

Noise and Vibration (NAV)

Amended to comply with National Planning Standards September 2022

NAV.1 Issues

Noise has the potential to cause adverse effects, depending on a number of factors including frequency, timing, volume and the type of noise. Disturbance of sleep is often the greatest complaint in relation to noise, however other adverse effects include general nuisance, psychological and chronic health effects, interference with speech communication and interference with learning processes, thinking and education.

Excessive noise can detract from the character and amenity values associated with the local environment. Noise generating activities can also be restricted by noise 'sensitive' activities in proximity that seek a higher level of amenity (reverse sensitivity). In an urban sense noise is a significant issue (especially at night) in mixed use zones and in 'interface' areas where noise sensitive activities (e.g. residential uses) are located in close proximity to high noise emitting land uses (e.g. bars and panel beaters).

The Resource Management Act 1991 (RMA) addresses noise in two ways. First, under section 16 there is a duty on every occupier of land and every person carrying out an activity in, on, or under a water body or the coastal marine area to adopt the best practical option to not emit more than a reasonable level of noise. Section 16 of the Act states that a national environmental standard, plan or resource consent may prescribe noise emission standards. Section 16 therefore guides how district plans can address noise emissions.

The other way the RMA addresses noise is through the control of excessive noise. There are specific provisions in the Act to deal with excessive noise, which normally involves intermittent noise sources that require immediate attention, for example loud stereos associated with parties. The excessive noise provisions stand apart from district plan provisions.

Noise rules have been designed to provide an adequate level of protection from the potential effects of noise. The rules within this chapter provide certainty about the level of ambient sound permitted during specific time frames within each Zone and acknowledge that there will be some noise associated with activities. The rules aim to strike a balance between the need for land to be used for its intended purpose while ensuring that other land users are not exposed to unreasonable levels of noise.

Permitted noise levels are set at a limit that is consistent with the character and amenity values anticipated in each Zone. Differing noise limits are established in interface areas between Zones to ensure that reasonable noise limits can be maintained. Reasonable noise limits are established for other activities such as, construction and demolition, airport operation, temporary military training, use of explosives, helicopter landing areas, shooting ranges and wind turbines.

In certain areas noise sensitive activities are restricted in order to ensure the unhindered and continued operation of high noise generating activities. In other areas the provision of acoustic insulation requirements for buildings containing noise sensitive activities in high noise environments will allow various activities to co-exist in Zones anticipating mixed use. Guidance from the most recent New Zealand Standards will ensure that noise levels are measured and analysed in accordance with international best practice.

Vibration is generally only a concern adjacent to construction or demolition projects; where there is operation of mechanical plant near or attached to buildings or structures; or in relation to explosives use and blasting. Accordingly, vibration limits have been provided to ensure that vibration from construction, demolition, fixed mechanical plant and use of explosives and blasting does not exceed reasonable levels. - For construction, demolition and fixed mechanical plant, a simplified approach has been taken whereby single velocity limits have been specified. This approach is considered to be the least complicated and will ensure the required level of amenity if maintained. For explosives use and

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blasting a more flexible approach has been adopted to achieve operational efficiency and to ensure the required level of amenity is maintained.

NAV.2 Eligibility

The following provisions shall apply district wide in addition to any other provisions in this District Plan applicable to the same area or [site](#).

NAV.3 Objectives

- | | |
|---|---|
| 1 | To enable a mix of activities to occur across a range of zones, while ensuring that noise and vibration is managed within appropriate levels for the health and wellbeing of people and communities, and for the amenity and character of the local environment . |
| 2 | To ensure that activities that seek a high level of acoustic and vibration amenity do not unduly compromise the ability of other lawful activities to operate. |

NAV.4 Policies

- | | |
|---|--|
| 1 | To establish reasonable noise and vibration limits and controls that enable appropriate activities to operate while maintaining the characteristic amenity values of each zone. |
| 2 | To avoid reverse sensitivity effects by: <ol style="list-style-type: none"> a. Requiring suitable acoustic design standards for noise sensitive activities located in or adjacent to areas anticipating high noise levels. b. Restricting noise sensitive activities in zones where they could unduly compromise the continuing operation of appropriate business activities. c. Considering the use of other mechanisms, such as noise control boundaries, buffer areas or building setbacks, as appropriate tools to protect existing or future activities. |
| 3 | To ensure that high noise generating activities located in noise sensitive areas maintain the characteristic amenity values of each zone by: <ol style="list-style-type: none"> a. Establishing noise limits that are consistent with anticipated noise and vibration levels in each zone. b. Requiring high noise generating activities to provide suitable mitigation measures to maintain appropriate noise levels for the health and wellbeing of people and communities, and for the amenity and character of the local zone. |
| 4 | To avoid restricting primary production activities by providing provisions that acknowledge their seasonal characteristics, transitory periods of noisiness and the effects of reverse sensitivity . |

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- 5 To ensure that **noise** associated with activities in open spaces and on public recreational areas is appropriate to the **amenity values** anticipated in the surrounding **environment**.

NAV.5 Noise Measurement and Assessment

Unless specified otherwise, **noise** shall be measured in accordance with New Zealand Standard NZS 6801:2008 “Acoustics – Measurement of environmental sound” and assessed in accordance with New Zealand Standard NZS6802:2008 “Acoustics - Environmental Noise.”

Rules

NAV.6 Permitted Activities

Unless specifically stated otherwise, any activity shall be a permitted activity provided it complies with all of the **noise** standards given in the following section(s) NAV.6.1 – NAV.6.15 and all other relevant zone and District Wide rules.

