



MARSHALL DAY  
Acoustics 

AVENUE BUSINESS PARK  
PRIVATE PLAN CHANGE  
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**Project:** AVENUE BUSINESS PARK

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**Report No.:** Rp 001 20211116

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MATAMATAPIAKO DISTRICT PLAN

## 1.0 REPORT SUMMARY AND CONCLUSIONS

*The potential for noise effects from the proposed Private Plan Change 58: Avenue Business Park, in the context of a changing (increasing) noise environment, are of little appreciable significance.*

The applicant seeks to rezone approximately 13.4 hectares of land (the Site) from Rural to General Industrial Zone (GIZ).

The Site is neighboured by Industrial Zone land (to the east) and other Rural zoned land to the north, west and south. State Highway 26 (SH26) is nearby approximately 175m south of the site.

Quantification of the existing noise environment has been undertaken. The Existing acoustic environment is typical for a site adjacent to a state highway. Traffic is a considerable source of noise in the area. The existing Industrial zone and the local roads are an active area with associated noise that also contributes to the existing noise environment. Development of the consented Avenue Industrial Business Park (Stage1) and new roads (anticipated by the Morrinsville Town Strategy) may introduce more noise to the area.

We have reviewed the existing noise and vibration performance standards for these zones (permitted baseline) and the proposed performance standards for the General Industrial Zone. We consider the noise proposed provisions for the General Industrial Zone are generally appropriate – albeit a little onerous for the proposed zone. The proposed rules allow for the proposed activities to occur whilst ensuring that the adverse effects of noise are avoided, remedied, or mitigated.

In the context of an anticipated changing (increasing) noise environment, we consider the potential for noise effects from the Plan Change is of little appreciable significance.

## 2.0 PLAN CHANGE LOCATION AND DESCRIPTION

### 2.1 The applicant seeks a Plan Change from Rural Zone to General Industrial Zone

The applicant seeks to rezone 13.4 hectares of land on the west side of Morrinsville by way of Private Plan Change. The Plan Change will be Plan Change 58: Avenue Business Park (PC58).

The Plan Change area (the Site) is identified in Figures 1, 2,3 &4. The Site and its neighbours are all located within Matamata Piako District. The zoning would change from Rural Zone to General Industrial Zone (GIZ) in the Matamata Piako District Plan (the Plan).

The Site is currently in pasture and is relatively flat but slopes upwards to the north at the northern end of the site.

A concept plan which shows an indicative development layout for the Site is shown in Figure 1.

Figure 1: Indicative development layout for the Site

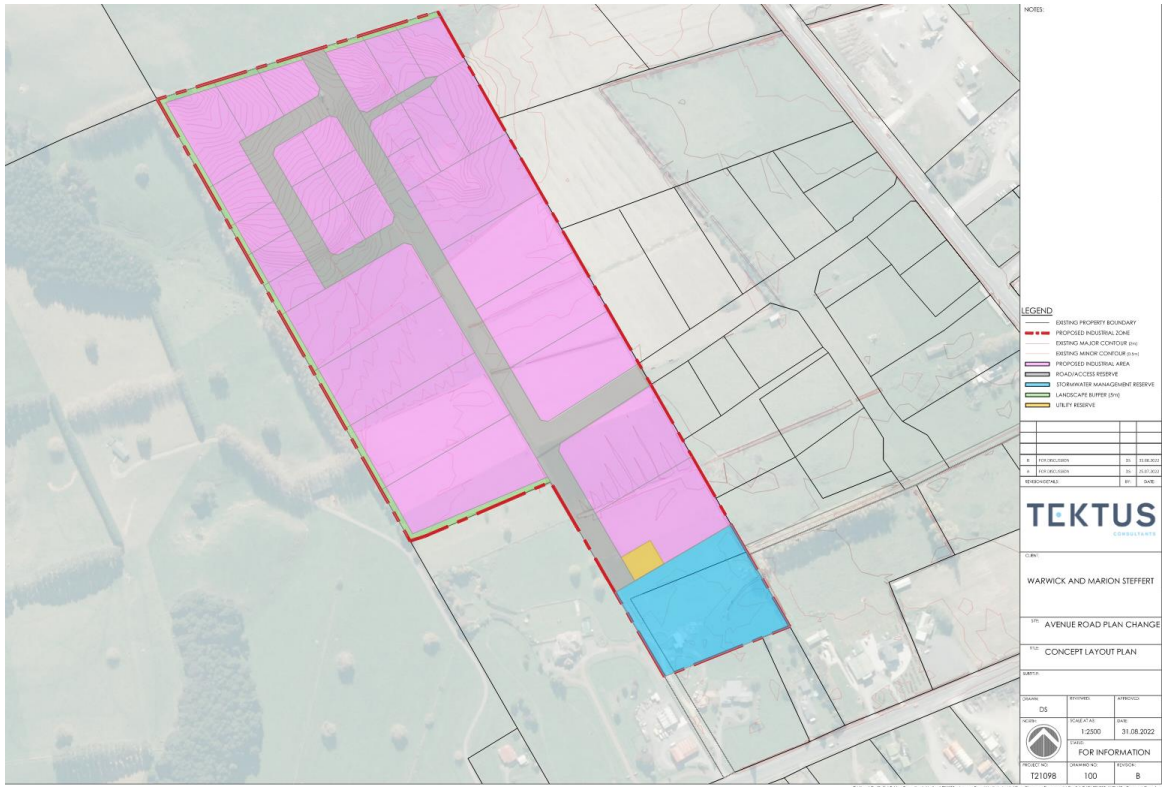
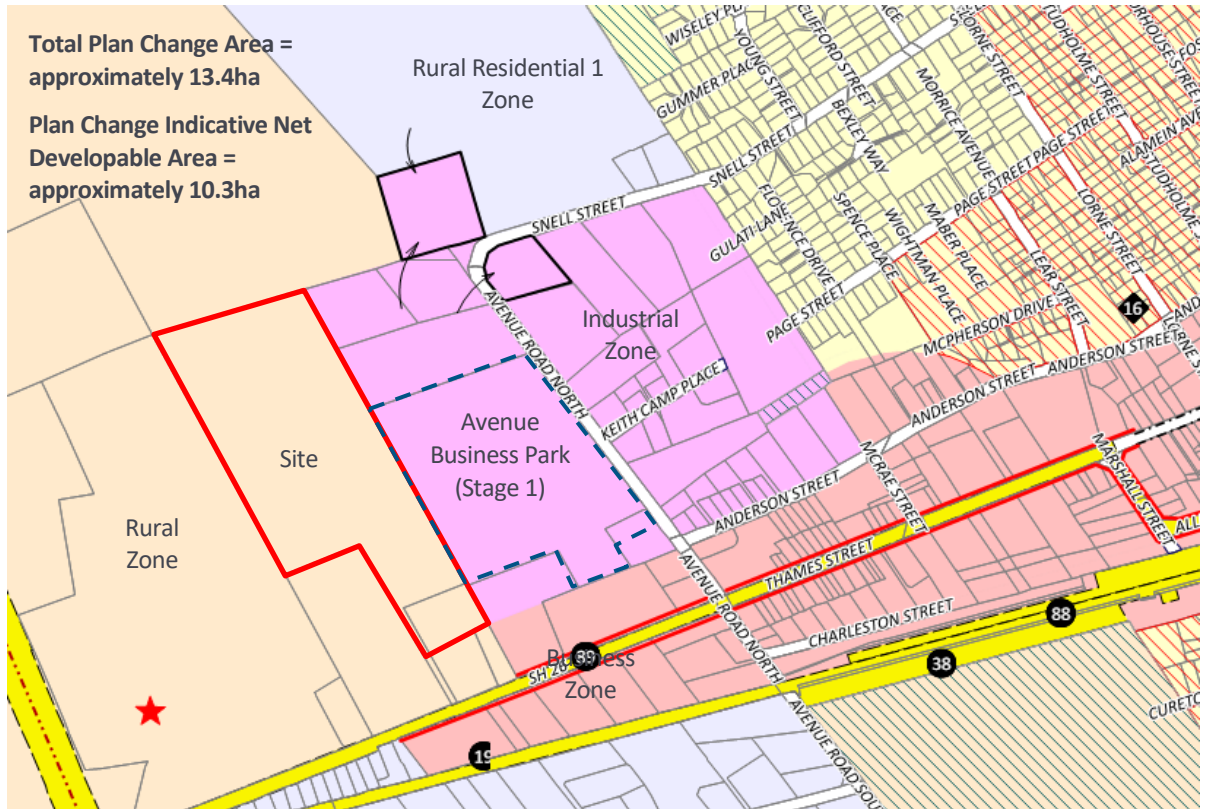


