

Appendix 1: Recommended amendments to the Proposed District Plan

Definitions

Term	Definition
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activity sensitive to noise	means a: 1. residential activity, or 2. retirement village, or 3. supported residential care facility, or 4. marae, or 5. healthcare activity, or 6. education activity, or 7. community facility, or 8. custodial corrections facility, or 9. visitor accommodation activity, or 10. place of assembly. but excludes rooms used solely for the purposes of an entrance, passageway, toilet, bathroom, laundry, garage or storeroom.
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Highway and Railway Noise Overlay	means the areas shown in the planning maps as the Highway and Railway Noise Overlay – High and Highway and Railway Noise Overlay – Moderate
Highway and Railway Noise Overlay – High	means the area shown in the planning maps as the Highway and Railway Noise Overlay – High
Highway and Railway Noise Overlay – Moderate	means the area shown in the planning maps as the Highway and Railway Noise Overlay – Moderate

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light sensitive area	means a: 1. An Outstanding Natural Feature 2. An Outstanding Natural Landscape 3. An Outstanding Coastal Natural Character Area 4. A High or Very High Coastal Natural Character Area 5. The Coastal Margin, and 6. The Coastal Marine Area
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temporary activity	means an activity that:
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	a. is intended to have a limited duration, b. is intended to have a limited recurrence in any given year, c. is not part of, or ancillary to, a permanent activity on the same site, d. would not be a permitted activity in the location in which it occurs under this plan when excluding the provisions of the Temporary Activities chapter, and e. does not permanently alter any land, building, structure, feature, or vegetation, except where that alteration would be a permitted activity when excluding the provisions of the Temporary Activities chapter, but does not include: a. <u>a construction activity, or</u> b. any associated temporary buildings, structures, or features. Examples include, but are not limited to, festivals, parades, concerts, fairs, markets, circuses, carnivals, exhibitions, displays, theatrical productions, art installations, filming on location, <u>temporary military training activities</u>, emergency response training, cultural events, sporting events, ceremonies, public meetings, public gatherings, and other community or special events.
<u>temporary military training activity</u>	<u>means a temporary activity undertaken for the training of any component of the New Zealand Defence Force (including with allied forces) for any defence purpose. Defence purposes are those purposes for which a defence force may be raised and maintained under section 5 of the Defence Act 1990 which are:</u> <u>(a) the defence of New Zealand, and of any area for the defence of which New Zealand is responsible under any Act;</u> <u>(b) the protection of the interests of New Zealand, whether in New Zealand or elsewhere;</u> <u>(c) the contribution of forces under collective security treaties, agreements, or arrangements;</u> <u>(d) the contribution of forces to, or for any of the purposes of, the United Nations, or in association with other organisations or States and in accordance with the principles of the Charter of the United Nations;</u> <u>(e) the provision of assistance to the civil power either in New Zealand or elsewhere in time of emergency;</u> <u>(f) the provision of any public service.</u>

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LIGHT — Light

Artificial lighting provides for people's safety and security at night, as well as enabling many activities to occur during hours of darkness, and a variety of other beneficial applications, including during the day.

However, the overuse of artificial light, or poorly designed lighting schemes, can impact on people's sleep, safety, and security, can cause annoyance, discomfort, or distraction, or interfere with other tasks, as well as degrade views of the natural night sky, and disturb terrestrial and marine wildlife.

This chapter sets out standards that lighting installations should be designed and operated to. For designs that do not meet these standards, the resource consent process allows designs to be considered on a case by case basis. As light spill and glare issues vary between day and night, the standards vary based on the time of day – there are more restrictions during the “restricted lighting period”, which lasts from 10pm until either 7am or dawn the following day, whichever is earlier.

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The limits and assessment methods in this chapter are based on Australian/New Zealand Standard 4282:2023, "Control of the Obtrusive Effects of Outdoor Lighting". This standard is incorporated by reference and will be necessary to determine conformance by calculation for larger or more complex lighting schemes. However, for simple lighting schemes or where conformance is demonstrated by measurement this standard may not be needed.

Objectives

LIGHT-O1	Artificial lighting enabled
Activities that require or benefit from artificial lighting can have appropriate artificial lighting.	
LIGHT-O2	Darkness in sleeping places
Habitable spaces used for people to sleep in are sufficiently dark during the restricted lighting period so as not to disturb people's sleep.	
LIGHT-O3	Lighting protects personal safety and security
Public spaces and other areas open to the public are lit, or left unlit, in a way that: 1. Avoids glare, 2. Protects personal safety, including safety while using the transport network, and 3. Provides for personal security, which includes where compatible, the perception of personal security.	
LIGHT-O4	Unreasonable obtrusion of light
People are not unreasonably annoyed, discomforted, distracted, or interfered with in everyday tasks by light spill or glare.	
LIGHT-O5	Views of the night sky
Rural areas, regional parks, and protected dark sky areas maintain the high quality of their views of the night sky during the restricted lighting period.	
LIGHT-O6	Light sensitive areas
The natural and cultural values and the character of light sensitive areas are protected from the adverse effects of excessive artificial light, including effects on: 1. The natural character of identified outstanding natural features and landscapes and identified	

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~~areas of high, very high, or outstanding coastal natural character, and~~
~~2. Indigenous fauna in coastal margins and the coastal marine area.~~

Policies

LIGHT-P1	Providing for and managing artificial lighting
Provide for artificial lighting that is appropriately designed in its intensity, location, direction, shielding, and other design elements so that it: - Enables the safe and efficient use of indoor and outdoor areas at night, - Recognises the functional needs and operational needs of the transport network and other significant infrastructure, - Protects the darkness of habitable spaces used for sleeping during the restricted lighting period, - Supports the health, safety, and security of people and communities, including transport network safety and perceived personal security, - Protects people from unreasonable annoyance, discomfort, distraction, or interference with their everyday tasks, by minimising unreasonable light spill and glare, and Minimises light spill and unnecessary sky glow that impacts on views of the night sky, during the restricted lighting period, in areas with high quality views, having particular regard to cumulative impacts. and Protects the identified natural and cultural values and the character of light sensitive areas.	

Rules

Note: These rules apply to all activities that involve artificial light, in addition to any other relevant zone, precinct, overlay, or district-wide rules. Rules that vary by zone or other spatial layer apply to the location where the light is emitted - the body of the rules and standards specifies how the requirements apply to receiving locations.	
LIGHT-R1	Artificial light
All zones	1. Activity status: Permitted Where: - The lighting complies with: - LIGHT-S1: Light spill, or and LIGHT-S2: Lighting within light sensitive areas, or - LIGHT-S3: Sky glow, or and - LIGHT-S4: Glare, or and - LIGHT-S5: Illuminated surfaces, or and - LIGHT-S6: General standards, or - The lighting is within a building or structure and the light does not spill outside that building or structure, or - One of the exceptions in appendix LIGHT-APP1 applies.
All zones	2. Activity status: Restricted discretionary Where: - Compliance is not achieved with LIGHT-R1.1a. Matters of discretion are restricted to: - Any positive effects arising from the artificial lighting that would not arise if the relevant standards were met. - Any functional needs or operational needs of the activity requiring artificial light.

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3. Cumulative effects.
4. The matters of discretion in any standard not met.

Standards

LIGHT-S1	Light spill
All Zones	1. Lighting must not result in excess illuminance above background levels greater than the limits in LIGHT-TABLE1 at: a. The centre of the exterior surface of any exterior window of a habitable room, b. The notional boundary of any residential unit in a rural zone or open space and recreation zone, in the vertical plane through that boundary, at any point between 1.5m above ground level and the maximum permitted height for that zone, and c. 1 metre back from the boundary into the affected site, in the vertical plane, in any part of a site where a building containing a habitable room could be built, at any point between 1.5m above ground level and the maximum permitted height for that zone, and d. The boundary of any light sensitive area, as measured in the vertical plane. 2. The limits in LIGHT-TABLE1 apply based on the zone of the location at which the light spill is measured, or at a site boundary that is also a zone boundary, the more restrictive limit of the two zones. Matters of discretion where standard not met: 1. Disturbance of people's sleep. 2. Any unreasonable annoyance, discomfort, distraction, or interference with everyday tasks from light spill. 3. Personal safety and security. 4. Transport network safety. 5. Impacts on views of the night sky. 6. The identified character or ecological values of the light sensitive area (where 1d is not met).
LIGHT-S2	Lighting within light sensitive areas
Light Sensitive Areas	1. Lighting emitted within light sensitive areas must not result in excess illuminance above background levels greater than the limits in LIGHT-TABLE1 for light sensitive areas at any point more than 20 metres from a building as measured in the horizontal plane, or in the vertical plane perpendicular to the light source; 2. Luminaires shall have an upward light ratio of 0%, and 3. Outdoor luminaires shall have a colour corrected temperature of no greater than 3,000K. Note 1: An upward light ratio of 0% means that the luminaire is shielded so that all light is emitted downward. Note 2: For light emitted from outside a light sensitive area but illuminating a light sensitive area, see standard LIGHT-S1: Light spill. Matters of discretion where standard not met: 1. Personal safety and security. 2. Transport network safety. 3. Impacts on views of the night sky. 4. The identified character or ecological values of the light sensitive area.

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LIGHT-S3	Sky glow
Light Sensitive Areas	See requirements in standard LIGHT-S2: Lighting within light sensitive area.
Residential Zones Rural Zones Open Space and Recreation Zones (other than a Light Sensitive Area)	1. Internally illuminated signs shall not exceed an upward light ratio of 50%. 2. Digital signs shall not exceed an upward light ratio of 45%. 3. Other outdoor luminaires shall not exceed an upward light ratio of 1%. 4. This requirement does not apply to any lighting that: a. is installed and operated so that it is not lit during the restricted lighting period, or b. is portable and used for a temporary activity, or c. is portable and handheld. Matters of discretion where standard not met: 1. Impacts on views of the night sky.
Commercial and Mixed Use Zones Industrial Zones Hospital Zone Tertiary Education Zone Quarry Zone Marae Zone Seaview Marina (other than a Light Sensitive Area)	1. Internally illuminated signs shall not exceed an upward light ratio of 50%. 2. Digital signs shall not exceed an upward light ratio of 45%. 3. Other outdoor luminaires shall not exceed an upward light ratio of 3%. 4. This requirement does not apply to any lighting that: a. Is installed and operated so that it is not lit during the restricted lighting period, or b. Is portable and used for a temporary activity, or c. Is portable and handheld. Matters of discretion where standard not met: 1. Impacts on views of the night sky.
LIGHT-S4	Glare
All Zones	1. No luminaire used for outdoor lighting shall have a luminous intensity greater than the limits in LIGHT-TABLE2. 2. Outdoor lighting shall be aimed or screened so that the light is not directed into: a. Any other site, or b. A legal road, where the luminaire is not within the legal road, or c. A railway designation, where the luminaire is not within the railway designation. LIGHT-S4.2.b does not apply to digital signs and other illuminated signs, for which see SIGN-S9.2. Matters of discretion where standard not met: 1. Disturbance of people's sleep. 2. Any unreasonable annoyance, discomfort, distraction, or interference with everyday tasks from light spill. 3. Personal safety and security. 4. Transport network safety (if 2(b) or 2(c) are not met).
LIGHT-S5	Illuminated surfaces

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All Zones	1. Any sign, display screen, or building façade that is intentionally lit, whether externally or internally, and visible from outside the site, shall have an average luminance no greater than the limits in LIGHT-TABLE3 during the restricted lighting period. Matters of discretion where standard not met: 1. Disturbance of people's sleep. 2. Any unreasonable annoyance, discomfort, distraction, or interference with everyday tasks from light spill. 3. Personal safety and security. 4. Transport network safety. 5. Impacts on views of the night sky.	
LIGHT-S6	General standards	
All Zones	1. Where conformance with the standards in this chapter is to be determined by measurement: a. Measurements of illuminance at a boundary take place at a height of 1.5m, b. If it is not possible to measure the illuminance above background levels because the lighting cannot be turned off, measurements shall be made in areas of a similar nature that are not affected by the lighting. The result of these measurements shall be used for determining the effects of the lighting, and c. The methods in section 5 of AS/NZS 4282:2023 (Control of the obtrusive effects of outdoor lighting) can be used, except as provided in appendix LIGHT-APP2. 2. Where conformance with the standards in this chapter is to be determined by calculation, the calculation shall be performed in accordance with the methods in sections 3 and 4 of AS/NZS 4282:2023 (Control of the obtrusive effects of outdoor lighting), except as provided in appendix LIGHT-APP2. Matters of discretion where standard not met: 1. That it can be adequately demonstrated that the other standards in this chapter are met. 2. The operational requirements of and adequate enforcement of the resource management system. 3. Professional practices in lighting engineering.	
LIGHT-TABLE1	Illumination at site boundary, boundary of light sensitive area, or window	
Location where the light spill is measured	Outside of the restricted lighting period (from 7am or dawn, whichever is earlier, until 10pm)	During the restricted lighting period (from 10pm until 7am or dawn, whichever is earlier)
Natural Open Space Zone	2 lux	0.1 lux
Coastal Marine Area		
Outside Lower Hutt		
Light Sensitive Areas		
Rural Zones	5 lux	1 lux

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Open Space Zone (other than a Light Sensitive Area)		
Residential Zones (other than a Light Sensitive Area)	10 lux	2 lux
City Centre Zone Metropolitan Centre Zone Local Centre Zone Neighbourhood Centre Zone Mixed Use Zone Industrial Zones Sport and Active Recreation Zone Quarry Zone Tertiary Education Zone Hospital Zone Marae Zone Seaview Marina Zone (other than a Light Sensitive Area)	25 lux	5 lux
LIGHT-TABLE2	Maximum luminous intensity per luminaire	
Location of luminaire	Outside of the restricted lighting period (from 7am or dawn, whichever is earlier, until 10pm)	During the restricted lighting period (from 10pm until 7am or dawn, whichever is earlier)
Natural Open Space Zone Light Sensitive Areas	2,500 cd	500 cd
Rural Zones	7,500 cd	1,000 cd

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Open Space Zone Quarry Zone (other than a Light Sensitive Area)		
Residential Zones Neighbourhood Commercial Zone Mixed Use Zone (other than a Light Sensitive Area)	12,500 cd	2,500 cd
City Centre Zone Metropolitan Centre Zone Local Centre Zone Industrial Zones Sport and Active Recreation Zone Hospital Zone Tertiary Education Zone Marae Zone Seaview Marina Zone (other than a Light Sensitive Area)	25,000 cd	2,500 cd
LIGHT-TABLE3	Maximum average luminance of signs, displays, and building façades	
Natural Open Space Zone Light Sensitive Areas	0.1 cd/m²	
Rural Zones Open Space Zone Quarry Zone	150 cd/m²	

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(other than a Light Sensitive Area)	
Residential Zones	250 cd/m ²
(other than a Light Sensitive Area)	
City Centre Zone	350 cd/m ²
Metropolitan Centre Zone	
Local Centre Zone	
Mixed Use Zone	
Neighbourhood Centre Zone	
Industrial Zones	
Sport and Active Recreation Zone	
Hospital Zone	
Tertiary Education Zone	
Marae Zone	
Seaview Marina Zone	
(other than a Light Sensitive Area)	
LIGHT-APP1	Lighting that is not required to meet standards
Lighting does not need to meet the standards in this chapter when: a. T he lighting is operated by a road controlling authority for street lighting in any legal road, and the lighting has an upward light ratio of no more than 3%, b. The lighting is operated by a road controlling authority for the purpose of traffic signalling in any legal road, c. The lighting is operated by central government, local government, or a foreign diplomatic mission to illuminate a flag in accordance with Appendix D of AS/NZS 4282:2023, d. The lighting is for the purpose of railway signalling (including level crossings) and is in a railway designation, e. The lighting is for an aeronautical navigation installation, f. The lighting is for a maritime navigation installation, g. The lighting is on a train or other rail vehicle approved for use on the national rail network, h. The lighting is on a vehicle that may be lawfully used on a legal road,	

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NOISE — Noise

Many activities unavoidably generate some noise. Noise can have adverse effects, particularly on people's health and wellbeing such as sleep disturbance and annoyance. Noise also impacts on amenity values.

However, the negative effects of noise need to be balanced against the need for those activities and considered in the context of existing background noise. The level of acceptability of noise or sensitivity to noise varies between different areas within the city, the characteristics of the noise, and the needs of the activity. The noise rules and standards in this chapter provide the noise limits for each zone and for specific activities.

This chapter also sets out zones and mapped overlays where sound insulation and mechanical ventilation is required for activities sensitive to noise. Rules in some zones also restrict the locations of activities sensitive to noise. In general, noise insulation is expected in High Noise areas (expected to be over 65dB Ldn) and Moderate Noise areas (expected to be over 57dB Ldn).

Except where expressly provided for, noise levels must be measured in accordance with NZS 6801:2008 (Acoustics - Measurement of environmental sound) and assessed in accordance with NZS 6802:2008 (Acoustics - Environmental noise).

Objectives

NOISE-O1	Adverse effects of noise
Adverse effects from noise: 1. Do not compromise people's health, and 2. Are compatible with people's wellbeing, and the planned purposes, characters, and amenity values of zones and precincts, except: a. To the degree necessary to provide for short-term construction activities or temporary activities, and b. To the degree necessary to provide for an infrequent number of major events in public places in the city where these have traditionally occurred.	
NOISE-O2	Reverse sensitivity
Existing noise generating activities, and future noise generating activities in locations anticipated for such activities, are not unreasonably constrained in their operations by reverse sensitivity from inappropriately located or designed activities sensitive to noise.	

Policies

NOISE-P1	Appropriate noise generating activities
Enable the generation of noise from any activity where that noise: 1. Does not compromise people's health, and 2. Is compatible with people's wellbeing and the planned purposes, characters, and amenity values of the relevant receiving zones and precincts.	
NOISE-P2	Short-term noise generating activities
Provide for the generation of noise where the noise does not compromise people's health, and: 1. The noise is from a construction activity, or 2. The noise is from a major event or other temporary activity, and	

is adequately managed using the best practicable option to avoid adverse effects that are unreasonable considering the scale, benefits, operational needs, and functional needs of the activity, and to avoid, remedy or mitigate other adverse effects.	
NOISE-P3	Reverse sensitivity
Require sound insulation where practical for activities sensitive to noise: 1. Near the rail network, 2. Near major highways, including State Highways, and 3. Within zones that anticipate higher levels of noise.	