[Decision \[2023\] NZEnvC 004](#)

NAV.6.1 Noise Arising from Activities within Zones

The following **noise** limits shall apply within and between Zones:

Noise emitted from any site in the following Zone	Noise measured within the applicable boundary of any of the following Zones (refer to following table for applicable assessment location)	Daytime 07:00 to 22:00 hours	Night-time 22:00 to 07:00 hours		Notes 8,9
		dB L_{Aeq}	dB L_{Aeq}	dB L_{AFmax}	
Light Industrial Zone Commercial Zone Sport and Active Recreation Zone	Residential Zones Neighbourhood Centre Zone Natural Open Space Zone Open Space Zone Rural Production Zone Rural Lifestyle Zone Settlement Zone Future Urban Zone	55	45	75	
Port Zone Settlement Zone Industrial Sub-Zone Heavy Industrial Zone	Residential Zones Neighbourhood Centre Zone Natural Open Space Zone Open Space Zone Rural Production Zone	55	45	75	

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	Rural Lifestyle Zone				
	Settlement Zone				
	Future Urban Zone				
All Zones other than: Heavy Industrial Zone Light Industrial Zone Commercial Zone Sport and Active Recreation Zone	<u>Residential Zones</u> Neighbourhood Centre Zone Rural Lifestyle Zone Settlement Zone Future Urban Zone	50	40	70	1, 2, 3
Settlement Zone Industrial Sub-Zone Strategic Rural Industries Zone [All SIRZ]	Open Space Zone Natural Open Space Zone Rural Production Zone	55	40	70	1, 2, 3
All Zones other than: - Strategic Rural Industries Zone [All SIRZ]	City Centre Zone Waterfront Zone	60	55	80	4, 5
	Light Industrial Zone Commercial Zone Sport and Active Recreation Zone Shopping Centre Zone <u>Hospital</u> Zone Airport Zone	65	60	80	
	Mixed Use Zone Local Centre Zone Settlement Zone Centre Sub-Zone	60	50	75	
	Heavy Industrial Zone Settlement Zone Industrial Sub-Zone Strategic Rural Industrial Zone [All SIRZ]	75	75	-	
	Marsden Primary Centre - <u>Noise</u> Zone 1	65	65	70	3
	Port Nikau Development Area	60	55	70	3
	Marsden Primary Centre – <u>Noise</u> Zone 2 and <u>Noise</u> Zone 2A	55	45	70	3
	Marsden Primary Centre - Town Centre	55	45	70	3

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Kauri Strategic Rural Industries	At the Kauri Milk Processing Site – Noise Control Boundary	Outer	55	45	75	9
Mineral Extraction Areas	Any noise sensitive activity not owned or controlled by the quarry owner or operator		Low noise Environment			6, 7
			50	40	70	
			High noise Environment			
			55	45	75	

The above [noise](#) rules shall apply within the relevant [boundary](#) assessment location as set out below:

Site boundary	Notional Boundary
<ul style="list-style-type: none"> • Open Space Zone • Airport Zone • Port Zone • Port Nikau Development Area • Marsden Primary Centre - Noise Zone 1 and 2 • Marsden Primary Centre - Town Centre • City Centre Zone • Mixed Use Zone • Commercial Zone • Local Centre Zone • Shopping Centre Zone • Light Industrial Zone • Heavy Industrial Zone • Sport and Active Recreation Zone • Waterfront Zone • Medium Density Residential Zone • General Residential Zone • Neighbourhood Centre Zone • Hospital Zone • Settlement Zone 	<ul style="list-style-type: none"> • Any noise sensitive activity not owned or controlled by the quarry owner or operator in a Quarrying Resource Area • Rural Production Zone • Rural Lifestyle Zone • Future Urban Zone • Low Density Residential Zone • Large Lot Residential Zone • Natural Open Space Zone
<p><i>Note: Except that where noise is generated from the Fonterra Kauri Milk Processing Site, the noise rules shall apply at the Fonterra Kauri Milk Processing Site – Noise Control Boundary as shown on the Planning Maps.</i></p>	

1. Normal [residential activity](#) occurring in any zone such as children’s play, spontaneous social activities, lawnmowing and home maintenance work undertaken by/for the occupier is excluded from compliance with the [noise](#) rules during the daytime provided such activity is reasonable in terms of duration and [noise](#) level and in the case of home maintenance does not exceed the rules for construction [noise](#). This exclusion does not apply to non-residential [land](#) use within the [Residential Zones](#) (such as childcare centres).
2. NAV.6.1 shall not apply to mobile machinery used for a limited duration as part of agricultural or horticultural activities occurring in the Rural Production Zone, Rural Lifestyle Zone, Future Urban Zone or Large Lot Residential Zones. Limited duration events are those activities normally

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associated with industry practice, of relatively short duration, and where no reasonable alternative is available. Any such activity shall be subject to Section 16 of the Resource Management [Act](#).

“Limited duration activities” in this context include, but are not limited to:

- Spraying and harvesting of crops and/or weeds for horticultural or agricultural purposes e.g. topdressing or [Aerial](#) spraying
- Primary forestry activities (not including milling or processing)

This exclusion does not apply to:

- Static irrigation pumps;
- Motorbikes that are being used for recreational purposes;

3. NAV.6.1 shall not apply if the activity under consideration is a [mineral extraction](#) activity included in the Appendix 1 - MIN- QRA – Quarrying Resource Areas Chapter. Where this occurs the limits and stated timeframes in Appendix 1 shall apply.
4. [Noise](#) generated by [temporary activities](#) in the Waterfront Zone may exceed the [noise](#) rules in any Zone for 12 [days](#) every calendar year provided that [noise](#) does not exceed a level of 65 dB [L_{Aeq}](#) between 09:00 and 23:00 hours at the [boundary](#) of any [Residential Zone](#).
5. In the City Centre Zone the “daytime” [noise](#) standard shall apply between 07:00 and 00:00 hours (midnight) on Fridays and Saturdays. The “night-time” [noise](#) standard shall apply between 00:00 and 07:00 hours on Saturday and Sunday mornings.
6. In [Mineral Extraction](#) Areas the “daytime” [noise](#) standard shall apply between 0630 and 2130 hours. The “night-time” [noise](#) standard shall apply between 2130 and 0630 hours.
7. Except where an alternative [noise](#) limit is provided for the activity within the District Plan [See Appendix 1 – MIN-QRA – Quarrying Resource Areas Chapter] then the activity shall comply with the [noise](#) limit stated within the [notional boundary](#) of a [noise sensitive activity](#) not owned or controlled by the quarry owner or operator.
8. NAV.6.1 shall not apply to the following specific activities which are provided for elsewhere:
 - Construction activities. Refer to Section [NAV.6.2] for specific rule.
 - [Wind turbines](#) and wind farms. Refer to Section [NAV.6.3] for specific rule.
 - Shooting ranges. Refer to Section [NAV.6.4] for specific rule.
 - Helicopter and aircraft landing areas. Refer to Section [NAV.6.7] for specific rule.
 - Engine testing at the airport. Refer to Section [NAV.6.8] for specific rule.
 - [Noise](#) from explosives. Refer to Section [NAV.6.9] for specific rule.
 - [Temporary military training activities](#). Refer to Section [NAV.6.10] for specific rule.
 - [Bird Scaring devices](#). Refer to Section [NAV.6.11] for specific rule.
 - [Road](#) traffic [noise](#). Refer to Section [NAV.6.12] for specific rule.
 - Frost fans. Refer to Section [NAV.6.13] for specific rule.
 - Emergency Generator Testing. Refer to Section [NAV.6.15] for specific rule.
9. The [noise](#) rules shall not apply to the following activities:
 - Level crossing warning devices.
 - The operation of [emergency service](#) vehicles or emergency callout sirens.
 - [Noise](#) from aircraft and helicopters when in flight.