Figure 2: Proposed Plan Change area (the Site)



### 2.1.1 The neighbouring sites to the east are Industrial Zone

The neighbouring activities in the Industrial zone to the east include:

- Bowers Concrete, and
- Avenue Business Park (Stage1) which has been granted a resource consent in early 2022 and is currently under construction.

The Site is proposed to be Stage 2 of the Avenue Business Park development.

### 2.1.2 The other neighbouring sites are Rural Zone

Sites to the north and west are in pasture. To the south are small Rural Zone lots with dwellings and light industry (builders depot).

The closest Rural Zone dwellings are:

- 2581 SH26 – south of the site (owned by the applicant)
- 2579 SH26 – ~125m south of the site
- 2561 SH26 – ~190m south of the site
- 2559 SH26 – ~170m west of the site
- 2469 SH26 – ~220m north-west of the site

### 2.1.3 State Highway 26 is just south of the Site

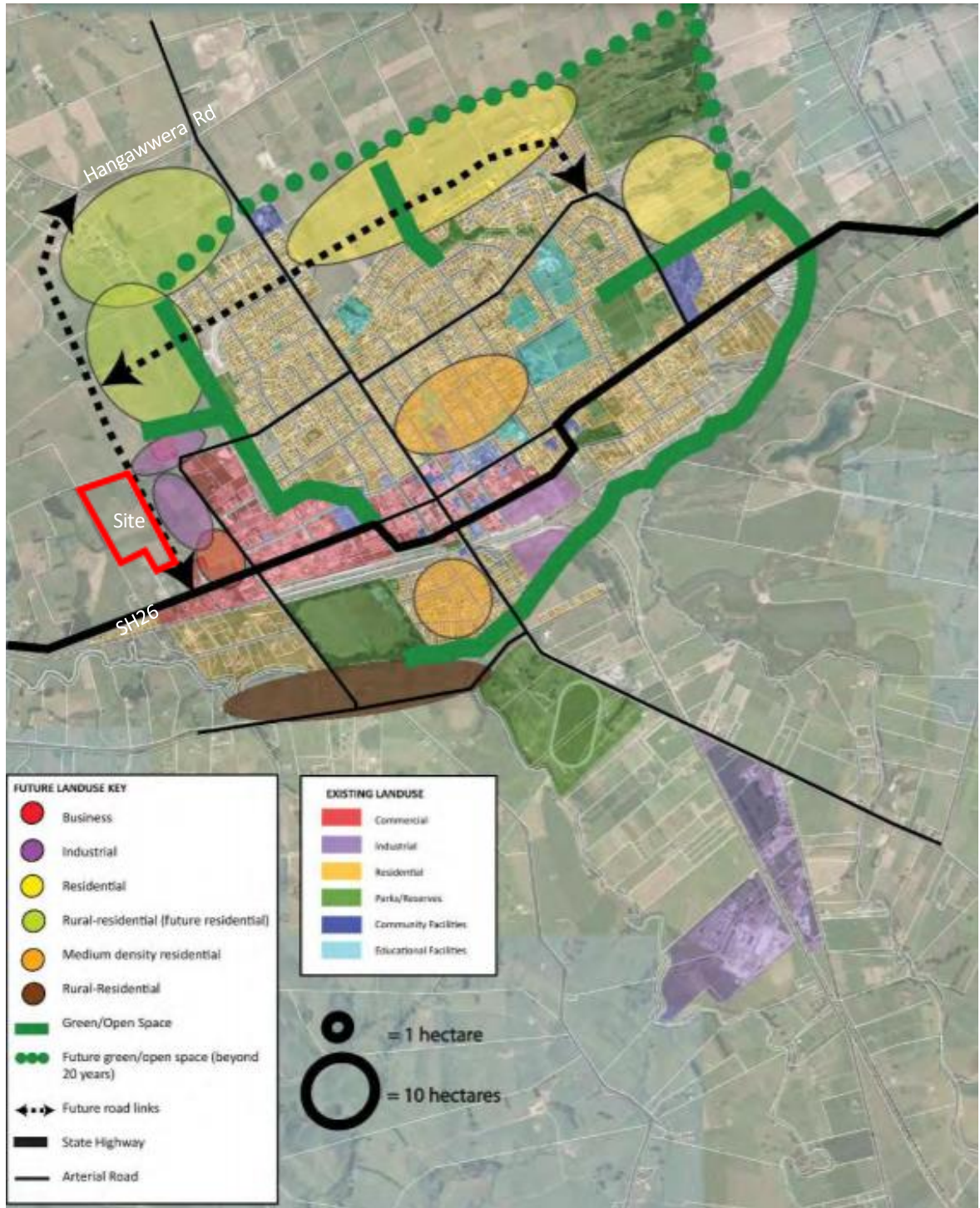
To the south of the Site lies SH26 , just beyond the adjacent Rural Zone. .