Rules

Note on application of noise rules The rules in this chapter do not apply to the following sources of noise: a. Aircraft being operated above 1,000 feet (305m) above ground over the urban environment or above 500 feet (152m) above ground over the rural environment, b. Aircraft being used in agricultural aviation activities, while in flight, c. Aircraft being used in emergencies, or as air ambulances, d. Vehicles being driven on a road (within the meaning of section 2(1) of the Transport Act 1998), or being driven within a site as part of or compatible with a normal residential activity, e. Trains or other rail vehicles on railway lines (public or private) and crossing bells within a road, including at railway yards, railway sidings or stations. This exemption does not apply to the testing (when stationary), maintenance, loading or unloading of rail vehicles, f. Any warning device or siren used by emergency services for civil defence or emergency purposes, and including testing and routine maintenance conducted between 7:00am and 7:00pm, g. The use of generators and mobile equipment (including vehicles) when used solely for civil defence or emergency purposes, including testing and maintenance not exceeding 48 hours in duration, where they are operated by emergency services or lifeline utilities, or for the continuation of radiocommunication broadcasts, h. Residential activities in the Residential Zones and Mixed Use Zone, other than vehicles, fixed plant, mobile plant, and construction, i. Rural activities including, agricultural vehicles, machinery or equipment used on a seasonal or intermittent basis in the Rural Zones, which are a permitted activity in the relevant Rural Zone, other than any fixed plant, j. Crowd noise from activities in the Open Space and Recreation Zones between 7:00am and 10:00pm, k. Wind turbines that form part of a community-scale renewable electricity generation or commercial-scale renewable electricity generation activity (for rules on which, see the Renewable Electricity Generation chapter).	
Note on requirements of the Building Act Noise insulation standards in this chapter apply in addition to, and do not affect the requirements of, the Building Act 2004.	
Note on application of insulation rules to changes of land use Noise insulation rules only cover new buildings, additions, and alterations. Changes in land use that do not involve a new building, addition, or alteration, do not need to meet the requirements of these rules.	
NOISE-R1	Emission of noise except where otherwise provided for in this chapter
All zones	1. Activity status: Permitted Where:

	a. Compliance is achieved with NOISE-S1: Emission of noise. Emissions of noise meet the limits in NOISE-APP1: Noise limits by emitting and receiving zone.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R1.1. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while complying with NOISE-R1.1. - Effects of the noise on people's health. - Background noise levels and any special character of noise from any existing activities. - The nature and character of any changes to the sound received at receiving sites, and the degree to which such sounds are compatible with: - The surrounding activities, - Anticipated future activities, and - Planned purposes, characters, and amenity values of the relevant zones and precincts. - Any mitigation of the noise proposed, in accordance with a best practicable option approach, such as through site layout and design, design and location of structures, buildings and equipment and the timing of operations.
NOISE-R2	Emission of noise from construction activities
All zones	1. Activity status: Permitted Where: 1. Compliance is achieved with NOISE-S2: Emission of noise from construction activities. Emissions of noise meet the limits in appendix NOISE-APP2: Noise limits for construction activities.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R2.1. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while complying with NOISE-R2.1. - Effects of the noise on people's health. - Background noise levels and any special character of noise from any existing activities, the nature and character of any changes to the sound received at receiving sites, and the degree to which such sounds are compatible with the surrounding activities, anticipated future activities, and planned purposes, characters, and amenity values of the relevant zones and precincts. Whether the sites and buildings that are affected by noise in excess of the limits in appendix NOISE-APP2 are occupied, and the sensitivity of the use they are occupied by. - Any mitigation of the noise proposed, in accordance with a best practicable option approach, such as through site layout and

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	design, design and location of structures, buildings and equipment and the timing of operations.
NOISE-R3	Emission of noise from temporary activities, other than Major Events within the Major Events Overlay
All zones	1. Activity status: Permitted Where: a. Compliance is achieved with NOISE-S3: Emission of noise from temporary activities. a. Emissions of noise (other than for temporary military training activities) meet the limits in appendix NOISE-APP3: Noise limits for temporary activities, and b. Emissions of noise from temporary military training activities meet the limits in appendix NOISE-APPxxx: Noise limits for temporary military training activities.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R3.1. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while complying with NOISE-R3.1. - Effects of the noise on people's health. - Background noise levels and any special character of noise from any existing activities, the nature and character of any changes to the sound received at receiving sites, and the degree to which such sounds are compatible with the surrounding activities, anticipated future activities, and planned purposes, characters, and amenity values of the relevant zones and precincts. - Any mitigation of the noise proposed, in accordance with a best practicable option approach, such as through site layout and design, design and location of structures, buildings and equipment and the timing of operations.
NOISE-R4	Emission of noise from major events within the Major Events Overlay
Major Events Overlay	1. Activity status: Permitted Where: a. Compliance is achieved with NOISE-S3: Emission of noise from temporary activities. Emissions of noise meet the limits in appendix NOISE-APP3: Noise limits for temporary activities.
Major Events Overlay	2. Activity status: Controlled Where: a. Compliance is not achieved with NOISE-R4.1, but b. Compliance is achieved with NOISE-S4: Emission of noise from major events (controlled activity limits). Emissions of noise meet the limits in appendix NOISE-APP4: Noise limits for major events. Matters of control are limited to:

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	- The provision of an Operational Noise Management Plan which must include, at minimum: - Purpose of the plan, - Map of the site and surrounding area (including noise sensitive receiver sites), - Overview of the activity (including the nature and scale of the activity, operating hours, duration), - Site layout map, - List of sound sources and locations, - Applicable noise limits for all activities and assessment locations, - Persons responsible for specific tasks and their contact details, - Noise control methods (breakdown for set up, take down and operations), - Community liaison (letter drop, signage, ads etc), - Community notification protocols and procedures, - Operational noise monitoring (scope, procedure and reporting), - Noise compliance reporting, - Complaints procedures and methods, and - Review procedures, and compliance statement. - The management of the event in accordance with that plan
Major Events Overlay	Activity status: Restricted discretionary Where: - Compliance is not achieved with NOISE-R4.1 or NOISE-R4.2. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while complying with NOISE-R4.1. - Effects of the noise on people's health. - Background noise levels and any special character of noise from any existing activities, the nature and character of any changes to the sound received at receiving sites, and the degree to which such sounds are compatible with the surrounding activities, anticipated future activities, and planned purposes, characters, and amenity values of the relevant zones and precincts. - Any mitigation of the noise proposed, in accordance with a best practicable option approach, such as through site layout and design, design and location of structures, buildings and equipment and the timing of operations.
NOISE-R5	Activities that result in vibration
All zones	Activity status: Permitted Where: - The activity is managed in such a way that ground vibration effects are contained as far as practical within the boundary of the site and do not compromise public health or safety, or well-being and amenity values within any other site, and - The activity is managed to avoid damage to buildings, by ensuring vibration levels received at any building except for any building located on the same site do not exceed vibration guideline values set out in Tables 1 and 3 of DIN 4150-3:1999-02 Structural

	vibration — Part 3: Effects of vibration on structures DIN 4150-3:2016 Vibration in buildings – Part 3: Effects on structures.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R5.1. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while meeting NOISE-R5.1. - Effects of the vibration on people's health, safety, and wellbeing. - The planned purposes, characters, and amenity values of the relevant zones and precincts of the areas that would be subject to ground vibration effects.
NOISE-R6	Construction of Nnew buildings, or alteration and additions to existing buildings, to be used by an activity sensitive to noise within the Highway and Railway Noise Overlay - High
All zones	1. Activity status: Permitted Where: a. Compliance is achieved with NOISE-S5: Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - High, or b. An existing activity sensitive to noise is replaced with a different activity sensitive to noise with a gross floor area that is no greater.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R6.1. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while meeting NOISE-R6.1. - Alternative means of achieving noise levels and ventilation in habitable spaces that are adequate to provide for people's health and wellbeing, given existing and anticipated future activities in the relevant highway or railway corridor. - Ambient noise levels and any special character of noise from any existing activities in the relevant highway or railway corridor, and the likely noise levels and special character of noise from likely future activities in the relevant highway or railway corridor. - Whether any special nature of the activity means that protection from noise from the relevant highway or railway corridor is of lesser importance than it would be in general. - Special constraints on achieving NOISE-R6.1, such as being a heritage item. Public notification is precluded for any application required under this rule, and limited notification is precluded except to the operators of the relevant highway or railway. The normal test of the RMA applies to these parties.
NOISE-R7	Construction of Nnew buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise, within the Highway and Railway Noise Overlay - Moderate

Commented [SD7]: Winstone Aggregates (444.13)

Commented [CN8]: New Zealand Heavy Haulage Association (429.03 and 429.08)

Commented [CN9]: New Zealand Heavy Haulage Association (429.03 and 429.08)

All zones	1. Activity status: Permitted Where: a. Compliance is achieved with NOISE-S6: Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - Moderate, or b. An existing activity sensitive to noise is replaced with a different activity sensitive to noise with a gross floor area that is no greater.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R7.1. Matters of discretion are restricted to: 1. Any positive effects of the activity that cannot be achieved while meeting NOISE-R7.1. 2. Alternative means of achieving noise levels and ventilation in habitable spaces that are adequate to provide for people's health and wellbeing, given existing and anticipated future activities in the relevant highway or railway corridor. 3. Ambient noise levels and any special character of noise from any existing activities in the relevant highway or railway corridor, and the likely noise levels and special character of noise from likely future activities in the relevant highway or railway corridor. 4. Whether any special nature of the activity means that protection from noise from the relevant highway or railway corridor is of lesser importance than it would be in general. 5. Special constraints on achieving NOISE-R7.1, such as being a heritage item. Public notification is precluded for any application required under this rule, and limited notification is precluded except to the operators of the relevant highway or railway. The normal test of the RMA applies to these parties.
NOISE-R8	Construction of New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise
City Centre Zone Metropolitan Centre Zone Industrial Zones Quarry Zone Seaview Marina Zone	1. Activity status: Permitted Where: a. Compliance is achieved with NOISE-S7: Acoustic insulation and ventilation for activities sensitive to noise in certain high noise zones, or b. An existing activity sensitive to noise is replaced with a different activity sensitive to noise with a gross floor area that is no greater.
Neighbourhood Centre Zone Local Centre Zone	2. Activity status: Permitted Where: a. Compliance is achieved with NOISE-S8: Acoustic insulation and ventilation for activities sensitive to noise in certain moderate noise

Commented [CN10]: New Zealand Heavy Haulage Association (429.03 and 429.08)

Mixed Use Zone Sport and Active Recreation Zone Hospital Zone Tertiary Education Zone	zones, or b. An existing activity sensitive to noise is replaced with a different activity sensitive to noise with a gross floor area that is no greater.
City Centre Zone Metropolitan Centre Zone Neighbourhood Centre Zone Local Centre Zone Mixed Use Zone Industrial Zones Sport and Active Recreation Zone Hospital Zone Tertiary Education Zone Quarry Zone	3. Activity status: Restricted discretionary Where: a. Compliance is not achieved with NOISE-R8.1 or NOISE-R8.2. Matters of discretion are restricted to: - Any positive effects of the activity that cannot be achieved while meeting the standard. - Alternative means of achieving noise levels and ventilation in habitable spaces that are adequate to provide for people's health and wellbeing. - Ambient noise levels and any special character of noise from any existing activities, and the likely noise levels and special character of noise from likely future activities in the area. - Whether any special nature of the activity means that protection from noise is of lesser importance than it would be in general. - Special constraints on achieving NOISE-R8.1 or NOISE-R8.2, such as being a heritage item. Public notification is precluded for any application under this rule.
NOISE-R9	Noise from aircraft at helicopter landing areas
General Rural Zone Natural Open Space Zone	1. Activity status: Permitted Where: - The helicopter landing area is used solely: - For agricultural aviation activities between dawn and dusk, on no more than 30 days in any calendar year, or - In unforeseen emergencies, and The helicopter landing area is managed to comply with the recommended noise limits and noise management provisions set out in NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas (excluding clause 4.3 Averaging).

Commented [SD11]: Fix number to "3" - Winstone Aggregates (444.16a), minor correction

Commented [SD12]: NZ Helicopter Association (215.6), NZ Agricultural Aviation Association 231.8)

General Rural Zone <u>Heavy Industrial Zone</u> <u>Hospital Zone</u> Natural Open Space Zone	2. Activity status: Restricted discretionary Where: 1. NOISE-R9.1 is not met. Matters of discretion are restricted to: 1. Positive effects of the use of helicopters, to the degree that those effects cannot be achieved by other means 2. People's health and wellbeing 3. The amenity of the surrounding area 4. The degree to which the activity is managed in accordance with NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas (excluding clause 4.3 Averaging).
<u>Heavy Industrial Zone</u> <u>Hospital Zone</u>	3. Activity status: Restricted discretionary Matters of discretion are restricted to: 1. <u>Positive effects of the use of helicopters, to the degree that those effects cannot be achieved by other means</u> 2. <u>People's health and wellbeing</u> 3. <u>The amenity of the surrounding area</u> 4. <u>The degree to which the activity is managed in accordance with NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas (excluding clause 4.3 Averaging).</u>
Residential Zones Rural Lifestyle Zone General Industrial Zone Light Industrial Zone Commercial and Mixed Use Zones Tertiary Education Zone Seaview Marina Zone Marae Zone Quarry Zone Open Space Zone Sport and Active Recreation	4. Activity status: Non-complying Public notification is required for any application under this rule.

Commented [SD13]: Minor correction, Laura Skilton (314.91)

Zone	
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Standards

NOISE-S1	Emission of noise
All Zones	1. Emissions of noise must meet the limits in NOISE APP1: Noise limits by emitting and receiving zone. 2. The noise shall be: a. Measured in accordance with NZS 6801:2008 (Acoustics—Measurement of Environmental Sound), and b. Assessed in accordance with NZS 6802:2008 (Acoustics—Environmental Noise), including consideration of special audible characteristics, except where the type of noise being assessed does not fall within the scope of that standard.
NOISE-S2	Emission of noise from construction activities
All Zones	1. Emissions of noise must meet the limits in appendix NOISE APP2: Noise limits for construction activities. 2. The noise shall be measured, assessed, and managed in accordance with NZS 6803:1999 (Acoustics—Construction Noise).
NOISE-S3	Emission of noise from temporary activities
All Zones	1. Emissions of noise must meet the limits in appendix NOISE APP3: Noise limits for temporary activities. 2. The noise shall be: a. Measured in accordance with NZS 6801:2008 (Acoustics—Measurement of Environmental Sound), and b. Assessed in accordance with NZS 6802:2008 (Acoustics—Environmental Noise), including consideration of special audible characteristics, except where the type of noise being assessed does not fall within the scope of that standard.
NOISE-S4	Emission of noise from major events (controlled activity limits)
All Zones	1. Emissions of noise must meet the limits in appendix NOISE APP4: Noise limits for major events. 2. The noise shall be: a. Measured in accordance with NZS 6801:2008 (Acoustics—Measurement of Environmental Sound), and b. Assessed in accordance with NZS 6802:2008 (Acoustics—Environmental Noise), except: i. That no duration adjustment or correction for special audible characteristics provided for in sections 6.3 and 6.4 of the standard shall be applied, and ii. The standard shall not be applied where the type of noise being assessed does not fall within the scope of that standard. 3. Noise from sound testing must only occur between the hours of 7:00am and 5:00pm on weekdays, and 10:00am and 5:00pm on Saturday, Sunday, or public holidays. 4. Helicopters must not be used (except for emergency purposes). 5. Drones must not be used outside the Major Events Overlay. 6. For concert events, the event organiser shall ensure a letter drop is undertaken informing local residents of the time and duration of the

Commented [SD14]: Laura Skilton (314.84)

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Commented [SD16]: Laura Skilton (314.87), consequential, minor correction

Commented [SD17]: Laura Skilton (314.88a)

	concert and any sound checks. Letters shall be delivered to all properties within 200m of the venue as well as any additional properties which may be subject to noise levels above the permitted noise limits in NOISE-APP4: Noise limits by emitting and receiving zone. Letters must arrive at least one week prior to an event taking place.
NOISE-S5	Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - High
Highway and Railway Noise Overlay - High	- Any building in which an activity sensitive to noise occurs must either: - Be designed, constructed, and maintained in accordance with the minimum construction schedule in appendix NOISE-APP5: Minimum construction schedule for noise insulation (to achieve $D_{tr,2m,nTw} > 35dB$), or - Be designed, constructed, and maintained in accordance with a design that is certified by a qualified acoustic expert as meeting an acoustic performance of $D_{tr,2m,nTw} > 35dB$ assessed in accordance with ISO 717-1:2020 Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation, and this certification is provided in writing to the Council before the activity commences, or - Be located where an acoustic screen (such as a solid noise barrier fence, terrain, or a building) is present on the same site, and which is certified in writing by a qualified acoustic expert or environmental noise officer before commencement of the activity, that: - The level of noise incident on the most exposed part of the building in which an activity sensitive to noise occurs will, under a reasonable maximum use scenario, not exceed 55 dB $L_{Aeq}(24h)$ at all points 1.5m above ground level, or - The level of noise incident on the most exposed part of the building in which an activity sensitive to noise occurs, where that building complies with NOISE-S6.1.a or NOISE-S6.1.b will, under a reasonable maximum use scenario, not exceed 60 dB $L_{Aeq}(24h)$ at all points 1.5m above ground level. - Where compliance with this standard is met through NOISE-S5.1.a, or where the acoustic performance of NOISE-S5.1.b can only be met with the windows closed, ventilation, heating, and cooling must be provided in accordance with appendix NOISE-APP7: Ventilation.
NOISE-S6	Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - Moderate
Highway and Railway Noise Overlay - Moderate	- Any building in which an activity sensitive to noise occurs must either: - Be designed, constructed, and maintained in accordance with the minimum construction schedule in appendix NOISE-APP6: Minimum construction schedule for noise insulation (to achieve $D_{tr,2m,nTw} > 30dB$), or - Be designed, constructed, and maintained in accordance with a design that is certified by a qualified acoustic expert as meeting an acoustic performance of $D_{tr,2m,nTw} > 30dB$ assessed in accordance with ISO 717-1:2020 Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation, and this certification is provided in writing to the

	Council before the activity commences, or c. Be located where an acoustic screen (such as a solid noise barrier fence, terrain, or a building) is present on the same site, and which is certified in writing by a qualified acoustic expert or environmental noise officer before commencement of the activity, that the level of noise incident on the most exposed part of the building in which an activity sensitive to noise occurs will, under a reasonable maximum use scenario, not exceed 55 dB L_{Aeq} (24h) at all points 1.5m above ground level. 2. Where compliance with this standard is met through NOISE-S6.1a, or where the acoustic performance of NOISE-S6.1b can only be met with the windows closed, ventilation, heating, and cooling must be provided in accordance with appendix NOISE-APP7: Ventilation.
NOISE-S7	Acoustic insulation and ventilation for activities sensitive to noise in certain high noise zones
City Centre Zone Metropolitan Centre Zone Industrial Zones Quarry Zone Seaview Marina Zone	1. Any building in which an activity sensitive to noise occurs must either: a. Be designed, constructed, and maintained in accordance with the minimum construction schedule in appendix NOISE-APP5: Minimum construction schedule for noise insulation (to achieve $D_{tr,2m,nTw} > 35dB$), or b. Be designed, constructed, and maintained in accordance with a design that is certified by a qualified acoustic expert as meeting an acoustic performance of $D_{tr,2m,nTw} > 35dB$ assessed in accordance with ISO 717-1:2020 <i>Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation</i>, and this certification is provided in writing to the Council before the activity commences. 2. Where compliance with this standard is met through NOISE-S7.1.a, or where the acoustic performance of NOISE-S7.1.b can only be met with the windows closed, ventilation, heating, and cooling must be provided in accordance with appendix NOISE-APP7: Ventilation.
NOISE-S8	Acoustic insulation and ventilation for activities sensitive to noise in certain moderate noise zones
Neighbourhood Centre Zone Local Centre Zone Mixed Use Zone Sport and Active Recreation Zone Hospital Zone Tertiary Education Zone	1. Any building in which an activity sensitive to noise occurs must either: a. Be designed, constructed, and maintained in accordance with the minimum construction schedule in appendix NOISE-APP6: Minimum construction schedule for noise insulation (to achieve $D_{tr,2m,nTw} > 30dB$), or b. Be designed, constructed, and maintained in accordance with a design that is certified by a qualified acoustic expert as meeting an acoustic performance of $D_{tr,2m,nTw} > 30dB$ assessed in accordance with ISO 717-1:2020 <i>Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation</i>, and this certification is provided in writing to the Council before the activity commences. 2. Where compliance with this standard is met through NOISE-S8.1.a, or where the acoustic performance of NOISE-S8.1.b can only be met with the windows closed, ventilation, heating, and cooling must be provided in accordance with appendix NOISE-APP7: Ventilation.