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- Unamplified [noise](#) from sporting events in Open Space and Sport and Active Recreation Zone where these occur for up to 20 hours per week between 07:00 and 21:00 hours.
- Unamplified [noise](#) from standard school outdoor activities where this occurs between 07:00 and 18:00 hours Monday to Sunday.
- Rail movements within Fonterra's Kauri Milk Processing [site](#) (the area encompassed within Scheduled Activity 15); excluding the loading and unloading of goods from trains within the [site](#).
- Emergency generators used to ensure the continued operation of network utilities. This exemption shall not include emergency generator testing which are required to comply with NAV.6.14.

The [noise](#) limits do not apply to [noise](#) generated within the Marsden Point Energy Precinct when measured within a Conservation or Open Space zone.

NAV.6.2 Construction Noise

[Noise](#) from [demolition](#) and construction, including that undertaken as part of temporary military training activities, shall comply with the guidelines and recommendations of NZS 6803: 1999 "Acoustics - Construction Noise". [Noise](#) levels shall be measured and assessed in accordance with New Zealand Standard NZS 6803: 1999 "Acoustics - Construction Noise". NAV.6.2 shall not apply to permitted [Maintenance](#) or utility works undertaken within the [road](#) carriageway of a [road](#) where:

- a. It has been demonstrated to Council that these works cannot reasonably comply with the referenced [noise](#) guidelines at the time when they must be carried out; and
- b. A construction [noise](#) and vibration management plan, as prepared by a [Recognised Acoustician](#), has been provided to Council.

NAV.6.3 Wind Turbines

[Noise](#) from [wind turbines](#) and wind farms shall comply with NZS6808:2010 "Acoustics – Wind farm noise".

NAV.6.4 Shooting Ranges

Where any new shooting range is established, or an existing shooting range or its use is altered or extended:

- a. Between 09:00 and 18:00 sound levels from the shooting range activity shall not exceed 50 dB [L_{AFmax}](#) from the [notional boundary](#) of any [noise sensitive activity](#) or [visitor accommodation](#) and;
- b. Between 18:00 and 22:00 and 07:30 and 09:00 sound levels from the shooting range activity shall not exceed 40 dB [L_{AFmax}](#) from the [notional boundary](#) of any [noise sensitive activity](#) or [visitor accommodation](#) and;
- c. No shooting shall occur between 22:00 and 07:30.

For the avoidance of doubt, in relation to [alterations](#) or extensions to an existing shooting range, compliance with items a, b and c is required for the altered or extended component of the activity.

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[2023]
NZEVC
004

NAV.6.5 Sound Insulation Requirements

- Any **noise sensitive activity** established within a City Centre Zone, Mixed Use Zone, Commercial Zone, Waterfront Zone, Local Centre Zone, Sport and Active Recreation Zone, Settlement Zone Centre Sub-Zone, Port Nikau Development Area, or Marsden Primary Centre **Noise** Zone 1 or 2A, or within the Fonterra Kauri Milk Processing **Site** – **Noise** Control **Boundary** shall be designed and constructed to ensure the following internal design **noise** levels:

Zones	Bedrooms and sleeping areas within dwellings or units 22:00 – 07:00 hours	Other habitable spaces within dwellings or units 07:00 – 22:00 hours	Teaching spaces, places of religious assembly, health and veterinary service buildings 07:00 – 22:00 hours
City Centre Zone Sport and Active Recreation Zone Mixed Use Zone Local Centre Zone Waterfront Zone Settlement Zone Centre Sub-Zone [Fonterra Kauri Milk Processing Site	30 dB L_{Aeq}	40 dB L_{Aeq}	35 dB L_{Aeq}
Port Nikau Development Area	35 dB L_{Aeq}	45 dB L_{Aeq}	35 dB L_{Aeq}
Marsden Primary Centre Noise Zone 1 and Noise Zone 2A	35 dB L_{Aeq}	45 dB L_{Aeq}	35 dB L_{Aeq}

- For design purposes, the following external **L_{eq} noise** levels shall be used. These **noise** levels shall be assumed to be incident on the façade.