The Site is currently accessed via 2581 SH26, on the west side of Morrinsville. The proposal is for access to be through Avenue Business Park (Stage 1) via a new road off Avenue Road North (refer Figure 1).

**Figure 3: Avenue Road Industrial Area – Currently Proposed Development Sites**



Figure 4: Morrinsville Town Strategy (2013) Preferred Development Options





### 3.0 EXISTING NOISE ENVIRONMENT

We deployed two unattended noise loggers in two locations near by the site. One logger was close to SH26, south of the site. The other logger was north of the site. The loggers each recorded for a 7-day period. We use the sound levels measured by the loggers to quantify the existing acoustic environment. The loggers measured environmental noise during the daytime and night-time. The processed logging results indicate that the background and ambient noise ranges are typical for a site located close to a state highway and active industrial area.

We installed two noise loggers on neighbouring sites at the location shown in Figure 5. The sites were chosen to represent two types of receivers:

1. Rural Zone dwellings, adjacent the site, near to SH26 (representative of the dwellings between the Site and SH26); and
2. Rural Zone dwellings adjacent the site, far from SH26 (representative of the dwelling at 2469 SH26)

The loggers automatically measured noise levels in 1-second intervals each for a period of 7 days (we derived sound levels in 15-minute intervals through post-processing of the data). We removed any measurement intervals where the weather was outside the allowable meteorological window prescribed in NZS 6801:2008.

**Figure 5: Noise logger locations**



Tables 1 and 2 (overleaf) summarise the processed noise logger results and shows the range of noise levels and the average per period.

Refer to Appendix C for the full summary of noise logging results and level versus time histogram.

**Table 1: Summary of measured noise levels – Noise Logger 1**

Day Range	Period	Noise Levels (dB)		
		LA10	LAeq	LA90
Monday - Saturday	Daytime (0700-2200) Range	39-61	37-56	31-52
	Daytime Average	50	47	43
	Night-time (2200-0700)	32-60	29-55	22-51
	Night-time Average	46	44	38
Sunday	Daytime (0700-2200) Range	38-55	35-50	29-42
	Daytime Average	47	44	37
	Night-time (2200-0700) Range	32-51	31-50	25-48
	Night-time Average	43	40	37

**Table 2: Summary of measured noise levels – Noise Logger 2**

Day Range	Period	Noise Levels (dB)		
		LA10	LAeq	LA90
Monday - Saturday	Daytime (0700-2200) Range	45-59	43-58	40-54
	Daytime Average	54	52	48
	Night-time (2200-0700)	39-59	37-57	28-55
	Night-time Average	53	51	46
Sunday	Daytime (0700-2200) Range	47-58	43-57	33-47
	Daytime Average	51	50	43
	Night-time (2200-0700) Range	38-57	35-55	29-53
	Night-time Average	51	49	44

### 3.1 The existing acoustic environment is typical for a site adjacent to a state highway

Based on the measured noise levels and the surveyor's observations the existing acoustic environment is typical for a site near a state highway and at the interface of a developed industrial zone.

#### 3.1.1 Traffic is a considerable source of noise in the area

The observations made by our surveyor, and the measured noise levels, indicate that SH26 is the primary source of ambient noise.

#### 3.1.2 The existing Industrial Zone and the local roads are an active area with associated noise

Industrial activity noise and noise from traffic on local road are secondary contributors to noise levels.

### 3.2 Development and new roads may introduce more noise to the area

The development and activation of the Avenue Business Park Stage One will likely further contribute to change (an increase – albeit small) in noise level when it is in operation.

The Morrinsville Town Strategy (2013) indicates that a future road link may be constructed between SH26 and Hangawera Road, as shown in Figure 4. If these new roads are built, noise – from traffic- can be expected to increase in the area.

## 4.0 A SUMMARY OF THE PLAN’S NOISE AND VIBRATION PERFORMANCE STANDARDS

Rather than reproduce the rules in our report we provide a summary of the relevant noise performance standards with respect to the Site and its neighbours.

We also provide some commentary on the Plan’s noise performance standards.

### 4.1 Section 5.2 of the Plan has rules for Noise

The Plan has noise performance standards in *Part B: Rules - 5 Performance Standard - all activities - 5.2 Noise*. These are reproduced in Appendix B for reference.

The rules which presently apply to the Site and the neighbouring sites are discussed below. They form the permitted baseline and expectations for noise levels in the area.

#### 4.1.1 There are rules for noise received between Rural Zone sites – with some activities exempt

The noise performance standards in Rule 5.2.6 apply to noise from a site in the Rural Zone, received at the notional boundary of Rural Zone dwellings. In short, the rules are:

- 50 dB  $L_{A10}$  during the daytime (7am to 8pm)
- 40dB  $L_{A10}$  during the night-time (8pm to 7am)

However, seasonal or temporarily intermittent noise resulting from agriculture and forestry activities consistent with the predominant character of the Rural Zone are exempt from these limits. These exemptions are subject to ‘best practice’ principles such as equipment maintenance and good management practices.

*The night-time period begins earlier than many other District Plans*

Many other district plans have rural zone night-time noise limits that start at 10pm. In some instances, a shoulder period - between, say, 8pm and 10pm - with a stepped decrease in noise level, might appear in the noise limits of other district plans.

Our noise monitoring shows that between 8pm and 10 pm the sound levels were above the Plan limits – more so for the location close to SH26.

**Table 3: Summary of measured noise levels – 8pm to 10pm**

Location	Period- 8pm to 10pm	Noise Levels (dB)		
		$L_{A10}$	$L_{Aeq}$	$L_{A90}$
Noise Logger 1	Range of measured levels	38-50	35-48	29-42
2469 SH26	Average	44	42	37
Noise Logger 2	(2000-2200) Range	45-57	43-53	33-47
2579 SH26	Average	53	50	44

*There is no  $L_{max}$  criterion for noise from Rural Zone activity*

The Plan has  $L_{max}$  criterion for noise received from Business Zone activities, Industrial Zone activities and Scheduled Site activities (unless specified in a Development Concept Plan). Within the explanation sections of the rules the Plan outlines that the application of  $L_{max}$  criterion ‘at night time is to minimise any sleep disturbance for the residential community.’