NOISE-APP1	Noise limits by emitting and receiving zone			
Zone where noise emitted	Zone of receiving site	Daytime Limit (7:00am - 7:00pm)	Evening Limit (7:00pm - 10:00pm)	Night Limit (10:00pm - 7:00am)
Residential Zones	Residential Zones	55 dB LAeq (15min)	50 dB LAeq (15min)	40 dB LAeq (15min)
Rural Zones	Marae Zone			70 dB LAFmax
Local Centre Zone	(at any point in site)			
Neighbourhood Centre Zone	Rural Zones	55 dB LAeq (15min)	50 dB LAeq (15min)	45 dB LAeq (15min)
Mixed Use Zone	(within the notional boundary of an activity sensitive to noise)			75 dB LAFmax
Open Space Zone				
Natural Open Space Zone	City Centre Zone	65 dB LAeq (15min)	65 dB LAeq (15min)	65 dB LAeq (15min)
Hospital Zone	Metropolitan Centre Zone			85 dB LAFmax
Tertiary Education Zone	Industrial Zones			
Marae Zone	Seaview Marina Zone			
	(at any point in site)			
	Local Centre Zone	65 dB LAeq (15min)	65 dB LAeq (15min)	55 dB LAeq (15min)
	Neighbourhood Centre Zone			75 dB LAFmax
	Mixed Use Zone			
	Open Space and Recreation Zones			
	Tertiary Education Zone			
	Hospital Zone			
	(at any point in site)			
City Centre Zone	Residential Zones	55 dB LAeq (15min)	55 dB LAeq (15min)	45 dB LAeq (15min)
Metropolitan Centre Zone	Marae Zone			75 dB LAFmax
	(at any point in			

Industrial Zones	site)			
Sport and Active Recreation Zone	Rural Zones (within the notional boundary of an activity sensitive to noise)	55 dB LAeq (15min)	55 dB LAeq (15min)	45 dB LAeq (15min) 75 dB LAFmax
Seaview Marina Zone	City Centre Zone Metropolitan Centre Zone Industrial Zones Seaview Marina Zone (at any point in site)	65 dB LAeq (15min)	65 dB LAeq (15min)	65 dB LAeq (15min) 85 dB LAFmax
	Local Centre Zone Neighbourhood Centre Zone Mixed Use Zone Open Space and Recreation Zones Tertiary Education Zone Hospital Zone (at any point in site)	65 dB LAeq (15min)	65 dB LAeq (15min)	55 dB LAeq (15min) 75 dB LAFmax
Quarry Zone	All zones other than the Quarry Zone (at the boundary of, or outside, the Quarry Zone)	67 dB LAeq (15min)	55 dB LAeq (15min)	45 dB LAeq (15min) 75 dB LAFmax

The noise shall be:

- Measured in accordance with NZS 6801:2008 (Acoustics - Measurement of Environmental Sound), and
- Assessed in accordance with NZS 6802:2008 (Acoustics - Environmental Noise), including consideration of special audible characteristics, except where the type of noise being assessed does not fall within the scope of that standard.

Where it is impractical to measure outside the building on any site within a Commercial and Mixed Use

Commented [SD18]: Laura Skilton (314.84)

Zone, measurements may be made indoors within habitable receiver rooms, with windows closed.

Where indoor measurements are undertaken, compliance with the above noise limits shall be determined by adopting the above limits reduced by 18dB. Where habitable rooms have been noise insulated to protect activities sensitive to noise (including residential activities), then compliance determined indoors shall not allow activities to increase noise emission levels above those that would apply if the noise insulation had not been undertaken.

NOISE-APP2		Noise limits for construction activities						
These limits are measured, and assessed, <u>and the noise managed</u> in accordance with NZS 6803:1999 (Acoustics - Construction Noise).								
Zone of receiving site (measured 1 metre from any building in which an activity sensitive to noise occurs)	Time period		Short term work (14 days or less)		Typical work (more than 14 days but not more than 20 weeks)		Long term work (more than 20 weeks)	
			dBA Leq	dBA Lmax	dBA Leq	dBA Lmax	dBA Leq	dBA Lmax
Rural Zones Residential Zones Mixed Use Zone Marae Zone	Weekdays	6.30am-7.30am	65	75	60	75	55	75
		7.30am-6.00pm	80	95	75	90	70	85
		6.00pm-8.00pm	75	90	70	85	65	80
		8.00pm-6.30am (next day)	45	75	45	75	45	75
	Saturday	6.30am-7.30am	45	75	45	75	45	75
		7.30am-6.00pm	80	95	75	90	70	85
		6.00pm-8.00pm	45	75	45	75	45	75
		8.00pm-6.30am (next day)	45	75	45	75	45	75
	Sunday and Public Holidays	6.30am-7.30am	45	75	45	75	45	75
		7.30am-6.00pm	55	85	55	85	55	85
		6.00pm-8.00pm	45	75	45	75	45	75

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		8.00pm-6.30am (next day)	45	75	45	75	45	75
City Centre Zone	Any day	6.30am-7.30am	65	85	65	85	65	85
Metropolitan Centre Zone		7.30am-6.00pm	80	95	75	90	70	85
Local Centre Zone		6.00pm-8.00pm	75	90	70	85	70	85
Neighbourhood Centre Zone		8.00pm-6.30am (next day)	65	85	65	85	65	85
Hospital Zone								
Tertiary Education Zone								
Light Industrial Zone								
Heavy Industrial Zone	Any day	7.30am-8.00pm	80	-	75	-	70	-
General Industrial Zone		8.00pm-7.30am (next day)	85	-	80	-	75	-
Open Space and Recreation Zones								
Quarry Zone								
Note: Red shaded rows have noise limits that are likely to mean that no construction work would comply with the limits.								

NOISE-APP3		Noise limits for temporary activities		
<u>The noise shall be:</u> a. <u>Measured in accordance with NZS 6801:2008 (Acoustics - Measurement of Environmental Sound), and</u> b. <u>Assessed in accordance with NZS 6802:2008 (Acoustics - Environmental Noise), including consideration of special audible characteristics, except where the type of noise being assessed does not fall within the scope of that standard.</u>				
Area where noise emitted	Zone of receiving site	Daytime Limit (7:00am - 7:00pm)	Evening Limit (7:00pm - 10:00pm)	Night Limit (10:00pm - 7:00am)
General Rural Zone	Residential Zones	67 dB LAeq (15min)	67 dB LAeq (15min)	40 dB LAeq (15min)

Commented [SD20]: Laura Skilton (314.87)

Commercial and Mixed Use Zones	Marae Zone (at any point in site)			70 dB LAFmax
Industrial Zones	Rural Zones (within the notional boundary of an activity sensitive to noise)	67 dB LAeq (15min)	67 dB LAeq (15min)	45 dB LAeq (15min) 75 dB LAFmax
Open Space and Recreation Zones				
Hospital Zone				
Tertiary Education Zone	City Centre Zone	67 dB LAeq (15min)	67 dB LAeq (15min)	65 dB LAeq (15min) 85 dB LAFmax
Marae Zone	Metropolitan Centre Zone			
	Industrial Zones (at any point in site)			
	Other Zones (at any point in site)	67dB LAeq (15min)	67 dB LAeq (15min)	55 dB LAeq (15min) 75 dB LAFmax
Other Zones	The limits in NOISE-APP1: Noise limits by emitting and receiving zone apply.			

NOISE-APPxxx	Noise limits for temporary military training activities
Noise from temporary military training activities from weapons firing or the use of explosives	
<u>Notice of the activity must be provided to the Council in writing at least 5 working days prior to the commencement of the activity.</u> <u>The activity must either:</u> <u>Be separated from any activity sensitive to noise by at least:</u> <u>500 metres, from 7am to 7pm, and</u> <u>1250 metres, from 7pm to 7am, or</u> <u>Not exceed a peak sound pressure level of:</u> <u>95 dBC from 7am to 7pm, and</u> <u>85 dBC from 7pm to 7am.</u> <u>In clause 2, the assessment location is:</u> <u>From 7am-7pm:</u> <u>At any location within the notional boundary of the activity sensitive to noise in any Rural Zone or Natural Open Space Zone, and</u> <u>At any location within a site containing an activity sensitive to noise in any other zone, and</u> <u>From 7pm-7am:</u> <u>Within 1m of the façade of a building containing an activity sensitive to noise.</u> <u>Note: noise from the activity from all sources other than weapons firing and explosives must meet the conditions in the table row below.</u>	
Noise from temporary military training activity from all other sources	

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1. <u>The noise shall be:</u> a. <u>Measured in accordance with NZS 6801:2008 (Acoustics - Measurement of Environmental Sound), and</u> b. <u>Assessed in accordance with NZS 6802:2008 (Acoustics - Environmental Noise), including consideration of special audible characteristics, except where the type of noise being assessed does not fall within the scope of that standard.</u> 2. <u>The activity shall comply with the following noise levels:</u> a. <u>From 7am-7pm: 55 dB $L_{Aeq(15\ min)}$</u> b. <u>From 7pm-7am: 55 dB $L_{Aeq(15\ min)}$ and 75 dB L_{AFmax}</u> 3. <u>In clause 2, the assessment location is:</u> a. <u>From 7am-7pm:</u> i. <u>At any location within the notional boundary of the activity sensitive to noise in any Rural Zone or Natural Open Space Zone, and</u> ii. <u>At any location within a site containing an activity sensitive to noise in any other zone, and</u> b. <u>From 7pm-7am:</u> i. <u>Within 1m of the façade of a building containing an activity sensitive to noise.</u>
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NOISE-APP4	Noise limits for major events
1. <u>The noise shall be:</u> a. <u>Measured in accordance with NZS 6801:2008 (Acoustics - Measurement of Environmental Sound), and</u> b. <u>Assessed in accordance with NZS 6802:2008 (Acoustics - Environmental Noise), except:</u> i. <u>That no duration adjustment or correction for special audible characteristics provided for in sections 6.3 and 6.4 of the standard shall be applied, and</u> ii. <u>The standard shall not be applied where the type of noise being assessed does not fall within the scope of that standard.</u> 2. The limits in this table apply only to activities of the major event occurring within the relevant Major Event Overlay, during the hours specified. At other times or locations, the standards in NOISE-S3/NOISE-APP3 apply. 3. The noise limits apply at: a. Any point within the notional boundary of an activity sensitive to noise in a Rural Zone, and b. Any point within another site in a zone other than the Rural Zone or the Open Space and Recreation Zones. 4. <u>Noise from sound testing must only occur between the hours of 7:00am and 5.00pm on weekdays, and 10:00am and 5:00pm on Saturday, Sunday, or public holidays.</u> 5. <u>Helicopters must not be used (except for emergency purposes).</u> 6. <u>Drones must not be used outside the Major Events Overlay.</u> 7. <u>For concert events, the event organiser shall ensure a letter drop is undertaken informing local residents of the time and duration of the concert and any sound checks. Letters shall be</u>	Commented [SD22]: Numbering added to organise new provisions - minor change for usability Commented [SD23]: Laura Skilton (314.88a)

delivered to all properties within 200m of the venue as well as any additional properties which may be subject to noise levels above the permitted noise limits in NOISE-APP1: Noise limits by emitting and receiving zone. Letters must arrive at least one week prior to an event taking place.

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Major Event Overlay	Hours during which major event noise limits apply	Noise limits
Hutt Recreation Ground McEwan Park	10:00am to 11:00pm (Friday and Saturday) 10:00am to 10:00pm (other days)	75 dB LAeq (15min) 95 dB Lzeq (15min) at 63 Hz 90 dB Lzeq (15min) at 125 Hz 85 dB LAFmax
Williams Park	10:00am to 9:00pm	75 dB LAeq (15min) 95 dB Lzeq (15min) at 63 Hz 90 dB Lzeq (15min) at 125 Hz 85 dB LAFmax

NOISE-APP5	Minimum construction schedule for noise insulation (to achieve $D_{tr,2m,nTw} > 35dB$)	
Building Element	Minimum Construction Requirement	
	Note: This schedule assumes and requires construction that complies with the Building Code. These requirements are in addition to the requirements of that Code. Where compliance with this schedule is not met, or for other building or construction materials not included in this schedule, compliance with NOISE-S5 or NOISE-S7 must be demonstrated by a suitably qualified specialist. The table refers to common specifications for timber size. Nominal specifications may in some cases be slightly less than the common specifications stated in the schedule for timber size. In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the jointing capping and guttering detail used in normal construction.	
External walls of habitable rooms	Option A	Light cladding on timber or steel framed stud walls Timber weatherboard or sheet materials with surface mass between 16kg/m² and 30kg/m² of wall cladding, and Internal lining of minimum 17kg/m² plasterboard, such as two layers of 10mm thick high-density plasterboard, on resilient/isolating mountings.
	Option B	Medium cladding on timber or steel framed stud walls Surface mass between 30kg/m² and 65kg/m², and Internal lining of minimum 17kg/m² plasterboard, such as two layers of 10mm thick high-density plasterboard.
	Option C	Heavy cladding on timber or steel framed stud walls Surface mass over 65kg/m², and Internal lining of minimum 6kg/m² plasterboard, such as one layer of 10mm thick plasterboard.
	Option D	Mass wall: concrete block

		Minimum concrete block thickness of 190mm, strapped, and internal lining of minimum 6kg/m ² plasterboard, such as one layer of 10mm thick plasterboard.
	Option E	Mass wall: solid concrete Minimum concrete wall thickness of 150mm.
External wall cavities of habitable rooms		Wall cavity infill of fibrous insulation, batts or similar, with a minimum density of 9kg/m ³ .
Glazed areas of habitable rooms (including glazed exterior doors)	Option A	Double-glazing with: a. At least one laminated pane of glass of at least 6mm thick, b. A cavity between the two panes of glass at least 12mm deep, and c. At least one more pane of glass at least 6mm thick.
	Option B	Any other glazing with minimum performance $R_w + C_{tr}$ 34dB.
	Required for both options	Aluminium, timber, or vinyl frame, Fixed panes and/or compression seals on opening panes (other than sliding doors and windows), and Glazed areas must be no more than 35% of room floor area.
Exterior doors of habitable rooms (excluding where glazed)	Option A	Solid core exterior door, minimum surface mass 20kg/m ² with compression seals.
	Option B	Other door set with minimum performance R_w 30dB.
	Option C	Door has edge and threshold compression seals and is shielded by the building so that there is no line of sight to the highway road surface or any point 3.8m directly above railway tracks. (This option is only available where compliance is required with NOISE-S5, due to being within the Highway and Railway High Noise Overlay, but compliance is not required with NOISE-S7).
Roof	Option A	Skillion roof with light cladding Surface mass up to 43kg/m² 20kg/m² of roof cladding, and Internal lining of minimum 47kg/m² 25kg/m² plasterboard, such as two layers of 40mm 13mm thick high-density plasterboard.
	Option B	Pitched roof with light cladding Surface mass up to 20kg/m ² of roof cladding, and Internal lining of minimum 17kg/m ² plasterboard, such as two layers of 10mm thick high-density plasterboard.
	Option C	Any roof with heavy cladding Surface mass over 20kg/m ² of roof cladding, and Internal lining of minimum 6kg/m ² plasterboard, such as one layer of 10mm thick plasterboard.
		Ceiling penetrations, such as for recessed lighting or ventilation, shall not allow additional noise break-in.
Ceiling cavity		Ceiling cavity infill of fibrous insulation, batts or similar, with a minimum density of 7kg/m ² .

Commented [SD25]: Policy Planning Team (440.58)

NOISE-APP6	Minimum construction schedule for noise insulation (to achieve $D_{tr,2m,nTw} > 30dB$)	
Building Element	Minimum Construction Requirement Note: This schedule assumes and requires construction that complies with the Building Code. These requirements are in addition to the requirements of that code. Where compliance with this schedule is not met, or for other building or construction materials not included in this schedule, compliance with NOISE-S6 or NOISE-S8 must be demonstrated by a suitably qualified specialist. The table refers to common specifications for timber size. Nominal specifications may in some cases be slightly less than the common specifications stated in the schedule for timber size. In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the joining capping and guttering detail used in normal construction. For each building element in this table, compliance may alternatively be achieved with the relevant requirement in NOISE-APP5 instead.	
External walls of habitable rooms	Option A	Light cladding on timber or steel framed stud walls Timber weatherboard or sheet materials with surface mass between $8kg/m^2$ and $25kg/m^2$ of wall cladding, and Internal lining of minimum $17kg/m^2$ plasterboard, such as two layers of 10mm thick high-density plasterboard, on resilient/isolating mountings, and Combined superficial density of at least $25kg/m^2$, being the combined mass of external and internal linings excluding structural elements (e.g. window frames or wall studs) with no less than $10kg/m^2$ on each side of structural elements.
	Option B	Medium or heavy cladding on timber or steel framed stud walls Surface mass over $25kg/m^2$ of wall cladding, and Internal lining of minimum $6kg/m^2$ plasterboard, such as one layer of 10mm thick plasterboard, and Combined superficial density of at least $25kg/m^2$, being the combined mass of external and internal linings excluding structural elements (e.g. window frames or wall studs) with no less than $10kg/m^2$ on each side of structural elements.
	Option C	Mass wall: concrete block Minimum concrete block thickness of 190mm, strapped, and internal lining of minimum $6kg/m^2$ plasterboard, such as one layer of 10mm thick plasterboard.
	Option D	Mass wall: solid concrete Minimum concrete wall thickness of 150mm.
External wall cavities of habitable rooms	Wall cavity infill of fibrous insulation, batts or similar, with a minimum density of $9kg/m^3$.	
Glazed areas of habitable rooms	Option A	At least one pane at least 6mm thick, with glazed area no more than 10% of floor area.

(including glazed exterior doors)	Option B	At least one laminated pane at least 6mm thick, with glazed area no more than 35% of floor area.
	Option C	Any other glazing with minimum performance R_w 33dB, with glazed area no more than 35% of floor area.
	Required for all options	Aluminium, timber, or vinyl frame, and Fixed panes and/or compression seals on opening panes (other than sliding doors and windows).
Exterior doors of habitable rooms (excluding where glazed)	Option A	Solid core exterior door, minimum surface mass 24kg/m^2 with edge and threshold compression seals.
	Option B	Other door set with minimum performance R_w 30dB.
	Option C	Door has edge and threshold compression seals and is shielded by the building so that there is no line of sight to the highway road surface or any point 3.8m directly above railway tracks. (This option is only available where compliance is required with NOISE-S6, due to being within the Highway and Railway Moderate Noise Overlay, but compliance is not required with NOISE-S8).
Roof	Option A	Skillion roof with light cladding Surface mass up to 20kg/m^2 13kg/m^2 of roof cladding, and Internal lining of minimum 25kg/m^2 17kg/m^2 plasterboard, such as two layers of 43mm 10mm thick high-density plasterboard.
	Option B	Pitched roof with light cladding Surface mass up to 20kg/m^2 of roof cladding, and Internal lining of minimum 17kg/m^2 plasterboard, such as two layers of 10mm thick high-density plasterboard.
	Option C	Any roof with heavy cladding Surface mass over 20kg/m^2 of roof cladding. No other requirements over Building Code.
	Ceiling penetrations, such as for recessed lighting or ventilation, shall not allow additional noise break-in.	
Ceiling cavity	Ceiling cavity infill of fibrous insulation, batts or similar, with a minimum density of 7kg/m^2 .	