Zone	Design noise level (dB L_{eq}) - incident							dBA
	63	125	250	500	1k	2k	4k	
Bedrooms and Sleeping Areas	Hz	Hz	Hz	Hz	Hz	Hz	Hz	
Waterfront Zone	66	65	55	54	49	42	38	55
City Centre Zone Sport and Active Recreation Zone Port Nikau Development Area Marsden Primary Centre Noise Zone 2A	67	64	61	58	55	52	49	60
Mixed Use Zone Local Centre Zone	57	54	51	48	45	42	39	50
Marsden Primary Centre Noise Zone 1	72	69	66	63	60	57	54	65
Fonterra Kauri Milk Processing Site – Noise Control Boundary	65	60	53	45	40	38	35	50
Other Habitable Rooms								

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City Centre Zone Waterfront Zone Mixed Use Zone Local Centre Zone	71	70	60	59	54	47	43	60
Sport and Active Recreation Zone Port Nikau Development Area Marsden Primary Centre <u>Noise</u> Zone 1 and <u>Noise</u> Zone 2A	72	69	66	63	60	57	54	65
Fonterra Kauri Milk Processing <u>Site</u> – <u>Noise</u> Control <u>Boundary</u>	65	60	54	45	40	38	35	50

3. Where any activity listed in NAV.6.5 Table 1 is located partly or wholly within the State Highway Noise Control Boundary or the Rail Noise Control Boundary, the entire room or space shall be designed, constructed and maintained to achieve the indoor design noise levels in NAV.6.5 Table 1.

NAV.6.5 Table 1

Activity	State Highway Noise Control Boundary L _{Aeq} (24h) from state highway noise	Rail Noise Control Boundary L _{Aeq} (1h) from railway corridor noise
Residential		
Bedrooms	40 dB	35 dB
All other habitable rooms	40 dB	40 dB
Educational		
Lecture rooms / theatres, music studios, assembly halls	35 dB	35 dB
Teaching areas, conference rooms and drama studios,	40 dB	40 dB
Libraries	45 dB	45 dB
Designated sleeping rooms for children aged 6 years or younger	40 dB	40 dB
Hospitals		
Overnight medical care, wards	40 dB	40 dB
Clinics, consulting rooms, theatres, nurses' stations	45 dB	45 dB
Place of Assembly		
Church, place of worship, marae	35 dB	35 dB

4. NAV.6.5.3 does not apply where any of NAV.6.5.4(a) – (f) apply:
- a. The nearest exterior façade of the building accommodating the activity listed in NAV.6.5 Table 1 is at least 50m from the formed carriageway of the state highway and 50m from the formed railway track and there is a solid building, fence, wall or landform that blocks the line of sight from all parts of all windows and doors to that activity to:
 - i. All parts of the formed carriageway of the state highway.
 - ii. All points 3.8m directly above the formed railway track; or
 - b. It can be demonstrated by way of prediction or measurement by a Recognised Acoustician that the noise at all exterior façades of the listed activity is no more than 15 dB above the relevant noise levels in NAV.6.5 Table 1; or

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- c. An alteration or extension to an existing building other than a residential unit does not increase the gross floor area of an activity listed in NAV.6.5 Table 1 within the State Highway Noise Control Boundary or the Rail Noise Control Boundary; or
 - d. An external alteration or extension to an existing residential unit does not increase the gross floor area of an activity listed in NAV.6.5 Table 1 within the State Highway Noise Control Boundary or the Rail Noise Control Boundary; or
 - e. An internal alteration to an existing residential unit does not increase the total gross floor area of activities listed in NAV.6.5 Table 1 by more than 5m² within each 10 year period from 18 January 2023 within the State Highway Noise Control Boundary or the Rail Noise Control Boundary; or
 - f. The activity is designed, constructed and maintained in accordance with the construction schedule in NAV Appendix 1 and meet the ventilation requirements at NAV.6.5.5.
5. Where windows are required to be closed to achieve the sound levels in NAV.6.5.1 – 3, the room or space shall be designed, constructed and maintained to:
- a. Provide mechanical ventilation that satisfies clause G4 of the New Zealand [Building Code](#) and is adjustable by the occupant to control the ventilation rate in increments up to a high air flow setting that provides at least 6 air changes per hour; and
 - b. Provide relief for equivalent volumes of spill air; and
 - c. Provide cooling and heating that is controllable by the occupant and that can maintain the inside temperature of the room or space between 18°C and 25°C.
 - d. Ensure that where a ventilation or cooling system is used that it does not generate more than 35dB_{L_{Aeq}} when measured 1m away from any grille or diffuser at the minimum level required to achieve the temperatures in NAV.6.5.5(c).
6. Any activity which does not comply with NAV.6.5.3 is a Restricted Discretionary activity. Discretion is restricted to:
- a. The effects on people's health and internal residential amenity, including effects on future residents and effects from future levels of noise anticipated when the application is being assessed.
 - b. Whether activity listed in NAV.6.5 Table 1 could be designed or located to achieve compliance with the rules.
 - c. The extent to which non-compliance with the rules could unduly compromise the continuing operation of the state highway corridor, or railway corridor as enabled within Designations KRH-1 and KRH-2.
 - d. Any natural or built features of the site or surrounding area which will mitigate noise effects.
 - e. The outcome of any consultation undertaken with Waka Kotahi or KiwiRail.

Notes:

1. NAV.6.5.4(d) and (e) apply where an existing building continues to be used as a residential unit.
2. NAV.6.5.4(e) provides for:
 - a. alterations that partition, combine, or re-allocate space between, habitable rooms.
 - b. the incorporation of a maximum of 5m² of non-habitable space into habitable rooms.

Compliance Standards:

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1. A certificate from a [Recognised Acoustician](#) is required to confirm compliance with the acoustic requirements of NAV.6.5. When confirming compliance with NAV.6.5.3 and NAV.6.5.4(b):
 - a. Railway noise is assumed to:
 - i. be 70 dB $L_{Aeq}(1h)$ at a distance of 12m from the track; and
 - ii. reduce at a rate of 3 dB per doubling of distance of up to 40m and 6 dB per doubling of distance beyond 40m.
 - b. Road noise is based on measured or predicted noise levels plus 3 dB.
2. Where more than one standard within NAV.6.5 applies that requires insulation of a noise sensitive activity or a noise sensitive space from an external noise source, each of those standards must be complied with.

Notification:

1. Any restricted discretionary activity under NAV.6.5.6 shall not be notified or limited notified unless Waka Kotahi or KiwiRail (as relevant) is determined to be an affected person in accordance with section 95B of the Resource Management Act 1991 or Council decides that special circumstances exist under section 94A(4) of the Resource Management Act 1991.