However, the Plan does not have  $L_{max}$  criterion for noise generated in Residential or Rural Zones. This is rather unusual when compared to the rules in other district plans.

#### 4.1.2 There are rules for noise from Industrial zones received in Rural zoned sites

The noise performance standards in Rule 5.2.4 apply to noise from an Industrial Zone site, received at the notional boundary of Rural Zone dwellings. In short, the rules are:

- 55 dB  $L_{A10}$  during the daytime (7am to 10pm) from Monday to Saturday
- 40dB  $L_{A10}$  at all other times
- 65dB  $L_{Amax}$  during the night-time (8pm to 7am)

#### 4.1.3 There are rules for noise from Construction

Rule 5.2.1 requires noise from construction meet the limits recommended in Table 1 of NZS 6803P:1984, measured and assessed in accordance with that standard, and references Clause 4.2.2 of NZS 6802:1991.

## 4.2 Section 5.3 of the Plan has rules for Vibration

The Plan contains amenity standards for vibration which is generated by business and industrial activities.

The explanation in the rule outlines that:

- The night-time limit for residential areas and rural dwellings is set at just above the threshold of perception
- The daytime limit of 3 times the threshold was chosen as a reasonable balance between residential amenity and the need for business activities to be able to generate a reasonable level of vibration.

## 4.3 The Plan’s noise and vibration performance standards are adequate but could be better

Generally, the noise rules and limits in Section 5 of the Plan:

- Acknowledge the likelihood of the types of activities that might occur in each zone, and
- Provide appropriate controls for those identified activities.

### 4.3.1 The performance standards have some minor shortcomings

Upon review of the Plan we have found the following minor inconsistencies.

#### *$L_{Aeq}$ vs $L_{A10}$ descriptors*

The Plan’s noise rules use the  $L_{A10}$  parameter and reference outdated versions of the relevant standards for noise measurement<sup>1</sup> and assessment<sup>2</sup>. The use of the  $L_{Aeq}$  parameter (which

<sup>1</sup> New Zealand Standard NZS 6801:2008 “Acoustics – Measurement of environmental sound”

<sup>2</sup> New Zealand Standard NZS 6802:2008 “Acoustics - Environmental Noise”

supersedes the  $L_{A10}$  parameter used in previous versions of the measurement and assessment standards) better aligns with the latest versions.

*Ministry for the Environment. November 2019. National Planning Standards (NPS)* directs the use of the latest versions of measurement and assessment standards, as well as, the use of the  $L_{Aeq}$  descriptor.

#### *Comparable time periods*

There is some small discrepancies in the time periods used.

All the noise rules have differing periods for the 'daytime' or 'active' period – presumably the period in which activity is anticipated and the noise limits are subsequently less stringent, e.g.:

- Residential Zone – Monday to Saturday 8am to 6pm
- Business Zone – Monday to Saturday 7am to 10pm
- Industrial Zone – Monday to Saturday 7am to 10pm
- Rural Zone – Monday to Saturday 7am to 8pm
- Settlement Zone (Residential/Commercial/ Industrial Precincts) – Monday to Saturday 7am to 10pm

Whilst the choice of time periods may have been intentional– to constrain anticipated activities and their associated impact for each zone - it presents as inconsistent in the context of the site. At present the rural zone neighbours of the Site can expect up to 40 dB  $L_{A10}$  from the site at 9pm, but 55 dB from the adjacent Industrial Zone at the same time.

#### *Sundays have low noise limits*

All the 'daytime' or 'active' period for the performance standards above apply Monday to Saturday and requires daytime noise limits of between 35 and 45 decibels on a Sundays and public holidays.

A noise limit of between 35 and 45 decibels ( $L_{Aeq}$  or  $L_{A10}$ ) during the daytime limit is uncommon.

#### *$L_{max}$ Criterion*

Some zones (Residential and Rural) lack night-time  $L_{max}$  criterion. Meanwhile, Industrial and Business Zone noise, received in the Rural, Rural Residential and Residential Zones have a relatively stringent criterion 65 dB  $L_{Amax}$  criterion. We consider 70 dB  $L_{Amax}$  to be a better suited criterion. 70 dB  $L_{Amax}$  aligns with the recommendations of NZS 6802:2008, and better balances achievability against sleep disturbance (especially in the Rural Zone where the limit applies at the notional boundary – 20m from any building in which people might be sleeping).

#### *Reverse Sensitivity from Rural/Rural residential encroachment*

The rules do not anticipate the potential for reverse sensitivity from the encroachment of dwellings. For example, under the Plan rules an Industrial activity may establish itself in an Industrial Zone adjacent a Rural Zone property without a dwelling. Once established the Industrial activity may generate compliant noise levels at the nearest existing receiver. Subsequently the owner of the adjacent Rural Zone property may build a dwelling on their land (as permitted by the Plan), closer to the Industrial activity than the receivers that existed when they established. Except where existing use rights apply, the established and previously compliant Industrial activity would then be considered non-compliant with the Plan's noise rules without any change in noise levels from their activity.

*Reference to an outdated Construction Noise Standard*

The referenced construction noise standard was replaced with New Zealand Standard NZS 6803: 1999 *Acoustics - Construction Noise*. The latest version of the standard uses the  $L_{Aeq}$  parameter and references the latest versions of the relevant standards for noise measurement and assessment.

*Vibration Standards*

The current vibration rules are based on outmoded standards and are not current best practice.

Most other District Plans refer to the German Industrial Standard DIN 4150-3:1999 “*Structural Vibration - Effects of Vibration on Structures*” to control vibration damage risk on buildings. We recommend this would be a more pragmatic Standard to use, but it does not address amenity.

The Auckland Unitary Plan applies an amenity limit of 2 mm/s PPV during the day and 0.3 mm/s PPV at night<sup>3</sup>, but only for construction and demolition activities. We understand that Auckland is the only territorial authority with an amenity rule like this.

We would not recommend applying a vibration amenity limit for other activities (as the Plan currently does). This is because it is impracticable to predict vibration levels for every neighbourhood activity, and amenity limits are so low it is difficult to assess them.

4.3.2 Rectifying all the shortcomings is beyond the scope of this Private Plan Change

Despite the identified shortcomings and inconsistencies described above, the rules are understood to achieve the desired outcomes. None of the shortcomings identified represent a critical problem for the Plan Change.

Amending the rules would provide clarity in the future. However, such a change has an impact on numerous parties in each of the zones – across the district. The proposed Plan Change is a small area relative to the entire Rural and Industrial Zones.