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NOISE-APP7	Ventilation
Minimum Ventilation Requirement Note: This schedule assumes and requires construction that complies with the Building Code. These requirements are in addition to the requirements of that code. A positive supplementary source of fresh air ducted from outside must be provided which complies with the following: - Each habitable room is to be provided with a mechanical ventilation system with air flow rates adjustable by the occupant in increments up to a high air flow setting of at least three air changes per hour, - Each habitable room is provided with cooling and heating that is controllable by the occupant and can maintain the inside temperature between 18°C and 25°C, - Noise from the operation of the ventilation system must not exceed $30\text{ dB LAeq}(30\text{s})$ when measured 1m away from any internal grille or diffuser.	

TEMP — Temporary Activities

A wide range of temporary activities contribute to the vibrancy, diversity, and prosperity of Lower Hutt. These activities include community, cultural, and economic events on a large and small scale, open to the public or in private.

The benefits of temporary activities and the limited duration of adverse effects mean that those effects are likely to be more acceptable to the community. This chapter therefore provides a more liberal pathway for certain temporary activities in zones where they might not otherwise be provided for. Temporary activities are permitted where they meet certain standards. Where they exceed the thresholds in those standards, operators can apply for resource consents which assess the effects of those activities case by case.

Temporary Activities in the Hazardous Substances Risk Management Overlay, and also in the remainder of the Seaview Marina Zone face an additional standard to manage residual risk from activities using hazardous substances in the area.

Commented [SD1]: Fuel Companies (471.227)

Temporary activities are also managed by the Council through bylaws and other local government powers such as by being the road controlling authority on roads, and being the owner of many public open space sites frequently used for events.

Objectives

TEMP-O1	Benefits of temporary activities
A broad range of temporary activities contribute to making Lower Hutt a vibrant, diverse, and prosperous city.	
TEMP-O2	Adverse effects of temporary activities
Temporary activities occur in ways that: 1. Protect cultural and heritage values, people's health and safety, and the natural environment, 2. Protect public access to lakes, rivers, and the coast, 3. Do not detract from public access to public spaces (other than any public space in which the temporary activity occurs) and the operations and capacity of the transport network more than is reasonable considering the benefits of the activity, 4. Do not detract from amenity values more than is reasonable considering the benefits of the activity, and 5. Have only temporary adverse effects.	

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Policies

TEMP-P1	Recognise benefits of temporary activities
Recognise that a wide range of temporary activities have social, economic, cultural, and environmental benefits for the wellbeing of people and communities.	
TEMP-P2	Recognise limited duration of effects
Recognise that the limited duration and infrequent recurrence of temporary activities limits the impact of their adverse effects and makes those effects more likely to be acceptable to the community.	
TEMP-P3	Provide for temporary activities
Provide for temporary activities where the adverse effects are temporary and are acceptable,	

considering the scale of the benefits of those temporary activities.	
TEMP-P4	Minimising certain effects of temporary activities
Minimise the adverse effects of temporary activities on:	
1. Cultural values of listed sites of significance to Māori, where those effects are unreasonable in duration or irreversible; 2. Heritage values of listed heritage items, where those effects are unreasonable in duration or irreversible; 3. People's health and safety, including the safety of the transport network, <u>and</u> 4. The natural environment, and 5. Public access to lakes, rivers, and the coast.	
TEMP-P5	When effects of temporary activities on public access to public spaces must be mitigated
Mitigate the adverse effects of temporary activities on public access to public spaces, including streets, but not including any public space in which the temporary activity occurs, that are:	
1. Unreasonable in duration, or 2. Disproportionate to the scale and benefits of the activity.	
TEMP-P6	When effects of temporary activities on amenity values must be mitigated
Mitigate the adverse effects of temporary activities on the peace, privacy, quiet, and other amenity values of nearby areas, particularly rural areas, residential areas, and public spaces, including streets, that are:	
1. Unreasonable, considering the planned place function of those streets and the planned purpose and character of the zones and precincts covering those other nearby areas, or 2. Unreasonable in duration, or 3. Disproportionate to the scale and benefits of the activity.	
TEMP-P7	When effects of temporary activities on transport network operations and capacity must be mitigated
Mitigate the adverse effects of temporary activities on the operations and capacity of the transport network that are:	
1. Unreasonable, considering the planned place function and movement function of the relevant parts of the transport network, or 2. Unreasonable in duration, or 3. Disproportionate to the scale and benefits of the activity.	
TEMP-P8	Encourage events to be conveniently accessible
Maximise the community benefits of large temporary activities that are open to the public (whether for a fee or otherwise) by encouraging them to be located and managed to be accessible to the widest possible range of people by active transport and public transport, while recognising that those activities may have functional needs or operational needs for their location.	
TEMP-Pxxx	Manage hazardous substances risk to temporary activities within the Hazardous Substances Risk Management Overlay and the remainder of the Seaview Marina Zone
Manage larger-scale or longer duration temporary activities within the Hazardous Substances Risk Management Overlay and the remainder of the Seaview Marina Zone by:	
1. Requiring temporary activities to be assessed to ensure that they do not expose people to unacceptable residual risk;	

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Commented [SD5]: Fuel Companies (471.229)

2.

Ensuring temporary activities are timed and operated in a manner that reduces potential exposure to hazardous substance risk, including through coordination with nearby hazardous facilities; and
3.

Minimising reverse sensitivity on existing significant hazardous facilities while enabling appropriate temporary use of land consistent with the purpose of the zone.

Rules

Where the rules in this chapter apply, they take precedence over the rules of any zone or precinct, and take precedence over the rules of the Signs chapter.

All other district-wide rules and the rules of any overlay in Part 2 of the plan apply in addition to this chapter. Where resource consent is required for a temporary activity under a rule in any other chapter the objectives and policies of this chapter should still be considered.

Where an activity is not included in any rule in this chapter, the chapter does not apply, and all relevant zone, precinct, and district-wide rules apply.

TEMP-R1	Temporary activities
All zones	1. Activity status: Permitted Where: a. Compliance is achieved with: i. TEMP-S1: Duration, ii. TEMP-S2: Recurrence, iii. TEMP-S3: Hours of operation, iv. TEMP-S4: Transport, and v. TEMP-S5: Restoration of site, and vi. Within the Hazardous Substances Risk Management Overlay or Seaview Marina Zone, TEMP-Sxxx: Hazardous substance risk

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	relevant zone and any precincts apply.
TEMP-R2	Construction of temporary buildings, structures, and features
All zones	1. Activity status: Permitted Where: a. Compliance is achieved with TEMP-S6: Buildings, Structures, and Features, and b. The buildings, structures, and features relate to: i. A temporary activity that is permitted by TEMP-R1.1, or ii. A temporary activity that is authorised by a resource consent under TEMP-R1.2, or iii. An activity other than a temporary activity that is permitted under this plan.
All zones	2. Activity status: Restricted discretionary Where: a. Compliance is not achieved with TEMP-S6: Buildings, Structures, and Features, and b. The buildings, structures, and features relate to: i. a temporary activity that is permitted by TEMP-R1.1, or ii. a temporary activity that is authorised by a resource consent under TEMP-R1.2, or iii. an activity other than a temporary activity that is permitted under this plan. Matters of discretion are restricted to: 1. Positive effects. 2. The matters of discretion in any standard not met. Note: Where compliance is not achieved with TEMP-R2.1 or TEMP-R2.2, this rule does not apply and the rules of the relevant zone and any precincts apply.

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Standards

TEMP-S1	Duration
All zones	1. The duration of temporary activities, including multiple temporary activities on the same site, must not exceed 6 consecutive days, excluding: a. The erection and removal of associated temporary buildings, structures, and features, b. Other associated set up and pack up activities, and c. The removal of waste and restoration of the site as required by TEMP-S5. 2. The duration of temporary activities including the associated set up and pack up activities of TEMP-S1.1b and the removal of waste and restoration of the site required by TEMP-S1.1c must not exceed 10 consecutive days. Matters of discretion if the standard is breached: 1. Cultural values of sites of significance to Māori listed in SCHED6 – Sites and Areas of Significance to Māori. 2. People's health and safety. 3. Public access to lakes, rivers, the coast, and public spaces, including streets. 4. The amenity values of nearby areas, including streets.

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	5. The safe and efficient transportation of people to and from the event. 6. The extent to which transportation of people to and from the event can make use of active transport and public transport. 7. The effects of the event on transport network operations, safety and capacity.
Commercial and mixed use zones Open Space and Recreation Zones Light Industrial Zone Hospital Zone Tertiary Education Zone Marae Zone Quarry Zone (except in legal road)	1. A site must not be occupied for temporary activities on more than 60 days in any calendar year. Matters of discretion if the standard is breached: 1. Cultural values of sites of significance to Māori listed in SCHED6 – Sites and Areas of Significance to Māori. 2. Heritage values of heritage items listed in SCHED1 – Heritage Buildings and Structures or SCHED2 – Heritage Areas. 3. People's health and safety. 4. Public access to lakes, rivers, the coast, and public spaces, including streets. 5. The amenity values of nearby areas, including streets. 6. The safe and efficient transportation of people to and from the event. 7. The extent to which transportation of people to and from the event can make use of active transport and public transport. 8. The effects of the event on transport network safety and capacity.
Residential Zones Rural Zones (except in legal road)	1. A site must not be occupied for temporary activities that consist of filming on location, temporary military training activities, or emergency response training, on more than 30 days in any calendar year. 2. A site must not be occupied for any other temporary activities on more than 10 days in any calendar year. 3. A site must not be used for more than 3 temporary activities in any calendar year. Matters of discretion if the standard is breached: 1. Cultural values of sites of significance to Māori listed in SCHED6 - Sites and Areas of Significance to Māori. 2. Heritage values of heritage items listed in SCHED1 - Heritage Buildings and Structures or SCHED2 - Heritage Areas. 3. People's health and safety. 4. Public access to lakes, rivers, the coast, and public spaces, including streets. 5. The amenity values of nearby areas, including streets. 6. The safe and efficient transportation of people to and from the event. 7. The extent to which transportation of people to and from the event can make use of active transport and public transport. 8. The effects of the event on transport network safety and capacity.
Heavy Industrial Zone General Industrial Zone Seaview Marina Zone	1. A site must not be occupied for temporary activities that consist of filming on location, temporary military training activities, or emergency response training, on more than 30 days in any calendar year. 2. A site must not be occupied for any other temporary activities on more than 10 days in any calendar year. 3. A site must not be used for more than 3 temporary activities in any calendar year. Matters of discretion if the standard is breached:

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(except in legal road)	1. Cultural values of sites of significance to Māori listed in SCHED6 – Sites and Areas of Significance to Māori. 2. Heritage values of heritage items listed in SCHED1 – Heritage Buildings and Structures or SCHED2 – Heritage Areas. 3. People's health and safety. 4. Public access to lakes, rivers, the coast, and public spaces, including streets. 5. The amenity values of nearby areas, including streets. 6. The safe and efficient transportation of people to and from the event. 7. The extent to which transportation of people to and from the event can make use of active transport and public transport. 8. The effects of the event on transport network safety and capacity. 9. Reverse sensitivity effects on major hazard facilities and other heavy industrial activities.
In legal road	1. This standard does not apply in legal road. Note: The Council as road controlling authority has the power to restrict and manage activities in legal road.
TEMP-S3	Hours of operation
City Centre Zone	There are no requirements of this standard.
General Rural Zone	1. Temporary activities must only operate between the hours of: a. Sunday to Thursday - 7.00am to 10.00pm. b. Friday and Saturday - 7.00am to 11.00pm. 2. Associated set up and pack up activities may also occur up to one hour before or after the times in TEMP-S3.1. 3. Filming on location may occur outside the hours in TEMP-S3.1 for up to 10 nights per site per calendar year. 4. This standard does not apply to any associated overnight accommodation for staff. 5. This standard does not apply to the evening of New Year's Eve, the morning of New Year's Day, the morning of ANZAC Day, and the morning of Matariki (observed). Matters of discretion if the standard is breached: 1. Cultural values of sites of significance to Māori listed in SCHED6 – Sites and Areas of Significance to Māori. 2. People's health and safety. 3. The amenity values of nearby areas, including streets. 4. The safe and efficient transportation of people to and from the event. 5. The extent to which transportation of people to and from the event can make use of active transport and public transport. 6. The effects of the event on transport network safety and capacity.
Industrial Zones	
Metropolitan Centre Zone	
Local Centre Zone	
Neighbourhood Centre Zone	
Mixed Use Zone	
Seaview Marina Zone	
Hospital Zone	
Tertiary Education Zone	
Marae Zone	
Quarry Zone	
Natural Open Space Zone	
Sport and Active	

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Policy Planning team of Hutt City Council (440.3)

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Recreation Zone	
Open Space Zone	
Residential Zones Rural Lifestyle Zone	- Temporary activities must only operate between the hours of: - Sunday to Thursday - 7.30am to 9.00pm, and - Friday and Saturday - 7.30am to 10.00pm. - Associated pack up activities may also occur up to one hour after the times in TEMP-S3.1. - Filming on location may occur outside the hours in TEMP-S3.1 for up to 5 nights per site per calendar year. - This standard does not apply to any associated overnight accommodation for staff. - This standard does not apply to the evening of New Year's Eve, the morning of New Year's Day, the morning of ANZAC Day, and the morning of Matariki (observed). Matters of discretion if the standard is breached: Cultural values of sites of significance to Māori listed in SCHED6—Sites and Areas of Significance to Māori. - People's health and safety. - The amenity values of nearby areas, including streets. - The safe and efficient transportation of people to and from the event. - The extent to which transportation of people to and from the event can make use of active transport and public transport. - The effects of the event on transport network safety and capacity.
TEMP-S4	Transport
City Centre Zone Metropolitan Centre Zone Major Events Overlay	- Temporary activities may not have more than 2,000 persons on site at any one time. - Temporary activities may not be a drive-through activity. Matters of discretion if the standard is breached: - The safe and efficient transportation of people to and from the event. - The extent to which transportation of people to and from the event can make use of active transport and public transport. - The effects of the event on transport network safety and capacity. - An event transport management plan to address those matters. - Management of the event in accordance with that plan.
Local Centre Zone Light Industrial Zone Open Space Zone Sport and Active Recreation Zone Tertiary Education Zone Hospital Zone Marae Zone	- Temporary activities may not have more than 1,000 persons on site at any one time. - Temporary activities may not be a drive-through activity. Matters of discretion if the standard is breached: - The safe and efficient transportation of people to and from the event. - The extent to which transportation of people to and from the event can make use of active transport and public transport. - The effects of the event on transport network safety and capacity. - An event transport management plan to address those matters. - Management of the event in accordance with that plan.

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Seaview Marina Zone (except in the Major Events Overlay)	
Natural Open Space Zone Quarry Zone Rural Zones General Industrial Zone Heavy Industrial Zone Residential Zones Neighbourhood Centre Zone Mixed Use Zone (except in the Major Events Overlay)	1. Temporary activities may not have more than 500 persons on site at any one time. 2. Temporary activities may not be a drive-through activity. Matters of discretion if the standard is breached: 1. The safe and efficient transportation of people to and from the event. 2. The extent to which transportation of people to and from the event can make use of active transport and public transport. 3. The effects of the event on transport network safety and capacity. 4. An event transport management plan to address those matters. 5. Management of the event in accordance with that plan.
TEMP-S5	Restoration of site
All Zones	1. All waste must be removed and the site restored following the temporary activity. 2. The required site restoration excludes any permanent alterations that would be permitted activities if not for the provisions of this chapter. Note: TEMP-S1 sets out the time limit in which this standard must be met, and the matters of discretion if that time limit is exceeded. Note: Where this standard is not met, then the activity will not meet the definition of a temporary activity. In such a case this chapter does not apply and the relevant zone and precinct rules apply.
TEMP-S6	Buildings, structures, and features
Commercial and mixed use zones Industrial zones Open Space and	1. Any temporary buildings, structures, and features that do not comply with any relevant standards for buildings, structures and features in the relevant zone or precinct: a. Must not begin construction earlier than 7 days before the temporary activity, if they relate to a temporary activity, b. Must be removed within 7 days of the end of the temporary

Recreation Zones Seaview Marina Zone Hospital Zone Tertiary Education Zone Marae Zone	activity, if they relate to a temporary activity, and c. Must be completely removed within 21 days of construction beginning. Matters of discretion if the standard is breached: 1. Cultural values of sites of significance to Māori listed in SCHED6 – Sites and Areas of Significance to Māori. 2. Heritage values of heritage items listed in SCHED1 – Heritage Buildings and Structures or SCHED2 – Heritage Areas. 3. People's health and safety, including the safety of the transport network. 4. Effects on the natural environment. 5. Public access to lakes, rivers, the coast, and public spaces, including streets. 6. The amenity values of nearby areas, including streets. 7. The capacity of the transport network. 8. Effects from construction and demolition. Note: In this standard, "relevant standards" in zones includes only the zone's standards (i.e. those numbered S1, S2, etc.), and not conditions within rules.
Residential Zones Rural Zones Quarry Zone	1. Any temporary buildings, structures, and features must comply with any relevant standards for buildings, structures, and features in the relevant zone or precinct. Matters of discretion if the standard is breached: 1. Cultural values of sites of significance to Māori listed in SCHED6 – Sites and Areas of Significance to Māori. 2. Heritage values of heritage items listed in SCHED1 – Heritage Buildings and Structures or SCHED2 – Heritage Areas. 3. People's health and safety, including the safety of the transport network. 4. Effects on the natural environment. 5. Public access to lakes, rivers, the coast, and public spaces, including streets. 6. The amenity values of nearby areas, including streets. 7. The capacity of the transport network. 8. Effects from construction and demolition. Note: In this standard, "relevant standards" in zones includes only the zone's standards (i.e. those numbered S1, S2, etc.), and not conditions within rules.
TEMP-Sxxx	Hazardous substances risk
Hazardous Substances Risk Management Overlay Seaview Marina Zone	1. Temporary activities may not have more than 250 persons on site at any one time. Matters of discretion if the standard is breached: 1. The extent to which people are exposed to unacceptable residual risk from existing significant hazardous facilities. 2. The timing and operation of the temporary activity, including coordination with hazardous substance activities and operational practices. 3. Measures to avoid, remedy, or mitigate residual risk, including layout of the temporary activity, type and duration of the activity and expected demographic and number of people attending the activity, and emergency, evacuation and management plan.