NAV.6.5A Activities within the Rail Noise Alert Area

1. Within the Rail Noise Alert Area any activity is a permitted activity where:
 - a. Resource consent is not required under any rule of the District Plan.
 - b. The activity is not prohibited under any rule of the District Plan.

Note:

1. The Rail Noise Alert Area identifies the noise-sensitive area within a 53dB rail noise contour each side of the rail corridor. Properties within this area may experience rail noise. No specific district plan rules or notification requirements apply as a result of this Rail Noise Alert Area.

NAV.6.5B Activities within the Rail Vibration Alert Area

1. Within the Rail Vibration Alert Area any activity is a permitted activity where:
 - a. Resource consent is not required under any rule of the District Plan.
 - b. The activity is not prohibited under any rule of the District Plan.

Note:

1. The Rail Vibration Alert Area identifies the vibration-sensitive area within 60metres each side of the rail corridor. Properties within this area may experience rail vibration. No specific district plan rules or notification requirements apply as a result of this Rail Vibration Alert Area.

NAV.6.6 Activities Establishing near the Airport Zone

1. Within the [Air Noise Margin](#):

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- a. A minor addition or alteration to an existing building, which is not to be used as a habitable room, is a permitted activity.
 - b. The following are **controlled** activities within the Outer Control Boundary:
 - i. The addition of a habitable room;
 - ii. The construction of a new residential unit if:
 - The net site area associated with each residential unit is at least 1,000m².
 - The proposed construction is the first residential unit upon an allotment that is less than 1,000m² and that allotment existed before 1 December 2005.
 - iii. Visitor's accommodation.
 - c. Control is reserved over:
 - i. The effect of aircraft noise on the living standard within buildings or habitable rooms. Whether the design and materials used in the construction achieves an internal design level of 40 dB L_{dn} for noise within any habitable room.
 - d. Any activity that does not comply with the standard for a **permitted** or **controlled** activity is a **discretionary** activity. See NAV.7 for Discretionary activity criteria.
2. Within the Air Noise Boundary:
 - a. New noise sensitive activities are **prohibited** activities
 - b. Visitor Accommodation is a **discretionary** activity:

Notes:

1. *Conditions of consent: Any application for land use consent for a residential or other noise sensitive activity in the Outer Control Boundary, will be required to have a notice registered against its title and included in the LIM report which alerts the owner that the property falls within a noise sensitive area and can therefore expect noise levels higher than would normally be expected in that Zone.*
2. *Notification: Council has identified reverse sensitivity effects that new noise sensitive activities may have on the safe and efficient operation of the Whangārei Airport. It has also identified potential adverse effects of the Airport on noise sensitive activities. Therefore, applications for resource consent may require the written approval of the Whangārei Airport as an affected party if such applications are to be considered on a non notified basis.*

NAV.6.7 Aircraft and Helicopter Landing Areas

Helicopter landing areas, including those used for military training activities, shall comply with and be measured and assessed in accordance with NZS 6807:1994 "Noise Management and Land Use Planning for Helicopter Landing Areas". NAV.6.7 shall not apply to emergency services helicopter movements. Noise from aircraft other than helicopters shall comply with NZS6805:1992 "Airport Noise Management and Land Use Planning."

The use of aircraft and helicopters undertaking rural production activities on an intermittent and infrequent basis are exempt from compliance with NAV.6.7.

NAV.6.8 Engine Testing

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Aircraft engine testing in the Airport Zone is a permitted activity if:

- a. Between the hours of 07:00 and 23:00, the **noise** generated by aircraft engine testing, assessed at any point within the **boundary** of any Residential Zone, does not exceed 55 dB **L_{Aeq}** (16 hours) and 65 dB **L_{Aeq}** (15 minutes);
- b. Between the hours of 23:00 and 07:00, **noise** generated by aircraft engine testing assessed at any point within the **boundary** of any **Residential Zone**, does not exceed 45dB **L_{Aeq}** (8 hours) and 65 dB **L_{AFmax}**;
- c. Between the hours of 23:00 and 07:00, for the purposes of essential, unscheduled **Maintenance** and engine testing on a maximum of 15 occasions within any calendar year, **noise** generated within the **boundary** of any **Residential Zone** does not exceed 55 dB **L_{Aeq}** (8 hours) and 70 dB **L_{AFmax}**. In these circumstances the **noise** limits set out in b. above shall not apply;
- d. The time, duration and other essential details of any testing undertaken in accordance with the requirements of c. above shall be recorded and advised to the Whangarei District Council within two weeks of any such event.

NAV.6.9 Explosives Use

Peak **noise** levels from explosives, excluding those from **Temporary Military Training Activities**, use shall not exceed the following limits when measured within the **notional boundary** of any **building** set out in the following table:

Affected building type	Permitted blasting time window	Number of blasts per year	Max peak sound level applying to all blasts dB L_{peak}
Occupied noise sensitive activity and visitor accommodation	07:00 to 19:00 hours	≤ 20 >20	120 115
Occupied commercial and industrial buildings	All hours of occupation	All	125
Unoccupied buildings	All times	All	140

NAV.6.10 Temporary Military Training Activities

Temporary military training activities are permitted activities provided that they comply with the following rules:

1. Weapons firing and/or the use of explosives
 - a. Weapons firing and explosives use on any **site** shall not exceed a total of 31 **days** in any 365 **day** period.
 - b. Weapons firing and/or use of explosives shall comply with the following:

Table 1:

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Activity	Time (Monday to Sunday)	Separation distance required between the Boundary of the activity and the notional boundary to any building housing a noise sensitive activity
i. Live firing of weapons and single or multiple explosive events	07:00 to 19:00 hours	At least 1,500m
	19:00 to 07:00 hours	At least 4,500m
ii. Firing of blank ammunition	07:00 to 19:00 hours	At least 750m
	19:00 to 07:00 hours	At least 2,250m

Table 2:

Rules to be complied with if minimum separation distances for sources NAV.6.10.1(i) and (ii) cannot be met:		
Rule	Time (Monday to Sunday)	Noise level at the notional boundary to an individual building housing a noise sensitive activity
(a)	07:00 to 19:00 hours	For the use of explosives: 120 dB L_{peak} For the use of small arms and pyrotechnics: 90 dB L_{peak} with one period in any 365 day period of up to five days consecutive use up to 120 dB L_{peak}
(b)	19:00 to 07:00 hours	For the use of explosives: 90 dB L_{peak} For the use of small arms and pyrotechnics: 60 dB L_{peak} with one period in any 365 day period of up to five days consecutive use up to 90 dB L_{peak}
(c)	<p>A Noise Management Plan prepared by a suitably qualified expert is provided to Council at least 15 working days prior to the activity taking place. The Noise Management Plan shall, as a minimum, contain:</p> <ul style="list-style-type: none"> A description of the site and activity including times, dates, and nature and location of the proposed training activities. Methods to minimise the noise disturbance at noise sensitive receiver sites such as selection of location, orientation, timing of noisy activities to limit noise received at sensitive receiver sites. A map showing potentially affected noise sensitive sites and predicted peak sound pressure levels for each of these locations. A programme for notification and communication with the occupiers of affected noise sensitive sites prior to the activities commencing, including updates during the event. A method for following up any complaints received during or after the event, and any proposed de-briefing meetings with Council. 	

Notes:

1. “Small arms” include, but are not limited to, revolvers, self-loading pistols, rifles and carbines, assault rifles, submachine guns and light machine guns.
 2. “Explosives” include but are not limited to explosive charges, cannons, grenades, mortars and rockets.
2. Mobile **noise** sources, excluding sources NAV.6.10.1(i) and (ii)
 - a. Activities shall comply with the “typical duration” **noise** limits set out in Tables 2 and 3 of NZS6803:1999 *Acoustics – Construction Noise* (with reference to ‘construction **noise**’ taken to refer to other, mobile **noise** sources) provided that no **building** housing a **noise sensitive activity** is exposed to **noise** above 35 dB **L_{AFmax}** from a **Temporary Military Activity** mobile source for more than a total of 31 **days** in any 365 **day** period.

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- b. Activities that do not comply with the duration limit in NAV.6.10.2(a) shall comply with the noise limits in NAV.6.10.3. Fixed (stationary noise sources).

Note:

1. Mobile noise sources (other than firing of weapons) include sources such as personnel, light and heavy vehicles, self-propelled equipment, earthmoving equipment.

3. Fixed (stationary) noise sources, excluding sources NAV.6.10.1(i) and (ii)

Time (Monday to Sunday)	<u>Noise</u> level at the <u>notional boundary</u> to any <u>building</u> housing a <u>noise sensitive activity</u> *	
07:00 to 19:00 hours	55 dB <u>L_{Aeg}</u> (15 min)	n.a.
19:00 to 22:00 hours	50 dB <u>L_{Aeg}</u> (15 min)	
22:00 to 07:00 hours the next <u>day</u>	45 dB <u>L_{Aeg}</u> (15 min)	75 dB <u>L_{AFmax}</u>

Note:

1. Fixed (stationary) noise sources (other than firing of weapons and explosives) include noise sources such as power generation, heating, ventilation or air conditioning systems, or water or wastewater pumping/treatment systems.

4. Helicopter Landing Areas

Helicopter landing areas shall comply with noise limits set out in NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas.

5. Restricted Discretionary Activities

Any activity that does not comply with rules NAV.6.10.1 – NAV.6.10.4 shall be a Restricted Discretionary Activity. Discretion is restricted to those matters listed in NAV.7.1(a) – (m).

NAV.6.11 Bird Scaring Devices

The use of bird scaring devices is a **permitted** activity in the Rural Production Zone if:

- a. Bird scaring devices do not operate between half an hour after sunset and half an hour before sunrise.
- b. Each device operates at not more than 6 “events” per hour where an “event” includes clusters of up to three shots from gas operated devices or three individual shots from a firearm in quick succession. (This rule does not apply to bird scaring devices that generate a noise level of less than 55 dB L_{AE} within the notional boundary of any noise sensitive activity not owned by the operator of the device).
- c. The sound level from any event does not exceed 65 dB L_{AE} within the notional boundary of any noise sensitive activity not owned by the operator of the device.
- d. The bird scaring device is only operated when a crop is at risk from bird damage.

The use of bird scaring devices in other Zones is a **discretionary** activity.

Advice Note:

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1. [Existing use rights](#) may apply where a [bird scaring device](#) has been lawfully established prior to the operative date 24 May 2016 of the NAV chapter.

NAV.6.12 Road Traffic

- a. [Noise](#) from any new or altered [road](#) shall be assessed in accordance with and meet the provisions of New Zealand Standard NZS 6806:2010 “Acoustics - Road-traffic noise - New and altered [roads](#).”
- b. The installation and operation of Audio-Tactile pedestrian call buttons at traffic signal controlled intersections and pedestrian crossings is a permitted activity. Installations shall comply with Australian Standard AS2353: 1999 Pedestrian Push- button Assemblies.

NAV.6.13 Frost Fans

The use of frost fans is a permitted activity in the Rural Production Zone if:

- a. [Noise](#) generated by single or multiple frost fans on a [site](#) does not exceed 55 dB [L_{Aeq}](#) (10 minute) at any time when assessed at the [notional boundary](#) of any [noise sensitive activity](#) on a separate [site](#) under different ownership.

Note:

1. The [noise](#) rule includes a correction for the special audible characteristics of frost control fans and no further penalty shall be applied to measured [noise](#) levels.
- b. Operation of frost fans during the [night](#) period shall be for protection of crops from frost only. Any other operation, such as for the purposes of maintenance, shall be undertaken during the [day](#) period.
- c. A legible notice shall be fixed to the [road frontage](#) of the property on which the frost fan is being used giving the name, address and telephone number of the person responsible for its operation.

The use of frost fans in any other Zone is a discretionary activity.

Advice Note:

1. [Existing use rights](#) may apply where a frost fan has been lawfully established prior to the operative date 24 May 2016 of the NAV chapter.