Instead, the applicant seeks to adopt a different zoning for the Site, one which is not presently within the Plan. The proposed zone – and associated noise performance standards are discussed in the following section.

**5.0 GENERAL INDUSTRIAL ZONE (GIZ) IS THE PROPOSED ZONING FOR THE SITE**

PC58 proposes to rezone the Site from Rural Zone to ‘General Industrial Zone’ (GIZ).

**5.1 The proposed GIZ provisions for PC58 are based on the provisions in PC57**

The proposed GIZ provisions for PC58 are based on provisions which have been developed in conjunction with Matamata Piako District Council (MPDC) for a private plan change for a rezoning in Matamata (Plan Change 57) from Rural Zone to GIZ.

The noise provisions for PC58 are the same as the proposed PC57 provisions except with an addition to address potential for reverse sensitivity.

The GIZ follows the NPS format. We understand it is MPDC’s intention that the GIZ will eventually replace the existing Industrial Zone throughout the district.

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<sup>3</sup> Auckland Unitary Plan operative in part Standard E25.6.30.1

## 6.0 PROPOSED NOISE AND VIBRATION PERFORMANCE STANDARDS FOR THE GIZ

Excerpts of the proposed provisions for the GIZ, and associated amendments to Part B of the Plan, which relate to noise and vibration are attached in Appendix C.

### 6.1 The proposed GIZ noise provisions address some shortcomings of the Plan's Noise rules

#### 6.1.1 The GIZ provisions align with NPS

The proposed GIZ noise provisions adopt the  $L_{Aeq}$  parameter and refer to the latest versions of the relevant standards for noise measurement and assessment. This aligns the provisions with the NPS.

#### 6.1.2 A reference to the plan change date addresses reverse sensitivity to encroachment

By identifying the dwellings by date to which the noise rule applies reverse sensitivity is addressed. However, it does place the onus upon the developer of future dwellings to appreciate the potential for noise from an adjacent GIZ.

### 6.2 The proposed GIZ noise provisions retain some shortcomings of the Plan's Noise rules

The following aspects are not addressed in the proposed GIZ noise provisions:

- Low noise limits on Sundays
- A stringent 65  $L_{AFmax}$  criterion in the night-time
- Reference to the current Construction Noise Standard

We consider that the noise provisions for the GIZ should address these. However, we understand the applicant accepts the provisions in relation to the above aspects and is prepared to adopt them for PC58 so that the provisions are consistent with PC57.

### 6.3 The proposed provisions address noise received in ancillary residential units within the GIZ

The PC58 provisions make one ancillary residential unit per site a permitted activity in the GIZ. The ancillary residential unit must be ancillary to industrial activity occurring on the site and is limited to a floor area of 60m<sup>2</sup>.

The noise standards for the GIZ require that noise received within an ancillary residential unit must not exceed:

- 35 dB  $L_{Aeq}$  in bedrooms and
- 40 dB  $L_{Aeq}$  in all other habitable spaces.

The provisions require:

- Alternative ventilation be provided where windows are required to be closed to meet the internal noise levels, and
- an acoustic design report is required to be prepared and submitted to MPDC confirming compliance.

We consider that the noise standards will ensure that an appropriate level of amenity will be provided for residents of any ancillary residential units that establish in the GIZ.

## 7.0 ASSESSMENT OF NOISE EFFECTS

The proposed GIZ provisions would allow for the proposed activities to occur whilst ensuring that the adverse effects of noise are avoided, remedied, or mitigated.

The proposed Plan Change would result in a change in the location of the interface between the Rural Zone and Industrial Zone activity. As such a change in activity noise levels – as received by some neighbours - is likely to occur.

The neighbours to the Site would be more likely to receive up to the proposed GIZ limits 55 dB  $L_{Aeq}$  during the day and 40 dB  $L_{Aeq}$  during the night from the proposed General Industrial Zone. Currently the Rural Zone Provisions limit the noise they receive from Rural Zone neighbours to 50 dB  $L_{A10}$  during the day and 40 dB  $L_{A10}$  during the night. We have quantified the existing noise levels and can objectively compare the existing noise environment to the levels that are proposed for the GIZ. The existing environment is quieter than the proposed limits - more so at locations which are further back from SH26 and the established industrial area.

Nonetheless, the area is anticipated to see a change (increase) in noise levels with the construction and operation of consented Industrial Zone development (Avenue Business Park - Stage 1) and the potential construction of new local roads. Therefore, the noise levels in the area are anticipated to change (increase) anyway.

The change (increase) in noise levels associated with the proposed Plan Change (as well as proposed roads and consented developments, when constructed) will not necessarily result in a change in character. We anticipate that the character of the existing environment, which consists predominantly of road traffic and industrial activity noise, will continue to be the likely dominant character if the proposed Plan Change is granted.

In this situation (including where we are expecting an increase in noise levels, but not entirely due to activity within the proposed Plan Change area), we consider the potential for noise effects from the Plan Change (including the proposed GIZ noise provisions) is of little appreciable significance.

The internal noise standards which are proposed for ancillary residential units in the GIZ will achieve an appropriate level of amenity for residents.



## APPENDIX A GLOSSARY OF TERMINOLOGY

<b>A-weighting</b>	A set of frequency-dependent sound level adjustments that are used to better represent how humans hear sounds. Humans are less sensitive to low and very high frequency sounds.
<b>dB</b>	Decibel. The unit of sound level.
<b>L<sub>A10</sub></b>	The A-weighted sound level exceeded for 10% of the measurement period, measured in dB. Commonly referred to as the average maximum noise level.
<b>L<sub>Aeq</sub></b>	The equivalent continuous A-weighted sound level. Commonly referred to as the average sound level and is measured in dB.
<b>L<sub>Amax</sub></b>	The A-weighted maximum sound level. The highest sound level which occurs during the measurement period. Usually measured with a fast time-weighting i.e. L <sub>AFmax</sub>
<b>L<sub>dn</sub></b>	The day-night sound level calculated from the measured L <sub>Aeq</sub> over a 24-hour period with a 10 decibel penalty applied to the night-time period (2200-0700 hours)
<b>Noise</b>	A subjective term used to describe sound that is unwanted by, or distracting to, the receiver.