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Commented [SD25]: Fuel Companies (471.230)

Appendix 2: Recommended decisions on submissions on Light, Noise, and Temporary Activities

Light

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Z Energy Limited	468	10c	Definitions	Activity sensitive to light	Support	Accept
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	3	Definitions	Activity sensitive to light	Support	Accept
Winstone Aggregates	444	35	LIGHT - Light	Light Table-1	Support	Accept in part
NZ Transport Agency Waka Kotahi	385	68	LIGHT - Light	LIGHT-P1 (Providing for and managing artificial lighting)	Support	Accept in part
Policy Planning team of the Hutt City Council	440	57	LIGHT - Light	LIGHT-R1 (Artificial light)	Oppose in part	Accept
NZ Transport Agency Waka Kotahi	385	69	LIGHT - Light	LIGHT-S1 (Light spill)	Support	Accept in part
NZ Transport Agency Waka Kotahi	385	70	LIGHT - Light	LIGHT-S2, LIGHT-S4, LIGHT-S5	Support	Accept in part
Laura Skilton	314	95	LIGHT - Light	LIGHT-TABLE1 (Illumination at site boundary, boundary of light sensitive area, or window)	Neutral	Accept

Noise

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
NZ Transport Agency Waka Kotahi	385	76b	NOISE - Noise	NOISE-S5, NOISE-S6	Oppose in part	Reject
Wellington Regional Council	F38	20	NOISE - Noise	NOISE-S5, NOISE-S6	Support 385.76b	Reject
NZ Transport Agency Waka Kotahi	385	3	Definitions	Activity sensitive to noise	Support in part	Accept
Ministry of Education	399	4	Definitions	Activity sensitive to noise	Support	Accept

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
New Zealand Defence Force	404	06	Definitions	Activity sensitive to noise	Support	Accept
KiwiRail Holdings Ltd	442	03	Definitions	Activity sensitive to noise	Support in part	Reject
Z Energy Limited	468	10d	Definitions	Activity sensitive to noise	Support	Accept
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	4	Definitions	Activity sensitive to noise	Support	Accept
NZ Agricultural Aviation Association	231	01	Definitions	Agricultural aviation activity	Support in part	Accept in part
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	10	Definitions	Best practicable option	Support	Accept
NZ Transport Agency Waka Kotahi	385	10	Definitions	Highway and Railway Noise Overlay	Support	Accept in part
NZ Transport Agency Waka Kotahi	385	71	Maps - Energy, Infrastructure, and Transport Overlays	Highway and Railway Noise Overlay	Oppose in part	Accept in part
KiwiRail Holdings Ltd	442	06	Definitions	Highway and Railway Noise Overlay	Support in part	Reject
Z Energy Limited	468	1b	Maps - Energy, Infrastructure, and Transport Overlays	Highway and Railway Noise Overlay - 453 Hutt Road	Support	Accept
Z Energy Limited	468	6e	Maps - Energy, Infrastructure, and Transport Overlays	Highway and Railway Noise Overlay - 60 Hutt Road	Support	Accept

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
KiwiRail Holdings Ltd	442	81a	Maps - Energy, Infrastructure, and Transport Overlays	Highway and Railway Noise Overlay - High	Oppose	Accept in part
KiwiRail Holdings Ltd	442	81b	Maps - Energy, Infrastructure, and Transport Overlays	Highway and Railway Noise Overlay - Moderate	Oppose	Accept in part
Policy Planning team of the Hutt City Council	440	12	Definitions	Best practicable option	Support in part	Reject
KiwiRail Holdings Ltd	442	14	Definitions	New definition - "Rail Vibration Alert Area Overlay"	Oppose (requesting new provision)	Reject
NZ Helicopter Association	215	02	Definitions	New definition - Helicopter landing area	Oppose (requesting new provision)	Reject
NZ Agricultural Aviation Association	231	03	Definitions	New definition - Helicopter landing area	Oppose (requesting new provision)	Reject
NZ Helicopter Association	215	03	Definitions	New definition - Heliport	Oppose (requesting new provision)	Reject
NZ Agricultural Aviation Association	231	04	Definitions	New definition - Heliport	Oppose (requesting new provision)	Reject
Te Kārearea Ltd and Rosco Ice Cream Ltd	447	12b	Definitions	New definition - vibration	Oppose (requesting new provision)	Reject
NZ Agricultural Aviation Association	231	06	Definitions	New definition -Rural airstrip	Oppose (requesting new provision)	Reject
NZ Transport Agency Waka Kotahi	385	75	NOISE - Noise	New policy - Noise related effects from State Highways and the Rail Network	Oppose (requesting new provision)	Reject
Wellington Regional Council	F38	18	NOISE - Noise	New policy - Noise related effects from State Highways and the Rail Network	Support 385.75	Reject
New Zealand Defence Force	404	22a	NOISE - Noise	New rule	Oppose (requesting new provision)	Accept in part

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Z Energy Limited	468	24	NOISE - Noise	New standard - NOISE-S9 (Acoustic insulation and ventilation for activities sensitive to noise on sites adjoining or opposite to Industrial Zones), NOISE-R8 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise)	Multiple	Reject
Z Energy Limited	468	10j	Definitions	Best practicable option	Support	Accept
KiwiRail Holdings Ltd	442	11	Definitions	Noise	Support	Accept
Te Kārearea Ltd and Rosco Ice Cream Ltd	447	12a	Definitions	Noise	Oppose in part	Reject
Federated Farmers of New Zealand	410	55	NOISE - Noise	Noise chapter	Support	Accept
Winstone Aggregates	444	18	NOISE - Noise	NOISE-APP1 (Noise limits by emitting and receiving zone)	Oppose in part	Reject
McDonald's Restaurants (NZ) Limited	174	8	NOISE - Noise	NOISE-APP1 (Noise limits by emitting and receiving zone)	Oppose in part	Reject
Bunnings Ltd	F18	4	NOISE - Noise	NOISE-APP1 (Noise limits by emitting and receiving zone)	Support 174.8	Reject
Laura Skilton	314	92	NOISE - Noise	NOISE-APP1 (Noise limits by emitting and receiving zone)	Oppose	Reject
Winstone Aggregates	444	19	NOISE - Noise	NOISE-APP2 (Noise limits for construction activities)	Oppose in part	Accept in part
Laura Skilton	314	93	NOISE - Noise	NOISE-APP2 (Noise limits for construction activities)	Oppose	Reject
Laura Skilton	314	94	NOISE - Noise	NOISE-APP3 (Noise limits for temporary activities)	Neutral	Reject

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Laura Skilton	314	90g	NOISE - Noise	NOISE-APP5 (Minimum construction schedule for noise insulation (to achieve Dtr,2m,nTw > 35dB))	Neutral	Reject
Policy Planning team of the Hutt City Council	440	58	NOISE - Noise	NOISE-APP5 (Minimum construction schedule for noise insulation (to achieve Dtr,2m,nTw > 35dB))	Oppose in part	Accept
Laura Skilton	314	90h	NOISE - Noise	NOISE-APP6 (Minimum construction schedule for noise insulation (to achieve Dtr,2m,nTw > 30dB))	Neutral	Reject
Policy Planning team of the Hutt City Council	440	59	NOISE - Noise	NOISE-APP6 (Minimum construction schedule for noise insulation (to achieve Dtr,2m,nTw > 30dB))	Oppose in part	Accept
Laura Skilton	314	90i	NOISE - Noise	NOISE-APP7 (Ventilation)	Neutral	Reject
Ministry of Education	399	45	NOISE - Noise	NOISE-O1 (Adverse effects of noise)	Support	Accept
Fire and Emergency New Zealand	374	63	NOISE - Noise	NOISE-O2 (Reverse sensitivity)	Support	Accept in part
NZ Transport Agency Waka Kotahi	385	72	NOISE - Noise	NOISE-O2 (Reverse sensitivity)	Support in part	Accept
Ministry of Education	399	46	NOISE - Noise	NOISE-O2 (Reverse sensitivity)	Support	Accept in part
New Zealand Defence Force	404	20	NOISE - Noise	NOISE-O2 (Reverse sensitivity)	Support	Accept in part
KiwiRail Holdings Ltd	442	71	NOISE - Noise	NOISE-O2 (Reverse sensitivity)	Support in part	Accept
NZ Transport Agency Waka Kotahi	385	73	NOISE - Noise	NOISE-P1 (Appropriate noise generating activities)	Support	Accept
Ministry of Education	399	47	NOISE - Noise	NOISE-P1 (Appropriate noise generating activities)	Support	Accept

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
New Zealand Defence Force	404	21	NOISE - Noise	NOISE-P1 (Appropriate noise generating activities)	Oppose	Accept in part
NZ Transport Agency Waka Kotahi	385	74	NOISE - Noise	NOISE-P3 (Reverse sensitivity)	Support in part	Reject
Ministry of Education	399	48	NOISE - Noise	NOISE-P3 (Reverse sensitivity)	Support	Accept
KiwiRail Holdings Ltd	442	72	NOISE - Noise	NOISE-P3 (Reverse sensitivity)	Support in part	Reject
Z Energy Limited	468	23	NOISE - Noise	NOISE-P3 (Reverse sensitivity)	Support in part	Reject
Manor Park and Haywards Residents Community Incorporated Society	377	10a	NOISE - Noise	NOISE-R1, NOISE-R2, NOISE-R5	Oppose in part	Accept in part
Waste Management NZ	F39	15	NOISE - Noise	NOISE-R1, NOISE-R2, NOISE-R5	Oppose 377.10a	Accept in part
Te Karearea Ltd / Rosco Ice Cream Ltd	F40	7	NOISE - Noise	NOISE-R1, NOISE-R2, NOISE-R5	Oppose 377.10a	Accept in part
Laura Skilton	314	84	NOISE - Noise	NOISE-R1. NOISE-S1, NOISE-APP1	Neutral	Accept in part
NZ Helicopter Association	215	05	NOISE - Noise	NOISE-R2 (Emission of noise from construction activities)	Support in part	Accept in part
Laura Skilton	314	85	NOISE - Noise	NOISE-R2, NOISE-S2, NOISE-APP2	Neutral	Accept in part
Fire and Emergency New Zealand	374	64	NOISE - Noise	NOISE-R3 (Emission of noise from temporary activities, other than Major Events within the Major Events Overlay)	Support	Accept
Laura Skilton	314	86	NOISE - Noise	NOISE-R3, NOISE-S3, NOISE-APP3	Oppose	Reject
Laura Skilton	314	87	NOISE - Noise	NOISE-R3, NOISE-S3, NOISE-APP3	Neutral	Accept in part
Laura Skilton	314	88b	NOISE - Noise	NOISE-R4 (Emission of noise from major events within the Major Events Overlay)	Neutral	Reject

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Laura Skilton	314	88a	NOISE - Noise	NOISE-R4, NOISE-S4, NOISE-APP4	Neutral	Accept in part
Laura Skilton	314	89	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Neutral	Reject
Manor Park and Haywards Residents Community Incorporated Society	377	10b	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose in part	Reject
Waste Management NZ	F39	16	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose 377.10b	Accept
Te Karearea Ltd / Rosco Ice Cream Ltd	F40	8	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose 377.10b	Accept
Manor Park and Haywards Residents Community Incorporated Society	377	10c	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose in part	Reject
Waste Management NZ	F39	17	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose 377.10c	Accept
Te Karearea Ltd / Rosco Ice Cream Ltd	F40	9	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose 377.10c	Accept
Te Kārearea Ltd and Rosco Ice Cream Ltd	447	12c	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose in part	Reject
Manor Park and Haywards Residents Community Incorporated Society	F10	9	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose 447.12c	Accept
Te Kārearea Ltd and Rosco Ice Cream Ltd	447	12d	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose in part	Reject
Manor Park and Haywards Residents Community Incorporated Society	F10	10	NOISE - Noise	NOISE-R5 (Activities that result in vibration)	Oppose 447.12d	Accept
Winstone Aggregates	444	12	NOISE - Noise	NOISE-R5.1.a (Activities that result in vibration)	Support in part	Reject
Winstone Aggregates	444	13	NOISE - Noise	NOISE-R5.1.b (Activities that result in vibration)	Support in part	Accept

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Winstone Aggregates	444	14	NOISE - Noise	NOISE-R6 (New buildings, or alteration and additions to existing buildings, to be used by an activity sensitive to noise within the Highway and Railway Noise Overlay - High)	Support in part	Accept in part
Laura Skilton	314	90a	NOISE - Noise	NOISE-R6 (New buildings, or alteration and additions to existing buildings, to be used by an activity sensitive to noise within the Highway and Railway Noise Overlay - High)	Neutral	Reject
NZTA	F20	23	NOISE - Noise	NOISE-R6 (New buildings, or alteration and additions to existing buildings, to be used by an activity sensitive to noise within the Highway and Railway Noise Overlay - High)	Oppose 314.90a	Accept
Ministry of Education	399	49	NOISE - Noise	NOISE-R6 (New buildings, or alteration and additions to existing buildings, to be used by an activity sensitive to noise within the Highway and Railway Noise Overlay - High)	Neutral	Accept
KiwiRail Holdings Ltd	442	73a	NOISE - Noise	NOISE-R6 (New buildings, or alteration and additions to existing buildings, to be used by an activity sensitive to noise within the Highway and Railway Noise Overlay - High)	Oppose	Reject
NZ Transport Agency Waka Kotahi	385	76a	NOISE - Noise	NOISE-R6, NOISE-R7	Oppose in part	Reject

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Wellington Regional Council	F38	19	NOISE - Noise	NOISE-R6, NOISE-R7	Support 385.76a	Reject
Laura Skilton	314	90b	NOISE - Noise	NOISE-R7 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise, within the Highway and Railway Noise Overlay - Moderate)	Neutral	Reject
NZTA	F20	24	NOISE - Noise	NOISE-R7 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise, within the Highway and Railway Noise Overlay - Moderate)	Oppose 314.90b	Accept
Ministry of Education	399	50	NOISE - Noise	NOISE-R7 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise, within the Highway and Railway Noise Overlay - Moderate)	Neutral	Accept
KiwiRail Holdings Ltd	442	73b	NOISE - Noise	NOISE-R7 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise, within the Highway and Railway Noise Overlay - Moderate)	Oppose	Reject
Laura Skilton	314	90c	NOISE - Noise	NOISE-R8 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise)	Neutral	Reject

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
NZTA	F20	25	NOISE - Noise	NOISE-R8 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise)	Oppose 314.90c	Accept
Ministry of Education	399	51	NOISE - Noise	NOISE-R8 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise)	Neutral	Accept in part
Winstone Aggregates	444	16a	NOISE - Noise	NOISE-R8.3 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise)	Amend	Accept
Winstone Aggregates	444	16b	NOISE - Noise	NOISE-R8.3 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise)	Support in part	Accept in part
Laura Skilton	314	91	NOISE - Noise	NOISE-R9 (Noise from aircraft at helicopter landing areas)	Neutral	Accept in part
Health NZ	F37	25	NOISE - Noise	NOISE-R9 (Noise from aircraft at helicopter landing areas)	Oppose 314.91	Accept in part
NZ Helicopter Association	215	06	NOISE - Noise	NOISE-R9 (Walking and cycling tracks)	Oppose in part	Accept in part
NZ Agricultural Aviation Association	231	08	NOISE - Noise	NOISE-R9 (Walking and cycling tracks)	Oppose in part	Accept in part
Winstone Aggregates	444	17	NOISE - Noise	NOISE-S1 (Emission of noise)	Support	Accept in part

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Laura Skilton	314	90d	NOISE - Noise	NOISE-S5 (Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - High)	Neutral	Reject
NZTA	F20	26	NOISE - Noise	NOISE-S5 (Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - High)	Oppose 314.90d	Accept
KiwiRail Holdings Ltd	442	73c	NOISE - Noise	NOISE-S5 (Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - High)	Oppose	Reject
Laura Skilton	314	90e	NOISE - Noise	NOISE-S6 (Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - Moderate)	Neutral	Reject
NZTA	F20	27	NOISE - Noise	NOISE-S6 (Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - Moderate)	Oppose 314.90e	Accept
KiwiRail Holdings Ltd	442	73d	NOISE - Noise	NOISE-S6 (Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay - Moderate)	Oppose	Reject

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Winstone Aggregates	444	15	NOISE - Noise	NOISE-S7 (New buildings, or alterations and additions to existing buildings, to be used by an activity sensitive to noise, within the Highway and Railway Noise Overlay - Moderate)	Support in part	Reject
Laura Skilton	314	90f	NOISE - Noise	NOISE-S7 (Acoustic insulation and ventilation for activities sensitive to noise in certain high noise zones)	Neutral	Reject
NZTA	F20	28	NOISE - Noise	NOISE-S7 (Acoustic insulation and ventilation for activities sensitive to noise in certain high noise zones)	Oppose 314.90f	Accept
Z Energy Limited	468	25	NOISE - Noise	NOISE-S7 (Acoustic insulation and ventilation for activities sensitive to noise in certain high noise zones)	Support	Accept
Z Energy Limited	468	26	NOISE - Noise	NOISE-S8 (Acoustic insulation and ventilation for activities sensitive to noise in certain moderate noise zones)	Support	Accept
Wainuiomata Rural Community Association Incorporated	364	20	NOISE - Noise	Note on application of noise rules	Support	Accept
Fire and Emergency New Zealand	374	62	NOISE - Noise	Note on application of noise rules	Support in part	Reject
Health NZ	F37	24	NOISE - Noise	Note on application of noise rules	Support in part 374.62	Reject
David and Pauline Innes	416	9	NOISE - Noise	Note on application of noise rules	Support	Accept

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
NZ Helicopter Association	215	04	NOISE - Noise	Note on application of rules	Support in part	Reject
Health NZ	F37	24	NOISE - Noise	Note on application of noise rules	Support in part 215.4	Reject
NZ Agricultural Aviation Association	231	07	NOISE - Noise	Note on application of rules	Support in part	Reject
KiwiRail Holdings Ltd	442	13	Definitions	Rail vehicle	Support	Accept
NZ Transport Agency Waka Kotahi	385	15	Definitions	Reasonable maximum use scenario	Support in part	Reject
KiwiRail Holdings Ltd	442	15	Definitions	Reasonable maximum use scenario	Support in part	Reject
Laura Skilton	314	83	NOISE - Noise	Whole chapter	Neutral	Reject

Temporary Activities

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	227	TEMP - Temporary Activities	Chapter introduction	Support in part	Accept in part
Seaview Marina Ltd	F14	22	TEMP - Temporary Activities	Chapter introduction	Oppose 471.227	Accept in part
New Zealand Defence Force	F27	2	TEMP - Temporary Activities	Chapter introduction	Oppose 471.227	Accept in part
New Zealand Defence Force	404	22b	TEMP - Temporary Activities	Introduction	Support	Accept in part
New Zealand Defence Force	404	04	Definitions	New definition - Temporary Military Training Activity	Oppose (requesting new provision)	Accept