[Decision](#)
[\[2023\]](#)
[NZEVC](#)
[004](#)

NAV.6.14 Emergency Generator Testing

The testing of emergency generators is a permitted activity in all Zones if:

- a. The duration of testing does not exceed 12 hours total per annum;
- b. Testing occurs between 09:00 and 17:00 hours only;
- c. [Noise](#) levels do not exceed the following:
 - i. 60 dB [L_{Aeq}](#)(15 min) within the relevant [boundary](#) assessment location of any Marsden Primary Centre – Town Centre Living, Open Space, Natural Open Space Rural Production, Rural Village Residential or [Residential Zones](#).

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- ii. 65 dB $L_{Aeq(15 \text{ min})}$ within the site boundary of any Business 1, 3, Rural Village Centre, City Centre, Mixed Use, Local Centre, Neighbourhood Centre or Waterfront Zones or Port Nikau Development Area, or Marsden Primary Centre Noise Zone 2.
- iii. 70 dB $L_{Aeq(15 \text{ min})}$ within the site boundary of any Light Industrial, Commercial, Sport and Active Recreation, Hospital or Airport Zone, or Marsden Primary Centre Noise Zone 1 Zone.
- iv. 85 dB $L_{Aeq(15 \text{ min})}$ within the site boundary of any Heavy Industrial, Strategic Rural Industries, Rural Village Industry or Port Zone.

NAV.6.15 Vibration

1. Continuous Vibration from Stationary Machinery

Vibration from building services is a permitted activity if vibrating, reciprocating and rotating machinery and all piping, ducting and other equipment attached to such machinery is installed and maintained so that any resulting vibration does not exceed the levels in the following table when measured in adjacent buildings or areas of buildings under different ownership from the source of vibration:

Affected occupied <u>building</u> type	Time	Maximum vibration level in mm/s <u>rms</u> between 8 and 80 Hz
Industrial	All	0.8
Commercial	All	0.4
<u>Noise sensitive activity</u>	07:00 to 22:00 hours	0.2
	22:00 to 07:00 hours	0.14
Surgery rooms of healthcare facilities	All	0.1

2. Construction Vibration

Vibration from construction and demolition activity is a permitted activity if it does not exceed the following levels when measured at the point of effect.

- a. For human annoyance, vibration should be assessed at the location of the affected person inside the building, typically on the appropriate floor. Vibration should be measured in three orthogonal directions orientated to the axes of the building and assessed in the single axis in which vibration is greatest.
- b. For building damage, vibration should be assessed at the horizontal plane of the highest floor of the building. Vibration should be measured in two horizontal orthogonal directions orientated to the axes of the building and assessed in the single axis in which vibration is greatest. Note that for the building damage criteria in NAV.6.15.2 Note 2 an alternative measurement location is defined.

<u>Effect</u>	Affected occupied <u>building</u>	Activity	Time	Maximum vibration level mm/s <u>ppv</u>	Notes
Annoyance			22:00 to 07:00	0.3	1

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	Occupied <u>noise sensitive activity</u> or <u>visitor accommodation</u> in any Zone	General construction activity	07:00 to 22:00	1	1
	Occupied commercial or <u>industrial activity</u> in any Zone	General construction activity	22:00 to 07:00	5	
			07:00 to 22:00	1	
<u>Building damage</u>	Unclassified <u>structures</u> of great intrinsic value such as historic <u>buildings</u>	All activity	All times	2.5	
	Non-occupied dwellings and <u>buildings</u> of similar design	All activity	All times	5	
	Non-occupied commercial and industrial <u>buildings</u>	All activity	All times	10	

- Except that in surgery rooms of hospital facilities, maximum vibration levels from construction and demolition activities shall not exceed 0.1mm/s rms between 8 and 80Hz.
- NAV.6.15.2 shall not apply to permitted maintenance or utility works undertaken within the road carriageway where the following levels are achieved:

Table 1

<u>Effect</u>	<u>Receiver</u>	<u>Location</u>	<u>Details</u>	<u>Maximum vibration level (mm/s <u>PPV</u>)</u>
Annoyance and <u>building damage</u>	Occupied <u>noise sensitive activity</u> or <u>visitor accommodation building</u> in any Zone	As set out in NAV.6.15.2 above	20:00 to 06:30 hours	1
			06:30 to 20:00 hours	5
	Occupied commercial or <u>industrial activity building</u> in any Zone	Inside the <u>building</u>	06:30 to 20:00 hours	5
<u>Building damage</u>	Unoccupied <u>buildings</u>	Base of <u>building</u> on side of <u>building</u> facing vibration source or, where this is not practicable, on the ground outside the <u>building</u>	Vibration – transient (including blasting)	Refer to table 2 below
			Vibration – continuous	Refer to table 2 below - 50% of Table 2 Values

Table 2

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Type of building	Peak component velocity (PPV) in frequency range of predominant pulse	
	4 to 15 Hz	15 Hz and above
Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s	50 mm/s
Unreinforced or light framed structures Residential and light commercial buildings	15 mm/s at 4Hz increasing to 2 0mm/s at 15 Hz	20 mm/s at 15Hz increasing to 50 mm/s at 40 Hz

Notes:

1. All values referred to in table 2 are at the base of the **building**
2. For unreinforced or light framed **structures** and residential and light commercial **buildings** at frequencies below 4 Hz a maximum displacement of 0.6mm (zero to peak) is not to be exceeded.

3. Vibration from Explosives Use and Blasting

Vibration from explosive use and blasting from activity other than provided for in NAV.6.15.2 is a permitted activity if it does not exceed the levels set out in the following table, when measured in general accordance with the provisions of Australian Standard AS2187.2: 2006 Explosives – Storage and use – Use of explosives.