APPENDIX B MATAMATA PIAKO DISTRICT PLAN – SECTION 5.2- NOISE RULE EXCERPT

**Part B: Rules**

**5 Performance standards – all activities**

**5.2 Noise**

**5.2.1 General noise**

- i. Where any dwelling in a Business zone is to be constructed within 10m of any road boundary an acoustic design report, prepared by a suitably qualified acoustic engineer, confirming that the specific design of the dwelling will provide a noise level (24 hours Leq) that will not exceed 45dBA and the maximum noise level (Lmax) that will not exceed 78dBA in all habitable rooms with all opening windows closed shall be obtained within twelve months of the commencement of construction.
- ii. For any new activity in any zone Council may require the submission of an acoustic design report from a suitably qualified Acoustic Engineer confirming that the anticipated noise levels will be in accordance with the requirements for the zone (or Development Concept Plan with respect to Scheduled Industrial Sites).
- iii. For any noise with special audible characteristics as defined by NZS6802:1991 the L10 noise level standards shall be reduced in accordance with the standard.
- iv. Construction noise from the site shall meet the limits recommended in Table 1 of NZS6803P:1984. The Measurement and Assessment of Noise from Construction, Maintenance and Demolition Work and shall be measured in accordance with NZS6803P:1984. Adjustments provided in Clause 6.1 of NZS6803P:1984 shall apply, and references in the Tables of NZS6803P:1984 to "NZS6802" shall read as references to Clause 4.2.2 of NZS6802:1991.
- v. The noise levels shall be measured and assessed in accordance with the requirements of NZS6801:1991 Measurement of Sound and NZS6802:1991 Assessment of Environmental Sound.

Objectives/Policies		
3.5.2.3	O1, O2, O6	P1, P2

**Explanation**

Traffic noise for residential uses with increasing flows and night time movements can become a nuisance. The aim is to minimise the traffic noise received at any new dwelling so noise will not be a long term problem. Similarly construction noise and noise with special characteristics can become a nuisance when expectations as to the length or nature of the noise are exceeded. The design standards are consistent with international design guidelines and the aims of the Resource Management Act.

**5.2.2 Residential zone**

- i. Home occupations.

The noise level (L10) as measured within the boundary of an adjacent residentially zoned site shall not exceed the following:

Monday to Friday	8.00am to 6.00pm	45dBA
At all other times including Saturdays, Sundays and Public Holidays		35dBA

- ii. Discretionary activities and education facilities up to a maximum of 10 pupils.

The noise level (L10) as measured within the boundary of an adjacent residentially zoned site shall not exceed the following:

Monday to Friday	8.00am to 6.00pm	50dBA
At all other times including Saturdays, Sundays and Public Holidays		40dBA

- iii. Residential activities

The requirements of Section 16 of the Resource Management Act states that at all times the best practicable option must be taken to reduce the noise. In terms of the Resource Management Act any noise must be kept to a reasonable level.

Objectives/Policies		
3.5.2.3	O1, O2, O3	P1, P3

**Explanation**

Any non-residential activity should not compromise the noise environment. For this reason low noise levels have been set to reflect the

fact that no significant noise intrusion is acceptable. It should be noted that a level of 35dBA (L10) prohibits almost any type of industrial noise in the area. The aim of this control is to provide for quiet home occupations, not noisy ones.

Some activities in residential areas are noisy yet are still considered acceptable, such as the lawn mower (at a reasonable hour of the day). However, an air conditioning unit operating at a much lower level can cause annoyance for a neighbour.

### 5.2.3 Business zone

- i. The noise level (L10) as measured within the boundary of any land zoned residential, or the notional boundary of any rural dwelling, or within the boundary of any site within the "Shopping Frontage", shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	50dBA
At all other times including Sundays and Public Holidays		40dBA
10.00pm to 7.00am. The Lmax shall not exceed 65dBA.		

- ii. The noise level (L10) as measured within the boundary of any adjacent property in the Business zone (excluding those sites within the "Shopping Frontage"), shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	55dBA
At all other times including Sundays and Public Holidays		45dBA

- iii. The noise level (L10) as measured within the boundary of any adjacent Industrial zone shall not exceed 60dBA.

Objectives/Policies		
3.5.2.3	O1, O2	P1, P2

#### Explanation

Differing noise standards have been set for the "Shopping Frontage" to protect their character and amenity values. Noisy activities can have a detrimental effect on the well being of a person in their place of residence or at work. Limiting the noise will ensure that a reasonable level of amenity is maintained in residential areas in particular.

The Lmax value at night time is to minimise any sleep disturbance for the residential community.

### 5.2.4 Industrial zone

- a. The noise level (L10) as measured within the boundary of any land zoned residential, or the notional boundary of any rural dwelling shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	55dBA
At all other times including Sundays and Public Holidays		40dBA
10.00pm to 7.00am. The Lmax shall not exceed 65dBA.		

- b. The noise level (L10) as measured within the boundary of any adjacent Industrial zone shall not exceed 65dBA.

### 5.2.5 Scheduled sites (see Schedule 5)

- i. Unless otherwise specified for a scheduled site and shown on the Development Concept Plan, the noise levels and noise control periods relating to scheduled sites shall be as follows:

- a. The noise level (L10) as measured within the boundary of any land zoned residential, the notional boundary of the rural dwelling, where shown on the DCP, or the noise emission control boundary shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	50dBA
At all other times including Sundays and Public Holidays		40dBA
10.00pm to 7.00am. The Lmax shall not exceed 65dBA.		

- b. The noise level (L10) as measured within the boundary of any adjacent Industrial zone shall not exceed 65dBA.

- ii. That any variation or change to existing development concept plans and new scheduled sites shall develop a noise control boundary and noise controls by reference to rule 1.4.2(i).

Objectives/Policies		
3.5.2.3	O1, O2	P1, P2, P3

#### Explanation

Noisy activities can have a detrimental effect on the well being of a person. Limiting the noise will ensure that a reasonable level of amenity is maintained in residential areas. The requirements of scheduled sites will provide a reasonable level of acoustic protection for residents' use and ensure undisturbed sleep for people for the open window situation.

The inter zone controls for the Industrial zone is to allow normal office work to be undertaken without undue interference from the neighbours.

The Lmax value at night time is to minimise any sleep disturbance for the residential community.

#### 5.2.6 Rural and Rural-Residential zones

- i. The noise level (L10) as measured within any residentially zoned boundary or within the notional boundary of any rural dwelling shall not exceed the following:

7.00am to 8.00pm	50dBA
8.00pm to 7.00am	40dBA

- ii. Exclusions

Seasonal or temporarily intermittent noise resulting from agriculture and forestry activities (e.g. crop spraying, agriculture or forestry harvesting, frost control, etc) consistent with the predominant character of the Rural zone, are permitted **provided that**:

- a. The activity is conducted in accordance with good management practice; and
- b. Machinery is operated in accordance with manufacturers' specifications.