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
New Zealand Defence Force	404	25	TEMP - Temporary Activities	New policy	Oppose (requesting new provision)	Reject
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	229	TEMP - Temporary Activities	New policy	Support	Accept in part
Seaview Marina Ltd	F14	24	TEMP - Temporary Activities	New policy	Oppose 471.229	Accept in part
New Zealand Defence Force	F27	4	TEMP - Temporary Activities	New policy	Oppose 471.229	Accept in part
New Zealand Defence Force	404	26	TEMP - Temporary Activities	New rule	Oppose (requesting new provision)	Reject
NZ Transport Agency Waka Kotahi	385	93	TEMP - Temporary Activities	TEMP-O2 (Adverse effects of temporary activities)	Support in part	Reject
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	228	TEMP - Temporary Activities	TEMP-O2 Adverse effects of temporary activities	Support in part	Reject
Seaview Marina Ltd	F14	23	TEMP - Temporary Activities	TEMP-O2 Adverse effects of temporary activities	Oppose 471.228	Accept
New Zealand Defence Force	F27	3	TEMP - Temporary Activities	TEMP-O2 Adverse effects of temporary activities	Oppose 471.228	Accept
Laura Skilton	314	4	Definitions	Temporary Activities	Oppose in part	Reject
Fire and Emergency New Zealand	374	12	Definitions	Temporary Activity	Support	Accept in part

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
Manor Park and Haywards Residents Community Incorporated Society	377	11	Definitions	Temporary activity	Oppose in part	Accept
New Zealand Defence Force	404	03	Definitions	Temporary activity	Multiple	Accept in part
Wellington Electricity	415	2	Definitions	Temporary activity	Support in part	Reject
Fire and Emergency New Zealand	374	66	TEMP - Temporary Activities	TEMP-P1 (Recognise benefits of temporary activities)	Support	Accept
New Zealand Defence Force	404	23	TEMP - Temporary Activities	TEMP-P1 (Recognise benefits of temporary activities)	Support	Accept
New Zealand Defence Force	404	24	TEMP - Temporary Activities	TEMP-P2 (Recognise limited duration of effects)	Support	Accept
NZ Transport Agency Waka Kotahi	385	94	TEMP - Temporary Activities	TEMP-P4 (Minimising certain effects of temporary activities)	Support	Accept
Policy Planning team of the Hutt City Council	440	61	TEMP - Temporary Activities	TEMP-P4 (Minimising certain effects of temporary activities)	Oppose in part	Other
NZ Transport Agency Waka Kotahi	385	95	TEMP - Temporary Activities	TEMP-P7 (When effects of temporary activities on transport network operations and capacity must be mitigated)	Support in part	Reject
BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (the Fuel Companies)	471	230	TEMP - Temporary Activities	TEMP-R1 Temporary activities	Support in part	Accept in part
Seaview Marina Ltd	F14	25	TEMP - Temporary Activities	TEMP-R1 Temporary activities	Oppose 471.230	Accept in part

Submitter	Sub #	SP #	Topic/chapter	Provision	Support/oppose	Recommendation
New Zealand Defence Force	F27	5	TEMP - Temporary Activities	TEMP-R1 Temporary activities	Oppose 471.230	Accept in part
Fire and Emergency New Zealand	374	67a	TEMP - Temporary Activities	TEMP-S1 (Duration)	Support in part	Reject
Policy Planning team of the Hutt City Council	440	62	TEMP - Temporary Activities	TEMP-S1, TEMP-S2, TEMP-S6	Oppose in part	Reject
Fire and Emergency New Zealand	374	67b	TEMP - Temporary Activities	TEMP-S2, TEMP-S3, TEMP-S4, TEMP-S5, TEMP-S6	Support in part	Accept in part
NZ Transport Agency Waka Kotahi	385	96	TEMP - Temporary Activities	TEMP-S4 (Transport)	Support in part	Reject
Policy Planning team of the Hutt City Council	440	63	TEMP - Temporary Activities	TEMP-S6 (Buildings, structures, and features)	Oppose in part	Accept
Policy Planning team of the Hutt City Council	440	64	TEMP - Temporary Activities	TEMP-S6 (Buildings, structures, and features)	Support in part	Accept

Appendix 3: Noise and acoustic evidence of Malcolm Hunt

**Before the Hearings Panel
At Hutt City Council**

UNDER Schedule 1 of the Resource
Management Act 1991 (RMA)

IN THE MATTER of Hutt City Proposed District Plan
– Hearing Stream #7 ‘Other Topics’

Statement of evidence of Malcolm J. Hunt (Noise & Acoustics)

Date: 10 September 2026

A. INTRODUCTION

- 1 My name is Malcolm Hunt. I am a self-employed noise and acoustic consultant based in Wellington. I have prepared this statement of evidence on behalf of the Hutt City Council (the Council) in respect of technical noise and vibration matters arising within submissions received following public notification of the Proposed District Plan.

B. QUALIFICATIONS AND EXPERIENCE

- 2 I have over 35 years' experience in the measurement and assessment of noise in the environment and matters relating to acoustic design. I hold a Bachelor of Science degree in science and a master's degree in mechanical engineering. I hold other qualifications with respect to the Environmental Health Officer Qualification Regulations 1975, and I also hold a Royal Society of Health Diploma in Noise Control.
- 3 I have been a member of various noise/acoustic committees including International Standards Organization (ISO technical working groups). I have been involved with a number of New Zealand Standards committees concerned with national Standards for environmental noise. I am an associate member of the New Zealand Acoustical Society.
- 4 I have been involved with the measurement, prediction and assessment of environmental noise from a range of industrial and transport-related projects and facilities such as motorways, airports, quarries, earthmoving projects and landfills. In addition, I have acted for various Councils in the development of District Plan noise rules and conducted numerous background sound level surveys in both urban and rural areas. I have wide experience in acoustic design and noise control engineering.

C. CODE OF CONDUCT

- 5 I have read the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing my evidence and will continue to comply with it while giving oral evidence before the Hearings Panel. My qualifications as an expert are set out above. Except where I state I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

D. INVOLVEMENT IN PROPOSED DISTRICT PLAN

- 6 During 2020 I was contracted by Hutt City Council ['Council'] to carry out a survey of ambient sound levels at a range of sites across the district (19 sites in total). I used automated equipment to measure typical daytime and night time ambient sound levels for at least 24

hours at each site, these being located in various zones and noise-affected areas. The majority of measurement sites were located in residential receiving environments.

- 7 Analysis of the data confirmed some parts of the district have significant ambient sound present, varying between busy commercial or industrial areas, quieter residential areas with a typical diurnal variation (day/night) reflecting nearby activity patterns. Measurements confirmed elevated levels of ambient sound, higher than would normally be acceptable for residential living environments, mainly concentrated along transport corridors, being state highway 2 and the Wellington – Wairarapa Railway Line in particular. The results of the ambient sound survey were analysed and reported on¹. The results are included among the factors considered when setting noise emission limits for various zones and activities within the notified Proposed District Plan (PDP). The process has considered a number of information sources, including guidance on this process set out within NZS6802:2008 *Acoustics – Environmental Noise*, section 8 *Guidelines for setting noise limits*.
- 8 In November 2021 I provided Council with a review of the existing (operative) District Plan noise provisions specifically assessing whether these remained valid for supporting the District’s social, economic and environmental vision, and to reflect Council’s RMA duty to ensure adverse noise impacts are avoided, or appropriately managed or mitigated². Although the focus of the PDP remains to be one which recognises and addresses noise impacts on sensitive receiver sites, the PDP now contains wider recognition of those who may be indirectly affected by people’s reaction to noise [reverse sensitivity effects].
- 9 In 2024 I provided advice to Council staff regarding planning precautions to deal with potential reverse sensitivity noise effects alongside state highways and designated railway lines in the district³. Earlier this year, following closure of the PDP submission period, I was asked to assist Council in addressing a number of vibration matters raised within a submission received. In July 2026 I assisted Council officer’s attending to Hearing Stream #4 regarding responding to vibration issues raised within Winstone Aggregates Submission 444 on Quarry Zone Standard QUARZ-S3.

¹ Summary results are at Appendix 1 to Noise and vibration review report included at Attachment 1 to ‘Section 32 Analysis – Noise’.

² This report is included as Attachment 1 to ‘Section 32 Analysis – Noise’

³ This report is included as Attachment 2 to ‘Section 32 Analysis – *Recommended State Highway & Wairarapa Rail Line Noise Overlays for Reverse Sensitivity Noise Protection Measures* - Hutt City Proposed District Plan – Malcolm Hunt Associates.

E. SCOPE OF EVIDENCE

- 10 My evidence below covers the noise and vibration matters raised within submissions received. I confirm I have read the submissions and related evidence relevant to the noise topic, including the following specific submissions:

- a) Winstone Aggregates (444)
- b) NZ Transport Agency (385)
- c) Federated Farmers (410)
- d) Laura Skilton (314)
- e) Kiwirail (442)
- f) McDonalds (174)
- g) NZ Defence Force (404)
- h) Z Energy (468)
- i) Manor Park & Haywards Residents Community Inc Soc (377)
- j) NZ Helicopter Association (215)
- k) NZ Agricultural Aviation Assn (231)
- l) Fire & Emergency NZ (374)
- m) Te Kārearea Ltd / Rosco Ice Cream (447)
- n) Policy Planning Team (440)

F. RESPONSE TO MATTERS RAISED

- 11 I have been asked by the reporting officer to respond to specific noise and vibration submission points raised by the above submitters. In formulating my advice, I have had particular regard to the following NZ standards and international guidelines;

- NZS 6801:2008 *Acoustics - Measurement of Environmental Sound*
- NZS 6802:2008 *Acoustics - Environmental Noise*
- NZS 6803:1999 *Acoustics - Construction Noise*
- NZS 6806:2010 *Acoustics - Road Traffic Noise - New and Altered Roads*
- NZS 6807:1994 *Noise Management and Land Use Planning for Helicopter Landing Areas*
- German Standard DIN 4150-3:2016 *Vibrations in buildings – Part 3: Effects on structures*
- DIN 4150-3:1999-02 *Structural vibration — Part 3: Effects of vibration on structures*
- ISO 717-1:2020 *Acoustics —Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation*

- Norwegian Standard NS 8176.E:2005 *Vibration and shock – Measurement of vibration in buildings from land based transport and guidance to evaluation of its effects on human beings.*

- 12 Submissions received reflect the two major groups of resource management issues arising in the district – issues related to the management of emission of noise, and controlling activities sensitive to noise where higher noise emissions are anticipated. A key consideration in finalising wording of the proposed noise provisions has been the efficacy or ‘workability’ of all aspects of the Noise Chapter.
- 13 My response to specific noise and vibration submission points involves subject matter which naturally fall within similar noise topics. Thus, I have grouped my responses under various topic headings, as follows.

Noise Limits – Land Use Activities

- 14 Submission point 444.18 of Winstone Aggregates seeks the noise limit for activities in the Quarry Zone between 07:00 and 19:00 be subject to a 68 dB LAeq limits in place of the 65 dB LAeq limit proposed in NOISE-APP1. The submitter implies this adjustment is justified because the operative district plan LA10 noise units are to be replaced by LAeq type limits, with an adjustment also to the duration of ‘daytime’ which changes 7am to 10pm versus to 7am to 7pm.
- 15 National Planning Standards require the noise Chapter to be based on NZS6801:2008 *Acoustics – Measurement of Sound* and NZS6802:2008 *Acoustics – Environmental Noise* with the latter mandating the adoption of LAeq as the preferred noise unit. According to the definitions for each of these measurement units, these units measure similar numerically with no need to apply any adjustment. In fact, as differences between measured LA10 and LAeq values for the same sound result in a $LA10 = LAeq + 1 \text{ to } 3 \text{ dB}$, changing to an LAeq unit implies a small extra amount of noise is permissible when LA10 units are replaced by LAeq, set at the same numerical value. The difference may be closer to zero for constant type sound sources⁴. In reality, the actual difference value (between 1 and 3 dB) is a function of the variability in the levels of sound under investigation. In summary, there is no clear technical reason to apply a 3 dB adjustment as sought when changing from LA10 to LAeq noise limits, or in relation to changing the definition of ‘daytime’ as proposed. On this basis, the requested of submission point 444.18 is not recommended to be adopted.

⁴ In my experience amendments to district plans in New Zealand where noise limits transition from LA10 to LAeq are not accompanied by an adjustment to the numerical decibel limit.

- 16 Submission point 174.8 of McDonald’s Restaurants seeks a 65 dB night time limit for noise generated within the Local Centre Zone (LCZ) when received in the Local Centre Zone, Mixed Use Zone, and Open Space and Recreation Zones). When considering whether the limit for night time noise emitted from LCZ activities (and received within the above zones) should be consistent with the 65 dB LAeq(15 min) of the LCZ, it is important to note 65 dB outdoors at night time is considered a ‘High Noise’ environment which is basically incompatible with [activity sensitive to noise](#) unless the district plan also requires buildings used for these activities to meet a suitably high acoustic insulation standard (with an accompanying ventilation standard) so as to ensure adequate indoor sleep quality and wellbeing within the built environment. My analysis of the PDP acoustic insulation standards of the requested receiving zones is summarised in the following table:

Receiving Zone	Applicable Insulation Standard	Insulation Standard
Local Centre Zone	NOISE- S8 – Moderate Noise Area	Dtr,2m,nTw >30dB
Mixed Use Zone	NOISE- S8 – Moderate Noise Area	Dtr,2m,nTw >30dB
Open Space	not applicable	nil
Recreation Zone	not applicable	nil

Table 1 Acoustic insulation standards of the nominated receiver zones.

- 17 Table 1 indicates two nominated receiver zones require the ‘moderate’ acoustic insulation standard apply (NOISE-S8), with no insulation standard applying within the other two nominated receiving zones. In situations where the district plan permits high night time noise emissions (65 dB LAeq(15 min) which is the requested limit) the ‘moderate’ acoustic insulation standard (NOISE-S8) is considered inadequate in terms of providing a suitable acoustic standard indoors to protect sleep during night time hours. The PDP standards require that where a night time noise limit 65 dB applies, the applicable insulation standard is NOISE-S7 which stipulates the building must achieve Dtr,2m,nTw **>35dB** this delivering a higher standard of sound insulation. In summary, due to inadequacies in applicable district plan acoustic insulation standards that apply within the nominated receiver zones (resulting in potentially unacceptable indoor noise environments within the built environment) I do not recommend granting the request to increase LAeq(15 min) noise emission limits for night time activities in the LCZ to 65 dB when assessed within the nominated receiving zones.
- 18 Submission points 314.92/314.94 found within the submission of Laura Skilton deals with applicable noise limits. Submission point 314.92 requests that a stated set of daytime and night time noise limits should apply district-wide. The requested noise limits are those lower noise LAeq(15 min) limits of NOISE-APP1 limits that apply to noise received in the Residential Zone. The submission indicates this is as a result of the “allowance of residential in all zones”.
- 19 In response, I do not consider the resource management aims of the district plan would be able to be achieved if, as requested, the district plan assigned the most restrictive NOISE-APP1 noise limit so that it applied consistently across all zones to control received noise. The s.32 report outlines how the Noise Chapter was developed and how rules and standards were developed that set permitted activity limits based on time of day and by zone. Noise

limits have been set at various limits consistent with the intended purpose and character of zones and precincts. Higher noise emission limits are acceptable within zones with higher activity levels such as industrial, commercial and mixed use zones. I do not consider it necessary for a set district-wide residential noise limits to apply simply because the PDP provides for residential uses to establish within most zones. In reality, noise limits are set based on achieving the zone objectives with these objectives varying markedly between zones. Thus, we have the range of noise limits between zones found within NOISE-APP1.

- 20 In requesting a fixed set of daytime and night noise limits for district-wide application, it appears no allowance has been made to differentiate noise limits that apply between sites within the same zone, compared to where noise limits that apply to noise received from activities within other zones. It is a basic premise of zone-based planning that higher levels of noise may be permitted between sites within active commercial or industrial zones, however lower limits should apply where this noise is received within sites in other zones which has the purpose of providing for noise-sensitive activities.
- 21 I do not support the submitter's request for noise received within all zones to be controlled to the nominated limits as I consider this counter to the flexible zoning approach of the PDP to managing the effects of noise in the district. I am concerned a possible outcome of the proposal sought would be that generally noise-compliant commercial and industrial activities would, in many cases, suddenly become non-compliant with PDP noise standards causing adverse economic and societal impacts.
- 22 Submission point 314.92 requests "all the zones should have the noise restrictions at the boundary of the property". Currently NOISE-APP1 stipulates that noise limits apply within any site in the relevant receiving zone, except for Rural Zones where compliance is to be assessed "within the notional boundary of an activity sensitive to noise". The request to apply noise restrictions "at the boundary" is considered technically inappropriate as this would be contrary to NZS6802:2008 which states at 8.4.3 that for practical reasons, compliance should be 'at any point within' the boundary of receiving sites. This has been confirmed in various environment court decisions. A major reason is that fences and other structures are often in place along property boundaries. The aim is to measure and assess outdoor noise within the receiving site, at a location free from obstructions and where measured levels represent noise impacting on activities sensitive to noise, and to some extent outdoor areas which building occupiers may use. I consider applying noise limits only at the site boundary in the rural zone would be unworkable. In some cases in urban settings it may be appropriate to measure at, or close to, the boundary of a receiving site but I do not support the request for a standardized location of "at the boundary of the property" to apply in all situations.

Noise Limits - Construction Noise

- 23 Winstone Aggregates Submission point 444.19 is concerned construction noise limits applying under NOISE-APP2 (Noise limits for construction activities) apply at buildings

whether the building is occupied or not. The submitter considers it should not be necessary to comply with construction noise limits outside an unoccupied building. In response, NOISE-APP2 is closely based on NZS6803:1999 Acoustics - Construction Noise. This Standard recommends (at clause 6.2) measurements be made "outside buildings which may be affected by construction noise" with no mention of occupancy. It is clear the committee who drafted NZS6803:1999 did not intend the building at which compliance is assessed needed to be occupied. I consider there can be practical difficulties in determining whether buildings are occupied or not at the time compliance is assessed. NOISE-R2 requires a restricted discretionary resource consent would need to be obtained where the NOISE-APP2 noise limits are not complied with, which could include unoccupied buildings. I accept the submission point in part as I agree there would be no useful purpose in insisting compliance with NOISE-APP2 if it can be reliably established that the building would not be occupied during proposed construction works.