Category	Type of blasting operations	Peak component particle velocity (mm/s)
Occupied noise sensitive activities and visitor accommodation	Operations lasting longer than 12 months or more than 20 blasts per year	5 mm/s for 95% blasts per year 10 mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Occupied noise sensitive activities and visitor accommodation	Operations lasting less than 12 months or less than 20 blasts per year	10 mm/s unless agreement is reached with the occupier that a higher limit may apply
Occupied non-sensitive site , such as factories and commercial premises	All blasting	25 mm/s unless agreement is reached with the occupier that a higher limit may apply

NAV.7	Discretionary Activities
	<p>1. Assessment of Discretionary Activities for NAV.6.1 – NAV.6.15</p> <p>Unless specifically stated otherwise, any activity shall be a discretionary activity where it does not comply with all of the permitted noise and vibration provisions given in the previous sections NAV.6.1 – NAV.6.15. When assessing discretionary applications pursuant to these sections, the assessment shall include (but is not limited to):</p>

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- a. The level of sound likely to be received
- b. The existing ambient sound levels
- c. The nature and frequency of the noise including the presence of any special audible characteristics
- d. The effect on noise sensitive activities within the environment
- e. The likely time when noise will be audible and the extent of the exceedance of the noise rule at that time
- f. Whether the level and character of the noise is below recognised guidelines or standards for the preservation of amenity
- g. The potential for cumulative effects to result in an adverse outcome for receivers of noise
- h. The effects of noise on recreation or Conservation areas within the Natural Open Space Zone.
- i. The value and nature of the noise generating activity and the benefit to the wider community having regard to the frequency of noise intrusion and the practicality of mitigating noise or using alternative sites.
- j. Any proposed measures to avoid, remedy or mitigate noise received off-Site
- k. The potential for any reverse sensitivity effects
- l. The level of involvement of a Recognised Acoustician in the assessment of potential noise effects and/or mitigation options to reduce noise.
- m. The ability of noise sensitive activities to unduly compromise the continuing operation or future development of other lawful activities

2. Assessment of Discretionary Activities for NAV.6.6 Activities Establishing Near the Airport Zone

When assessing discretionary applications pursuant to section NAV.6.6, the assessment shall include (but is not limited to):

- a. Consideration of the proposed location of the noise sensitive activity in relation to airport activities;
- b. Effects, or potential effects arising from the proximity of the airport, aircraft approach/takeoff paths, lead-in lighting, navigational aids; and the potential of buildings or structures to create glare, electromagnetic interference, smoke, mechanical turbulence or other adverse effects;
- c. The effect, or potential effect of the noise sensitive activity on the operation of Whangārei Airport; particularly having regard to helicopter TLOF and hover points and the runway centreline alignments, requirements for aircraft on approach, and aircraft utilising navigational aids/lighting.
- d. The effect, or potential effect of airport operations, in particular noise, and health/safety effects from low flying aircraft, on the noise sensitive activity, given low ground clearances for aircraft on approach/ takeoff over this area, and high single event noise levels and average daily noise levels;

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- e. The effect of topographical characteristics of the land in relation to shielding of airport noise;
- f. Relevant objectives and policies, as they relate to the protection of a regionally significant transportation resource;
- g. Any remedial measures to avoid, remedy or mitigate potential conflict with the safe and efficient operation of the airport;
- h. Whether there has been adequate and meaningful consultation with the Airport Authority with respect to the current or potential effects associated with the operation of the airport resource, whether any issues have been resolved and any mitigation measures that have been proposed.

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NAV Appendix 1 NAV.6.5.4(f) Alternative Construction Schedule for Road and Rail Noise Control

Elements	Minimum construction for noise control in addition to the requirements of the New Zealand Building Code	
Exterior Walls	Wall cavity infill of fibrous insulation, batts or similar (minimum density of 9 kg/m ³)	
	Cladding and internal wall lining complying with either Options A, B or C below:	
	Option A - Light cladding: timber weatherboard or sheet materials with surface mass between 8 kg/m ² and 30 kg/m ² of wall cladding	Internal lining of minimum 17 kg/m ² plasterboard, such as two layers of 10 mm thick high-density plasterboard, on resilient/isolating mountings
	Option B - Medium cladding: surface mass between 30 kg/m ² and 80 kg/m ² of wall cladding	Internal lining of minimum 17 kg/m ² plasterboard, such as two layers of 10 mm thick high-density plasterboard
	Option C - Heavy cladding: surface mass between 80 kg/m ² and 220 kg/m ² of wall cladding	No requirements additional to New Zealand Building Code
Roof / Ceiling	Ceiling cavity infill of fibrous insulation, batts or similar (minimum density of 7 kg/m ³)	
	Ceiling penetrations, such as for recessed lighting or ventilation, shall not allow additional noise break-in	
	Roof type and internal ceiling lining complying with either Options A, B or C below:	
	Option A - Skillion roof with light cladding: surface mass up to 20 kg/m ² of roof cladding	Internal lining of minimum 25 kg/m ² plasterboard, such as two layers of 13 mm thick high-density plasterboard
	Option B - Pitched roof with light cladding: surface mass up to 20 kg/m ² of roof cladding.	Internal lining of minimum 17 kg/m ² plasterboard, such as two layers of 10 mm thick high-density plasterboard
	Option C - Roof with heavy cladding: surface mass between 20 kg/m ² and 60 kg/m ² of roof cladding	No requirements additional to New Zealand Building Code
Glazed Areas	Aluminium frames with full compression seals on opening panes	
	Glazed areas shall be less than 35% of each room's gross floor area	
	Either: <ul style="list-style-type: none"> • double-glazing with: <ul style="list-style-type: none"> ○ a laminated pane of glass at least 6 mm thick; ○ a cavity between the two panes of glass at least 12 mm deep; and ○ a second pane of glass at least 4 mm thick Or • any other glazing with a minimum performance of Rw 33 dB 	
Exterior Doors	Exterior door: <ul style="list-style-type: none"> • within the state highway noise control boundary with a line-of- 	Solid core exterior door, minimum surface mass 24 kg/m ² , with edge and threshold compression seals; or other doorset with minimum performance of Rw 30 dB

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	<p>sight to any part of the state highway road surface; or</p> <ul style="list-style-type: none"> • within the railway corridor noise control boundary with a line-of-sight to any point 3.8m directly above the formed railway track. 	
	<p>Exterior door outside of the state highway noise control boundary and railway corridor noise control boundary, or with no line-of-sight to any part of the state highway road surface or to any point 3.8m directly above the formed railway track</p>	<p>Exterior door with edge and threshold compression seals</p>