This exclusion does not include rural operations such as the distribution of industrial factory by-products.

The noise levels set by this Rule do not apply within the Quarry Noise Control Boundary shown in Appendix 8. The noise levels set by this Rule will apply to Rural zoned land outside that boundary.

Objectives/Policies		
3.5.2.3	O1, O2, O3, O4	P1, P2, P4

#### 5.2.7 Airport noise

- i. The noise of aircraft using the airport shall not exceed the air noise boundary (Ldn 65) or the outer control boundary (Ldn 55) as shown on planning map.
- ii. The maintenance of aircraft, including engine testing, shall comply with the following conditions:

The noise level (L10) as measured within the notional boundary of any rural dwelling shall not exceed the following limits:

Monday to Saturday	7.00am to 10.00pm	55dBA
At all other times including Sundays and Public Holidays		45dBA

Objectives/Policies		
3.5.2.3	O1, O2, O6	P1, P4

#### Explanation

The airfield represents a significant existing use in the rural area. It is appropriate that the rules contain measures that while placing the onus on airfield operators to maintain the existing noise environment and provide for the foreseeable future, also places an onus on new noise sensitive activities in the vicinity to provide for their own protection.

Ldn (the day/night level) is defined as the time average sound level in decibels over a 24 hour period (from midnight to midnight) with the addition of 10dBA to night time levels during the period from midnight to 0700 hours and from 2200 hours to midnight to take account of the increase annoyance caused by noise at night.

### 5.2.8 Noise standards for works and network utilities

- i. See Section 8 for additional noise standards applicable to works and network utilities. Where there is conflict between the noise standards in 5.2.1–5.2.7 above and Section 8, the standards in Section 8 shall apply.

### 5.2.9 Noise insulation: Noise sensitive activities – railway lines and state highways

i. Performance Standards

- a. New (including relocated) buildings to be used for a noise sensitive activity located:
- Within 40m of a railway line included in the definition of “regionally significant infrastructure”;
  - Within 80m of a state highway with a posted speed limit above 70km/h; or
  - Within 40m of a state highway with a posted speed limit of 70km/h or less;

Shall be designed, insulated, constructed, or screened by suitable barriers and maintained to ensure that noise received within any new bedroom, habitable space, or other space containing a noise sensitive activity, will not exceed the limits below:

Space	Internal noise limit	
	Road traffic noise	Railway noise
Inside bedrooms	40 dB LAeq(24h)	35 dBA LAeq (1 hour)
Inside other habitable rooms	40 dB LAeq(24h)	40 dBA LAeq (1 hour)
Inside other spaces containing a noise sensitive activity	No greater than the recommended maximum design guidelines in AS/NZS 2107-2000: Acoustics – recommended design sound level and reverberation times for building interiors	

- b. The distances referred to above are measured from the:
- Edge of a railway track;
  - Edge of the nearest traffic lane of the state highway;
  - Face of the closest external wall of a new building.
- c. If windows are required to be closed to achieve the noise limits above, the building shall be designed and constructed to provide an alternative means of ventilation in accordance with Clause G4 of the New Zealand Building Code.
- d. An acoustic design report prepared by an appropriately qualified practitioner confirming compliance with the limits above must be submitted to Council as part of any resource or building consent application.

**Advice Note: Compliance with Clause G4 will not guarantee thermal comfort. Owners should consider the installation of additional ventilation equipment such as a heat pump.**

ii. Permitted activities

- A new (including relocated) building to be used for a noise sensitive activity that has demonstrated compliance with the performance standards in 5.2.9(i) above is a permitted activity.
- A new (including relocated) building, not to be used for a noise sensitive activity is a permitted activity and is not required to demonstrate compliance with the performance standards in 5.2.9(i) above.

iii. Restricted-discretionary activities

A new (including relocated) building, to be used for a noise sensitive activity not meeting the performance standards in 5.2.9(i) above is a restricted-discretionary activity

iv. Matters of discretion

Council has restricted its discretion to the following matters and may impose conditions relating to these matters if consent is granted:

- The effects of noise from the state highway and/or railway network on the activity to be constructed/relocated;
- The reverse-sensitivity effects of the activity to be constructed/relocated on the operation of the state highway and/or rail network and the ability and suitability of mitigation measures to enable the continued and uninterrupted operation of the state highway and/or railway network;
- The degree of noise attenuation achieved by the noise sensitive activity;

- Technical advice provided by the railway operator (KiwiRail) and/or the NZ Transport Agency.

v. Non-notification

Applications utilising Rule 5.2.9(iii) that do not simultaneously trigger other consent requirements, shall not be publicly notified and shall not be served on any party other than the railway operator (KiwiRail) and/or the NZ Transport Agency.

Objectives/Policies		
2.4.6	O1	P1, P2
2.4.7	O2, O3	P5
3.8.2	O2, O3	P9

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#### 5.2.10 Matamata airport approach path

i. Performance Standards

- a. New buildings or additions to existing buildings to be used for a noise sensitive activity shall not be located within the air noise boundary (65dBA Ldn) as shown on the Planning Maps.
- b. New buildings or additions to existing buildings to be used for a noise sensitive activity located in the area of land between the air noise boundary and the outer control boundary (65dBA–55dBA Ldn contours) as shown on the Planning Maps shall be designed, insulated, and constructed to ensure a satisfactory internal noise environment in accordance with "NZS 6805:1992 – Airport Noise Management and Land Use Planning".

ii. Permitted activities

- a. New buildings or additions to existing buildings to be used for a noise sensitive activity located in the area of land between the air noise boundary and the outer control boundary (65dBA–55dBA Ldn contours) as shown on the Planning Maps that have demonstrated compliance with the performance standard in 5.2.10(i)(b) above are a permitted activity.
- b. New buildings or additions to existing buildings to be used for a noise sensitive activity located outside the outer noise control boundary (55dBA Ldn contour) as shown on the Planning Maps are a permitted activity.

iii. Restricted-discretionary activities

New buildings or additions to existing buildings to be used for a noise sensitive activity located in the area of land between the air noise boundary and the outer control boundary (65dBA–55dBA Ldn contours) as shown on the Planning Maps that have not demonstrated compliance with the performance standard in 5.2.10(i)(b) above are a restricted-discretionary activity.

iv. Matters of discretion

Council has restricted its discretion to the following matters and may impose conditions relating to these matters if consent is granted:

- a. The effects of noise from the airport on the activity to be constructed;
- b. The reserve-sensitivity effects of the activity to be constructed on the continued operation of the airport;
- c. The extent to which the adverse effects can be mitigated;
- d. Any technical advice provided by the airport authority.

v. Non-notification

Applications utilising Rule 5.2.10(iii) that do not simultaneously trigger other consent requirements, shall not be publicly notified and shall not be served on any party other than the airport authority (Council).

vi. Non-complying activities

New buildings or additions to existing buildings to be used for a noise sensitive activity located within the air noise boundary (65dBA Ldn) as shown on the Planning Maps are a non-complying activity.