- 24 I therefore recommend, in situations where unoccupied buildings may receive noise more than the NOISE-APP2 limits, these situations be given an improved compliance pathway within NOISE-R2.2 for situations where construction noise may exceed the relevant noise limit at buildings known to be unoccupied during the construction work period. To achieve this, I recommend a matter of discretion be included in NOISE-R2.2 that considers, as a matter of discretion whether it can be established that building(s) at which non-compliance occurs are not occupied during the construction works.
- 25 The submitter is also concerned *"...there are no construction noise limits outside buildings used for commercial activities or offices"* however this is covered within the lower portion of NOISE-APP2 which sets out construction noise limits for sites within zones where commercial activities typically take place. Daytime construction limits are set at similar limits to those in the upper portion of APP2 for noise-sensitive sites but there are some instances restricted to the following zones whereby the permitted activity noise standards for night time differ.
- 26 I have been asked to assess if night time construction noise effects for activities sensitive to noise located within the zones identified in the lower portion of AAP2 would be acceptable. My assessment is that the normally applying permitted activity night time noise limit (10pm to 7am) under APP1 is approximately equivalent to the APP2 night time construction noise limit for buildings located in the City Centre Zone, Metropolitan Centre Zone and Light Industrial Zone. The night time construction noise limits in the lower portion of APP2 are 10 dB (noticeably) above the APP1 permitted activity night time standard (55 dB LAeq(15 min)) for buildings in the Local Centre Zone, Neighbourhood Centre Zone, Hospital Zone, Tertiary Education Zone.
- 27 As NOISE-APP2 night time LAeq and LAFmax construction noise limits differ by not more than 10 dB compared to the night time permitted activity noise limits of NOISE-APP1, and taking into the PDP acoustic insulation requirements of NOISE-S5 and NOISE-S6, I do not recommend adjusting the existing situation whereby night time construction noise up to 65 dB LAeq may affect buildings within these stated (commercial) zones that may house

activities sensitive to noise. The (temporary) night time noise effects are somewhat mitigated because:

- Buildings housing activities sensitive to noise in these zones are required to be insulated (and ventilated) according to NOISE-S5 and NOISE-S6; and
- the commercial zones specified in the lower portion of APP2 are not zones intended to necessarily preserve quiet night time periods thus building occupants are likely to experience elevated ambient outdoor noise given that the night time APP1 limits for these stated (commercial) zones is 15 dB to 20 dB higher than the equivalent APP1 night time limit that applies to noise received in the more protective Residential Zone⁵.

28 Submission point 314.93 of the submission from Laura Skilton seeks;

- A standardised limit on construction noise applying between 7.30am to 6pm, Monday to Saturday only. Although the submitter states construction “should not be allowed” prior to 7:30am or after 6:00pm, the table included within the submission indicates that, outside 7.30am to 6.00pm, construction noise would need to comply with the ‘normal’ permitted activity noise limits for daytime/night time of NOISE-APP1.
- Construction noise limits should be assessed “at the boundary of the property”.
- Adjustments to the time periods for “short”, “typical” and “long” construction projects used to ascertain applicable noise limits.

29 The requested standardised construction noise limits are not supported as they offer little flexibility across hours of the day and days of the week, compared to NOISE-APP2. The requested “No construction work” outside nominated hours seems impractical and is contrary to effects-based approach to noise management. As above, the NZ relevant standards do not support assessing noise compliance “at the boundary of the property”. Under NZS6803:1999 compliance is in fact assessed based on the noise level measured at 1 metre from the outside of rooms in buildings housing activities sensitive to noise.

30 Regarding amendments to time periods for “short”, “typical” and “long” term construction projects (to which specific noise limits apply) the proposal is to shorten currently proposed project durations to less than 3 days for “short term” projects, 3 to 14 days for “medium term” projects with projects over 14 days being classified as “long term” construction projects. The effect would be to considerably restrict the likelihood that even modest sized construction activities would be regulated to the lower noise limits applying to medium and shorter term projects. The proposed amendments do not reflect the reality that typical

⁵ It is noted a slight difference exists in the definition of night time between APP1 (10pm to 7am) and APP2 (8pm to 6.30am) however I consider this inconsequential to my assessment.

construction projects take months and often more than 1 year to complete. The time periods of NOISE-APP2 are based on the recommendations of NZS6803:1999 which used an expert committee process, taking into account a range of factors when settling on the nominated project time periods⁶. I therefore do not support amending the “construction work” periods of NOISE-APP2 as requested.

Temporary Military Training Activities

- 31 Submission 404 by NZ Defence Force seeks a new rule be introduced within the Temporary Activities Chapter to provide for Temporary Military Training Activities (TMTA) on a district-wide basis⁷. The requested definition of TMTA indicates training activities involve, at times, the emission of significant noise due to use of powered machinery, vehicles or aircraft and may involve weapons firing and the use of explosives, in addition to the deployment of personnel and the infrastructure used to support these personnel in the field. Given the request to include TMTA as Temporary Activity, I have been specifically asked by the reporting officer to address submission point 404.22a which is to consider whether temporary military training activities would be more appropriately assessed under the general temporary activity noise limits of the PDP (NOISE-S3 and NOISE-S4). The alternative is to consider whether the more bespoke noise limits and setback distances requested in the submission would better achieve the aims of the PDP. The NZ Defence proposals for limiting and managing TMTA noise are set out within ‘NOISE-RX’ found within Attachment 1 to submission 440.
- 32 My understanding is that military training exercises occur relatively infrequently across the district but may, at times, emit sufficient noise to fail to meet normally applying district plan permitted activity noise limits, which in this case are the temporary activity noise limits referred to within NOISE-S3 and NOISE-S4. It is my estimation that in fact TMTA training would, if undertaken at reasonable distances to noise sensitive sites, comply with NOISE-APP3 “Noise limits for temporary activities” however I note the APP3 night time limits for noise from temporary activities received within noise-sensitive Residential Zones and Marae Zones are 5 dB lower than that requested within the NZDF submission, so some night time non-compliance could be an outcome if TMTA were regulated using the existing PDP noise limits for temporary activities.
- 33 I consider the main problem with assimilating noise from TMTA into the noise limit regime for temporary activities is the inability of LAeq and LAFmax type noise limits of NOISE-APP3

⁶ Clause 1.2 of NZS6803:1999 states the Standard may be used by local authorities “*in setting noise limits to reduce the likelihood of annoyance, nuisance and adverse health effects to people in the vicinity of construction work*”

⁷ With respect to TMTA noise provisions, I acknowledge over 4 years ago I worked with NZ Defence Force in the development of TMTA noise guidelines with no contact since then. In making this acknowledgement I do not consider this to be a conflict of interest with my role advising Council.

to adequately measure (and therefore, control) single event noise associated with TMTA weapons firing and use of explosives. This type of sudden sound event can be quite disturbing. Being high energy, short duration type sounds, the effects on people are not adequately reflected when assessed using the commonly found LAeq and LAFmax units⁸. I consider the best solution is to adopt the more type-specific TMTA noise limits and setbacks rules set out in Attachment 1 to the NZ Defence submission as a new noise standard (NOISE-APP9).

- 34 TMTA noise rules set out in the submitter's Attachment 1 separately regulate noise due to any activity involving weapons firing or use of explosives from noise due to all other TMTA. The proposed standard sets out an initial requirement for any activity involving weapons firing or the use of explosives to be conducted at suitable a daytime or night time setback distance to sensitive receiver sites to ensure noise impacts for sensitive receivers are suitably mitigated and remain reasonable. Where these setback distances are unable to be met for this type of noise, the proposed standard sets daytime and night time single event noise limits, measured using noise units designed to capture the full effect of the sound emitted by weapons firing and the use of explosives⁹. The second section of Attachment 1 includes a separate set of LAeq and LAFmax daytime and night time noise limits that apply to noise from any TMTA activities not involving weapons firing or use of explosives.
- 35 My assessment of the requested noise limit regime described in Attachment 1 is that the overall noise impact of proposed setback distances and/or proposed noise limits would be not dissimilar to (and not likely to exceed) noise effects of non-TMTA temporary activities emitting noise up to the limits proposed in NOISE-APP3. Considering the impulsive sound of weapons firing and single event sound due to the use of explosives, noise effects experienced at the minimum setback distances requested would be significantly reduced over the distances stipulated and not be unreasonable in my view. Noise from weapons firing and the use of explosives, when measured using the requested noise metrics, and compliant with the proposed daytime / night time noise limits would also not be unreasonable in my view.
- 36 I note the LAeq and LAFmax daytime and night time limits for activities not involving weapons firing or use of explosives are below the noise limits stipulated in NOISE-APP3 that apply to controlled activity temporary activities however I prefer the approach of Attachment 1 in the way the special impacts of impulsive noise events are dealt with.
- 37 Overall, I consider noise effects of TMTA activities meeting the relevant setback distances, or comply with stipulated single event noise limits or the LAeq / LAFmax noise limits

⁸ NZS6802:2008 states at clause 1.2.1 that this Standard is not suitable for assessing impulsive sound such as gunfire and blasting.

⁹ Daytime and night time noise limits are stipulated using 'peak' sound levels which are recognised as able to capture the high-level, short-duration sound event, also using C weighting to capture excess low frequency sound sometimes associated with distant weapons firing or use of explosives.

applicable to non-weapons firing or use of explosives to be generally acceptable and would result in a similar overall effect to temporary activities meeting the timing / duration and noise limit requirements of NOISE-APP3.

- 38 In deciding whether a separate TMTA noise limit is advisable, there may be efficiencies in implementing amendments to simply require all TMTA noise to comply with NOISE-S3 and NOISE-S4, however a major downside would be inadequacy of the NOISE-APP1 or NOISE-APP3 noise units (LAeq and LAFmax) in taking into account the potentially annoying attributes of noise due to weapons firing or use of explosives. I consider the NZ Defence submission 440 proposes reasonable and technically appropriate setback distances and noise limits that are better tailored to control TMTA noise effects compared to compliance with temporary event noise limits set out in NOISE-APP1 or NOISE-APP3. I therefore recommend adopting the recommended noise limit regime set out in Attachment 1 to submission 440. I note a raft of wording amendments to the Noise Chapter may be required to implement the proposed TMTA noise limits. It is worth noting similar TMTA noise limits are found within many other NZ district plans. In my experience they are generally held as a reasonable approach to managing the noise effects of military training.

Reverse Sensitivity Noise Corridors – Highway & Rail Traffic

- 39 NZ Transport Agency (NZTA) request at submission point 385.71 NZTA that potential reverse sensitivity traffic noise effects be addressed where noise levels are expected to reach 60 dB LAeq(24 hr) in the foreseeable future. This is because the submitter considers noise and vibration effects if the state highway network may interrupt amenity and enjoyment, as well as the ability to sleep which can have significant impacts on people's health and wellbeing.

- 40 In terms of operational traffic noise from state highways, the PDP planning maps provide for;

'High Noise' Overlay

This overlay describes an area extending out to 40 metres from the state highway encompassing the areas with the highest levels of traffic noise have been found during monitoring adjacent to state highway 2. Monitoring results indicate outdoor traffic noise levels measuring up to 70 dB LAeq(24 hr) lie at distances not greater than 40 metres of the state highway. Under NOISE-S5 "Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay – High" a 'high' level of acoustic insulation is proposed within buildings in which an activity sensitive to noise occurs. The requirement is for the building to achieve an insulation standard of $D_{tr,2m,nTw} > 35$ dB. With this standard of insulation in place (together with ventilation meeting the requirements of NOISE-APP7) this would result in an internal noise level of not more than LAeq(24 hr) 35 dB within insulated rooms. Due to diurnal distribution of traffic flow, noise levels during the critical night time period would in fact measure 10 dB below the 24 hour average (i.e. 25 dB) which is suitable to protect sleep within these high noise outdoor environments.

'Moderate Noise' Overlay

To address traffic noise effects in areas receiving between 69 dB and 60 dB LAeq(24 hr) the PDP deploys a second noise overlay which extends out to areas where levels of highway noise are not considered significant (60 dB LAeq(24 hr)). In this case, the inner extent of this overlay is just below the 70 dB (i.e. 69 dB) with the outer extent of the overlay based on an electronic noise contour provided by NZTA during preparation of the PDP based on 57 dB LAeq(24h)¹⁰ however this represents the future 60 dB contour. Under NOISE-S6 "Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay – Moderate" future traffic noise levels up to 69 dB which 'moderate noise' overlay requires these building insulation standard of Dtr,2m,nTw >30 dB. With this standard of insulation in place (together with ventilation meeting the requirements of NOISE-APP7) this would result in an internal noise level of not more than LAeq(24 hr) 39 dB within insulated rooms. Due to diurnal distribution of traffic flow, noise levels during the critical night time period would measure 10 dB below the 24 hour average (i.e. 29 dB) which is suitable to protect sleep within areas with moderate outdoor noise environments.

- 41 In terms of noise from the rail network, the PDP maps show 'high' and 'moderate' noise overlays which denote areas affected by noise associated with rail activity on the Wairarapa Railway Line and a portion of the Gracefield Line (from Whites Line East to Parklands Road). These rail lines define what is hereafter referred to as the 'Lower Hutt Rail Network'. It is important to note areas affected by rail activity on the Melling Line are fully encompassed within the noise overlays for state highway 2 and are thus not separately shown on PDP planning maps.

'High Noise' Overlay

This overlay extends out to 20 metres from the rail corridor denoting the areas most affected by rail noise. This area has been defined based on measurements of outdoor rail noise performed over representative 24 hour period, such as at Ava Park which indicated LAeq(24 hr) rail noise levels in the region of 63 dB to 65 dB at a distance not greater than 20 metres from the edge of the rail corridor. Under NOISE-S5 "Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay – High" a 'high' level of acoustic insulation is proposed for buildings within this area in which an activity sensitive to noise occurs.

Within the 'high' overlay the requirement is for buildings to achieve an insulation standard of Dtr,2m,nTw >35 dB. With this standard of insulation in place (together with ventilation

¹⁰ While outdoor traffic noise levels up to 60 dB LAeq(24 hr) represent the most significantly affected areas requiring mitigation, state highway noise effects have been plotted out to a further distance away from the highway, where up to 57 dB LAeq(24 hr) may be experienced. In this way, a 3 dB allowance is made for future growth in noise which has also been described in NZTA documents as catering for half of assumed modelling errors.

meeting the requirements of NOISE-APP7) this would result in an internal noise level of not more than LAeq(24 hr) 30 dB within insulated rooms. As with road traffic diurnal variations, passenger and freight movements exhibit a strong day/night pattern on the Lower Hutt Rail Network meaning noise levels during the critical night time period would measure 10 dB below the 24 hour average (i.e. 20 dB) which I consider suitable to protect sleep within these high outdoor rail noise environments.

'Moderate Noise' Overlay

Regarding potential traffic noise effects at received levels between 64 dB and 60 dB LAeq(24 hr) the PDP deploys a second noise overlay which extends out to 40 metres from the rail corridor. This distance has been based on a series of rail noise measurements taken during the 2021 ambient noise survey at a location 40 metres from the Wairarapa Railway Line at 3/86 North Street, Ava. This survey determined levels of rail noise experienced at a distance of 40 metres or greater (<60 dB LAeq(24 hr)) are not significant as, at these distances, rail noise tends to be embedded within similar levels of ambient sound from other sources¹¹.

Within the 'moderate' noise overlay NOISE-S6 "Acoustic insulation and ventilation for activities sensitive to noise in the Highway and Railway Noise Overlay – Moderate" caters for outdoor rail noise levels up to 64 dB which is effectively addressed via a moderate level of acoustic insulation within buildings in which an activity sensitive to noise occurs. Within the 'moderate noise' overlay the requirement is for the building to achieve an insulation standard of Dtr,2m,nTw >30 dB. With this standard of insulation in place (together with ventilation meeting the requirements of NOISE-APP7) this would result in an internal noise level of not more than LAeq(24 hr) 34 dB within insulated rooms. As the Lower Hutt Rail Network exhibits a strong day/night pattern, noise levels during the critical night time period would measure 10 dB below the 24 hour average (i.e. 24 dB) which I consider suitable to protect sleep within these high outdoor rail noise environments.

- 42 NZ Transport Agency submission 385.71 and submission points 442.81a, 442.81b from Kiwirail Holdings Ltd both seek that the "Highway and Railway Noise Overlay – Moderate" and "Highway and Railway Noise Overlay – High" be replaced with one single overlay titled "Highway and Railway Noise Overlay". The single overlay request is closely linked to the form of acoustic insulation standard preferred by these submitters which is based on an alternative 'indoor noise limit' type insulation rule which bases compliance on achieving specified maximum indoor level of sound due to outdoor sources rather than basing the insulation standard on the acoustic qualities of the building construction (which is the basis of NOISE-S5 and NOISE-S6).

¹¹ It is notable there are highways, streets or roads co-located near or next to the Lower Hutt Rail Network throughout the district, activity on which also contribute to the ambient sound environment.

- 43 The indoor noise limit approach to mitigate against state highway and rail noise within specified noise-affected areas is an approach adopted within Standard 6 of Chapter 14 A Transportation of the operative District Plan¹². This approach requires calculating compliance with the indoor sound limit based on detailed knowledge of the outdoor traffic noise levels which must be estimated. The estimation process can lead to an inconsistent design approach as different designers may assume (unwittingly) differing levels of outdoor sound¹³. Although some guidance is available for predicting noise from state highways in NZ¹⁴, there appears no simple method for determining rail noise levels at any nominated setback distance, for the unique mix of passenger rail and rail freight traffic on the Lower Hutt Rail Network. The request to adopt a single highway and rail noise overlay is not supported. The issue is related to the method used to specify acoustic insulation standards, thus the following paragraphs of evidence are also relevant to this submission topic.

Recommended Acoustic Insulation Standards

- 44 Submission points 442.73a, 442.73b, 442.73c, 442.73d, 385.76a, 385.76b of NZTA and Kiwirail request an alternative 'indoor noise limit' method for specifying acoustic insulation standards in place of NOISE-S5 and NOISE-S6. These standards are based on ISO 717-1:2020 *Acoustics —Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation*. The attributes of the two alternative methods for specifying acoustic insulation is discussed in Section 10.11.2 of the noise discussion document "Noise and Vibration Review" included as Attachment 1 to the 'Section 32 Analysis – Noise'. I consider two key problems with the 'indoor noise limit' type of insulation rule requested by NZTA and Kiwirail are;

- a) Adopting an A-weighted indoor design sound limit (such as LAeq(24 hr) in the case of indoor highway noise and LAeq(1 hr) in the case of indoor rail noise) there is an automatic de-rating of the importance of low frequency sound. This is because, when compliance is assessed using a simple A-weighted indoor sound level (as proposed by submitters), excessive low frequency sounds from outdoor sources are not detected as low frequency sounds below 100m Hz make virtually nil contribution to indoor sound levels when measured using dBA.

The main problem with adopting an indoor A-weighted sound limit as a means of specifying acoustic insulation standards for buildings (i.e. the 'Indoor sound level' method) is that this approach does not require building claddings, glazing, wall

¹² Expert advice received Council received on this topic (Plan Change 39 Marshall Day Acoustics report to Council officers) recommended district plan reverse sensitivity acoustic insulation rules based around specifying building performance (i.e. the Dtr,2m, nTw method).

¹³ *Managing Reverse Sensitivity Noise & Vibration Effects Of Rail and Road Transport in New Zealand*. New Zealand Acoustics - Journal of the NZ Acoustical Society, Vol. 28 / # 3, 2015.

¹⁴ See <https://www.nzta.govt.nz/resources/specification-for-road-traffic-noise-prediction>

linings, etc to achieve any specified degree of acoustic protection across the audible sound spectrum. Most habitable buildings in New Zealand are generally ineffective in reducing outdoor low frequency sound. Because the A-frequency weighting sound level is heavily weighted towards sound occurring in the mid- and high-frequency range, installed exterior walls or other building elements could be quite lightweight in design and yet appear to achieve the required reduction in outdoor sound (that is, building elements only need to be effective at reducing sound occurring within the mid and high frequency range to satisfy a dBA indoor sound limit). This contrasts with the approach of NOISE-S5 and NOISE-S6 based on ISO 717-1:2020 which takes full account of sound at all frequencies, including low frequency indoor sound, when determining the insulation level.

The problem of under-estimating the low frequency performance of buildings can be overcome to some extent if the acoustic insulation standard includes a prescribed 'normalised traffic noise spectrum' to be adopted when designing compliance with the indoor sound limit. No such recommended 'design noise spectra' are included in the wording proposed as an alternative acoustic insulation standard, as set out within Appendix 1 to the NZ Transport Agency submission and within Appendix 1 to the Kiwirail submission which hinders their adoption as a workable acoustic insulation rule in my view.

- b) Monitoring and enforcement of acoustic insulation standards may be required to be carried out on Council's behalf to check compliance from time to time. This is not a matter Kiwirail or NZTA seem to have considered. It is important to note there are no established NZ or international standards that provide direct guidance on methods to ascertain compliance with indoor A-weighted sound limit due to outdoor sound sources. Although some form of field measurement method may be adapted to perform this task, one of the most significant advantages of adopting the ISO717-based units of $D_{tr,2m,nTw}$ of NOISE-S5 and NOISE-S6 is that ISO field test methods are readily available and in use internationally for this purpose¹⁵.

- 45 I consider it important to consider possible efficiencies for Council processes and staff that may accrue when identical acoustic insulation standards are prescribed in a consistent manner district-wide throughout the PDP. This includes efficiencies when the same minimum building construction standards at NOISE-APP5 (Minimum construction schedule to achieve $D_{tr,2m,nTw} > 35\text{dB}$) and NOISE-APP6 (Minimum construction schedule to achieve $D_{tr,2m,nTw} > 30\text{dB}$) are adopted for highway noise and rail noise, in addition to being adopted to protect indoor spaces used for activities sensitive to noise in other zones and affected areas of the district. The request to insert a second, separate acoustic and

¹⁵ For example, ISO 16283-3:2016 *Acoustics — Field measurement of sound insulation in buildings and of building elements — Part 3: Façade sound insulation*.

ventilation standard dealing with effects of land transport noise would erode these efficiencies in my view.

- 46 For the above reasons I recommend retaining the ISO717-based units of Dtr,2m,nTw for specifying minimum acoustic insulation standards in NOISE-S5 and NOISE-S6 and do not support adopting the 'Indoor noise limit' approach to setting minimum acoustic standards requested by submitters 385 (NZ Transport Agency) and 442 (Kiwirail Holdings Ltd).
- 47 NZ Transport Agency submission 385.71 seeks that the Highway and Railway Noise Overlay should extend out to a level of 57 dB LAeq(24 hr). While (as above) it is not agreed to replace the 'moderate' and 'high' noise overlays with the single requested overlay, the outer extent of the 'moderate' noise overlay is based on the 57 dB contour as provided electronically by NZTA. As this modelling aspect of the NZTA request is satisfied, the alternative NZTA request "in-lieu of modelling" to base the outer extent of the overlay at a location 100m from the highway does not need to be responded to. This may be of no moment given that map distances I have scaled off indicate the outer extent of the 'moderate' highway noise contour is located at a distance (unscreened) of about 92 to 96 metres from the highway which is approximately equal to the requested 100m buffer.
- 48 Kiwirail request at submission point 81, that the single requested noise overlay should be based on a level of 57 dB LAeq(24h) or more, as modelled from Railway corridor. However, this does not appear correct given the requested Kiwirail acoustic insulation rule, as set out at Appendix 1 to submission, adopts an acoustic insulation standard based on rail noise measured over a much shorter time frame¹⁶. It is unclear how 24 hour rail noise levels can relate to the 1 hour indoor rail noise limits set out within the requested insulation rule. This is addition to the above-mentioned problem that there is no general guidance on calculating outdoor rail noise that would apply to the unique rail traffic mix of the Lower Hutt Rail Network.
- 49 As with NZTA, Kiwirail request that "in-lieu of modelling" the outer extent of the single proposed noise overlay should be 100m from the rail corridor. In this case, the proposed 'moderate' and 'high' rail noise overlays have not been modelled. Instead these overlays have been based on rail noise measured in the district which justify the 20m and 40m setbacks proposed. Based on field readings, there seems no justification for extending the 'moderate' noise overlay out to 100m from the rail corridor. This would impose acoustic insulation requirements within large areas where existing or proposed buildings house activities sensitive to noise.
- 50 Based on the measurements obtained adjacent to the Wairarapa Railway Line, rail noise levels received at distances greater 40 metres from the rail corridor would be unlikely to

¹⁶ The tabulated acoustic insulation standards are based on "Maximum railway noise level LAeq(1h) indoors".

exceed the permitted activity daytime or night time noise standards applying to land use activities in these area. At these levels (57 dB LAeq(24 hr) acoustic insulation is not considered necessary given outdoor rail noise at these levels would not be likely to adversely impact activities sensitive to noise.

- 51 The acoustic insulation standards referred to within NOISE-S5 and NOISE-S6 provide for compliance via an acoustic design report certified by a qualified acoustic expert or, alternatively, be constructed in compliance with the prescribed minimum building constructions set out within NOISE-APP5 (Minimum construction schedule to achieve $D_{tr,2m,nTw} > 35dB$) and NOISE-APP6 (Minimum construction schedule to achieve $D_{tr,2m,nTw} > 30dB$). Submission points 314.90(g) and (h) of the submission of Laura Skilton requests these schedules be replaced “as this should all be contained in the Building Code”. The NZ Building Code does not, however, currently prescribe acceptable solutions to achieve minimum acoustic insulation standards that protect indoor spaces from noise on the exterior of the building¹⁷.
- 52 I am aware the High Court has indicated (*Building Industry Authority and Christchurch International Airport v Christchurch City Council AP 78/96*) that it is within the powers of Local Authorities under the Resource Management Act to specify a certain level of acoustic insulation in plan rules and consent conditions, and that doing so would not conflict with the Building Act. Given the lack of progress in expanding G6 to include any acceptable solutions for implementing acoustic insulation against outdoor noise, I recommend not replacing APP5 and APP6 with any current requirement of the NZ Building Code. I consider these schedules are essential for the proper functioning of standards NOISE-S5.1(a) and NOISE-S6.1(a) which provide for compliance to be achieved by meeting providing minimum construction and materials standards.
- 53 Submission point 314.90(i) of the submission of Laura Skilton represents a similar request as it requests that APP7 “Ventilation” be replaced “as this should all be contained in the Building Code”. NZ Building Code G4 does set out minimum requirements for indoor spaces in buildings to be provided with adequate ventilation “consistent with their maximum occupancy and intended use”. APP7 requires compliance with this minimum ventilation standard however there are additional precautions needed for insulated rooms involving the necessary use of a positive supplementary source of fresh air ducted from outside. This additional requirement ensures occupants of rooms where compliance with G4 is via provision of openable windows (of a minimum prescribed openable area) are provided with an alternative source of fresh air to maintain indoor thermal comfort while keeping windows closed to maintain a reasonable standard of acoustic protection against outdoor noise. As I

¹⁷ Acoustic insulation is covered within clause G6 of the NZ Building Code. Acoustic standard G6 “Airborne and impact sound” only applies to building elements that are common between occupancies. The aim of G6 is to prevent undue noise transmission from other occupancies or common spaces in household units

consider retaining APP7 essential for the proper functioning of standards NOISE-S5 and NOISE-S6 I do not support replacing APP7 with provisions of the NZ Building Code (G4) as this would be a lesser ventilation requirement thus undermining the acoustic protection of indoor spaces which I consider essential for the proper functioning of the PDP acoustic insulation standards.

Technical Fixes - Council Submission

- 54 Council Policy Planning Team, at submission points 440.58, 440.59, request amendments to NOISE-APP5 and NOISE-APP6 to correct what appears is a typographical error within the minimum specification for a skillion type of roof. As the submission point describes, it does appear that rows titled “Roof – Option A” of have been invertedly swapped between NOISE-APP5 and NOISE-APP6. Under this error, the ‘Option A’ lighter weight skillion roof structure of NOISE-APP5 may not achieve the $D_{tr,2m,nTw} > 35\text{dB}$ insulation standard. I therefore support amending wording of NOISE-APP5 and NOISE-APP6 as requested.

Helicopter Noise

- 55 Submission point 215.5 of the NZ Helicopter Association refers to clarifying how noise from helicopters is provided for within NOISE-R2 “Emission of noise from construction activities”. The submitter acknowledges noise from helicopters can be associated with construction work on a site and requests that is be provided for within NOISE-R2. Neither the definition of ‘construction work’¹⁸ within NZS6803:1999 nor the PDP definition of “Construction Activity” would not appear to rule out including noise from airborne sources associated with carrying out construction work on a site. Based on helicopters operating above a worksite, it would be jurisdictionally acceptable for Council to set standards for this airborne source, such as when operating above a construction site (not landing or taking off).
- 56 It is my experience that District Plan provisions are able to control the noise of helicopters that are not ‘overflying’¹⁹. The Dome Valley Decision²⁰ is widely regarded as being the authority on this matter. The Environment Court determined, with reference to Rule 91.311 of the Civil Aviation Act 2023, that the rules essentially say that aircraft flying under Visual

¹⁸ NZS6803:1999 *Acoustics – Construction Noise* defines Construction work as any work in connection with the construction, erection, installation, carrying out, repair, maintenance, cleaning, painting, renewal, removal, alteration, dismantling, or demolition of structures and buildings.

¹⁹ S9 of the RMA.

²⁰ *Dome Valley District Residents Society Inc v Rodney District Council*, Environment Court, Auckland 14/12/2007, Sheppard Judge, A099/07, and *Dome Valley District Residents Society Inc v Rodney District Council*, High Court, Auckland, 1/8/2008, Priestly J CIV- 2008-404-587.

Flight Rules (VFR) must be higher than 1000ft over any congested area of a city, town, or settlement, or over any open-air assembly of persons, and higher than 500ft above any other areas, (such as open countryside or unpopulated zones). The flight paths and operations beneath those VFR altitudes are therefore not overflying and are able to be controlled by Council's under the RMA. On this basis, I support the inclusion of noise from helicopters operating above construction sites and that this be implemented within NOISE-R2 if possible.

57 Submission points 215.6 and 231.8 of the NZ Helicopter Association and NZ Agricultural Aviation Association deal with NOISE-R9 "Noise from aircraft at helicopter landing areas" specifically, the role of NZS 6807:1994 for managing noise from helicopter landing areas used only intermittently. Under NOISE-R9.1.1 helicopter movements are permitted on a site on up to 3 days per 3 month period. I consider such noise effects would generally be acceptable in rural and open space zoned sites (on average, this is one noise effect day within a 30 day period). This is broadly consistent with NZS6807:1994 which states that the noise controls recommended within that Standard only apply where;

- 10 or more flight movements occur in any month or
- where flight movements are likely to result in a high level of maximum sound level (Lmax). For daytime, this means 90dBA during daytime within any residential zone or within the notional boundary of any rural land.

58 Given NOISE-R9.1.1 severely limits helicopter movements as a permitted activity, it is not considered necessary, as an alternative to set a permitted activity standard that only requires noise effects of helicopter landing areas to be managed using NZS6807:1994 (NOISE-R9.1.2). NZS6807:1994 is focussed on sites used within resource consent applications for regularly used landing areas. I support amending NOISE-R9.1.2 to remove reference to NZS6807:1994, if possible.

Vibration Standards

59 I have been asked to provide advice on submission points 314.89, 377.10a (part), 377.10b, 377.10c, 444.12, 447.12c which deal with vibration effects and provisions of NOISE-R5 "Activities that result in vibration". This rule manages vibration effects primarily based on the qualitative approach of NOISE-R5.1(a) with ground vibration effects sought to be "contained as far as practical within the boundary of the site and do not compromise public health or safety, or well-being and amenity values within any other site." Submitter concerns can be summarised as support for replacing the qualitative approach with district-wide objective vibration limits which submitters consider would address workability of the proposed qualitative rule for vibration.

60 I have looked into the issue of adopting numerical limits for ground vibration received within a site, for example the table of daytime and night time single event acceleration limits submitted within 444.12 from Winstone Aggregates. From my investigations, these do not appear to be based on any specific international vibration standard or guideline (however

the proposal bears a close resemblance to Auckland Unitary Plan (AUP) Standard E25.6.30.1 — *Vibration limits in buildings*). The proposed vibration limits set as 'Peak Particle Velocity' (PPV) limits apply to an individual 'peak' vibration occurrence and does not therefore control anything other than the highest measured value which I consider, on its own, is insufficient for establishing a district-wide district plan permitted activity vibration standard. In acoustic terms this would be similar to relying upon a single event type LAFmax limit to manage noise effects in all situations.

- 61 I am concerned other qualities of the vibration effect such as duration and frequency of the effect are not taken into account when applying the proposed tabulated PPV vibration limits. Such single event based limits tend to ignore a number of important factors I consider necessary to take into account when setting limits on an environmental effect such as ground vibration. FIDOL²¹ is a foundational framework used to assess whether an environmental effect, most commonly odour, reaches an "objectionable" threshold which may indicate the point at which regulation is necessary.
- 62 The FIDOL concept has been referred to within various environment court cases and is becoming increasingly referred to in relation to noise²² and dust issues. I consider the fundamentals of the well-established FIDOL concept are not met when applying a simple table of daytime and night time PPV ground vibration limits, particularly in respect to inadequate consideration of issues relating to the frequency, duration, offensiveness and location. An adverse effect (whether objectionable or not) is unlikely to be signalled should the mm/s limit be breached on limited occasions.
- 63 The proposed district-wide setting of PPV standards for managing ground vibration effects implies field measurement of PPV values would be feasible and practical to carry out. Neither are the case, in my view. One major obstacle is the confounding effect of day-to-day 'ambient' ground vibrations which are likely to be regularly experienced at levels similar to the requested limits, seemingly without complaints or disturbance of building occupants. This widespread vibration effect is mainly due to heavy vehicle and rail activity found along transport corridors. Also, significant (although temporary) ground vibration effects can be due to nearby construction or maintenance activities. I expect there are many locations where 'ambient' ground vibration would likely exceed the proposed night time standard due to this low standard (0.3 mm/s) being close to the threshold level at which people can detect ground vibrations. For example, in the case of nominally continuous sources of vibration such as traffic, this vibration is perceptible at around 0.3 – 0.5 mm/s PPV²³

²¹ FIDOL stands for Frequency, Intensity, Duration, Offensiveness and Location.

²² For example *Harvey v Nelson City Council* [2011] NZEnvC 98 where the FIDOL concept was applied to noise effects.

²³ Table 6.2.2.2: Guidance for human response to construction vibration in BS 5228-2:2009, Annex B.

- 64 I therefore consider compliance measurements may be impractical due to widespread ground vibration due to land transport vibration readings. It is notable, these transport activities are undertaken within district plan designations that provide for transport activity, thus, transport vibrations will not be subject to the proposed vibration limits.
- 65 My research indicates a district-wide set of daytime/night time numerical vibration limits aimed at protecting people would bring many associated problems. Being based on relatively low vibration thresholds during night time periods, I consider there would be issues when attempting to measure non-compliance within an environment where vibrations are already present due to non-target sources, especially along transport corridors.
- 66 Overall, I consider adopting the requested table of vibration limits risks turning a technically complex, highly source-dependent environmental effect into a single universal compliance test that may be difficult to measure, difficult to enforce, unnecessarily restrictive, and poorly correlate with the actual adverse effect the Council is attempting to manage. New Zealand has a mature suite of acoustical standards and established methodologies for measuring environmental noise, as referred to within MfE's National Planning Standards (NPS) which provides consistency in noise assessment, leading to effective management via consent conditions and district plans. There are no similar multi-faceted NZ standards or guidelines providing a factual basis on which to assess ground vibration effects within the requested amendments to NOISE-R5.1(a).
- 67 It is notable the NPS does not prescribe a ground vibration standard or assessment procedure for district plans in New Zealand. My research indicates there are no widely adopted vibration standards suitable for application district-wide in district plans in New Zealand²⁴. This is perhaps the reason only few (~10%) NZ district plans apply daytime and night time, district-wide ground vibration limits.
- 68 I do not consider the qualitative approach of NOISE-R5.1(a) deficient. Many Councils have successfully enforced environmental standards based, at least in part, on qualitative judgements (such as the judging the presence of special audible characteristics when applying NZS6802:2008).
- 69 In reality, where vibration-generating activities on a site are considered (subjectively) to compromise public health or safety, or well-being and amenity values within any other site, Council has the ability to issue enforcement orders or abatement notices (possibly involving

²⁴ I note Norwegian Standard NS 8176.E:2005 "*Vibration and shock – Measurement of vibration in buildings from land based transport and guidance to evaluation of its effects on human beings*" uses an assessment method based on the statistical maximum value for weighted velocity (or acceleration) which makes some allowance for vibration duration, intensity and possibly offensiveness of the effect, however as this Standard only assesses vibration due to land transport sources, it does not appear suitable for application district-wide.

targeted measurements of received levels of vibration²⁵) to mitigate unacceptable vibration effects emitted by site-specific activities. Under NOISE-R5.1(a) situations where vibration effects exceed the permitted (subjective standard) Council is able to enforce s.16 duty to avoid unreasonable noise to achieve mitigation. The qualitative permitted activity threshold of NOISE-R5.1(a) can, in my view, function effectively to require a resource consent in situations that can be adjudged as necessary, not whether a specific PPV limit value is exceeded within an environment that may already be experiencing ground vibrations.

70 I therefore do not support amending NOISE-R5.1(a) to apply numerical PPV vibration limits district-wide as requested.

71 Submission point 447.12 of Te Kārearea Ltd also questions the qualitative approach of NOISE-R5.1(a) which it considers 'too vague' and prefers that vibration should have a specific definition to help implement the rule. Given the wide range of situations where ground vibration effects may be experienced and the range of human reactions in terms of what is acceptable in any given situation, I do not consider it practical to develop a definition for vibration that could be applied district-wide.

72 Submission point 444.13 of Winstone Aggregates helpfully points out that the 1999 version of DIN 4150 referred to within NOISE-R5.1(b) has been replaced with a more up to date 2016 version. It is accepted best practice for district plans, when reviewed, to adopt a more recent version of referenced standards where they exist. In this case, the more recent 2016 version of DIN4150 is recommended to be adopted within NOISE-R5.1b. I therefore recommend amendment for NOISE-R5.1b is as follows;

b. The activity is managed to avoid damage to buildings, by ensuring vibration levels received at any building except for any building located on the same site do not exceed vibration guideline values set out in ~~Tables 1 and 3 of DIN 4150-3:1999-02 Structural vibration — Part 3: Effects of vibration on structures~~ DIN 4150-3:2016 Vibration in buildings – Part 3: Effects on structures.

G. SUMMARY

73 As requested, I have provided evidence regarding a range of noise and vibration matters raised by submitters. I have based my evidence on research, experience and knowledge. I have looked into the noise and vibration concerns raised and have set out in my evidence the reasons for accepting or rejecting certain requested amendments to the Noise Chapter.

²⁵ Vibration measurements in occupied buildings can be an issue. Because the requested vibration standards are based on Peak Particle Velocity (PPV), a single footstep near a sensor attached to the building can easily trigger a false exceedance. To measure compliance with the proposed lower night time vibration limit it is likely the receiving building will need to be unoccupied.

74 For the reasons set out above, I have recommended certain minor but necessary wording amendments to the PDP Noise Chapter.

A handwritten signature in black ink, appearing to read 'M. J. Hunt', is positioned above a horizontal dotted line.

10 September 2026