**5.2.11 Settlement Zone**

(i) Residential Precinct and Commercial Precinct

The noise level ( $L_{Aeq}$ ) as measured at any point within the boundary of an adjacent Residential Precinct and Commercial Precinct site or the notional boundary of any rural dwelling shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	50dBA
At all other times including Sundays and Public Holidays		40dBA
10.00pm to 7.00am. The $L_{AFmax}$ shall not exceed 65dBA.		

The day time levels may be exceeded for infrequent and short-term noise from normal household activities such as lawn mowing and domestic use of power tools.

(ii) Commercial Precinct

The noise level ( $L_{Aeq}$ ) as measured at any point within the boundary of an adjacent Industrial Precinct site or the notional boundary of any rural dwelling shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	55dBA
At all other times including Sundays and Public Holidays		45dBA
10.00pm to 7.00am. The $L_{AFmax}$ shall not exceed 75dBA.		

(iii) Industrial Precinct

(a) The noise level ( $L_{Aeq}$ ) as measured at any point within the boundary of an adjacent Residential Precinct and Commercial Precinct site or the notional boundary of any rural dwelling shall not exceed the following:

Monday to Saturday	7.00am to 10.00pm	55dBA
At all other times including Sundays and Public Holidays		45dBA
10.00pm to 7.00am. The $L_{AFmax}$ shall not exceed 75dBA.		

(b) The noise level ( $L_{Aeq}$ ) as measured at any point within the boundary of an adjacent Industrial Precinct site shall not exceed 65dB

**5.2.12 Noise Insulation for Rural House Sites and the Settlement Zone**

(i) Performance Standards

(a) New (including relocated) buildings to be used for a noise sensitive activity located:

- (i) Within 40m of a railway line included in the definition of "regionally significant infrastructure";
- (ii) Within 80m of a state highway or significant district road with a posted speed limit above 70km/h; or
- (iii) Within 40m of a state highway or significant district road with a posted speed limit of 70km/h or less.

Shall be designed, insulated, constructed, or screened by suitable barriers and maintained to ensure that noise received within any new bedroom, habitable space, or other space containing a noise sensitive activity, will not exceed the limits below:

Space	Internal noise limit	
	Road traffic noise	Railway noise
Inside bedrooms	40dB L <sub>Aeq</sub> (24h)	35dBA L <sub>Aeq</sub> (1 hour)
Inside other habitable rooms	45dB L <sub>Aeq</sub> (24h)	40dBA L <sub>Aeq</sub> (1 hour)
Inside other spaces containing a noise sensitive activity	No greater than the recommended maximum design guidelines in AS/NZS 2107-2000: Acoustics – recommended design sound level and reverberation times for building interiors	

(b) The distances referred to above are measured from the:

- (i) Edge of a railway track;
- (ii) Edge of the nearest traffic lane of the state highway;
- (iii) Face of the closest external wall of a new building.

(c) If windows are required to be closed to achieve the noise limits above, the building shall be designed and constructed to provide an alternative means of ventilation in accordance with Clause G4 of the New Zealand Building Code.

(c) An acoustic design report prepared by an appropriately qualified practitioner confirming compliance with the limits above must be submitted to Council as part of any resource or building consent application.

**Advice Note: Compliance with Clause G4 will not guarantee thermal comfort. Owners should consider the installation of additional ventilation equipment such as a heat pump.**

(ii) Permitted activities

- (a) A new (including relocated) building to be used for a noise sensitive activity that has demonstrated compliance with the performance standards in 5.2.12(i) above is a permitted activity.
- (b) A new (including relocated) building, not to be used for a noise sensitive activity is a permitted activity and is not required to demonstrate compliance with the performance standards in 5.2.12(i) above.

(iii) Restricted-discretionary activities

A new (including relocated) building, to be used for a noise sensitive activity not meeting the performance standards in 5.2.12(i) above is a restricted-discretionary activity

(iv) Matters of discretion

Council has restricted its discretion to the following matters and may impose conditions relating to these matters if consent is granted:

- (a) The effects of noise from the state highway and/or railway network on the activity to be constructed/relocated;
- (b) The reverse-sensitivity effects of the activity to be constructed/relocated on the operation of the state highway and/or rail network and the ability and suitability of mitigation measures to enable the continued and uninterrupted operation of the state highway and/or railway network;
- (c) The degree of noise attenuation achieved by the noise sensitive activity;
- (d) Technical advice provided by the railway operator (Kiwirail) and/or the NZ Transport Agency.

(v) Non-notification

Applications utilising Rule 5.2.12(iii) that do not simultaneously trigger other consent requirements, shall not be publicly notified and shall not be served on any party other than the railway operator (Kiwirail) and/or the NZ Transport Agency.

<sup>1</sup> Amended on 15 August 2022



**Part B: Rules**

**5 Performance standards – all activities**

**5.3 Vibration**

i. Industrial and Business Activities

**Advice note: This Section does not include vibration created as a result of blasting. See Section 4.9.1 for rules related to blasting.**

Vibration from Industrial and Business activity shall not exceed the following average levels:

a. At or within the boundary of any site zoned Residential, or within 20m of any dwelling in the Rural or Rural-Residential zones:

Time	Average weighted vibration level (Wb or Wd)
Monday to Saturday: 7.00am to 6.00pm (0700 to 1800)	45 mm/s <sup>2</sup>
At all other times	15 mm/s <sup>2</sup>

b. At or within the boundary of any adjacent site zoned Business or Industrial:

Time	Average weighted vibration level (Wb or Wd)
At all times	60 mm/s <sup>2</sup>

The weighted vibration levels Wb and Wd shall be measured according to BS6841:1987. The average vibration shall be measured over a time period not less than 60 seconds and not longer than 30 minutes. The vibration shall be measured at any point where it is likely to affect the comfort or amenity of persons occupying an adjacent site.

Objectives/Policies	
3.5.2.3	O1, O2, O3, O4   P1, P2, P3, P4

ii. Buildings adjacent to railway lines and state highways

**Advice Note: Vibration from the operation of state highways and railway lines may cause adverse effects on adjacent buildings and occupants. Vibration is site specific and owners/developers are advised to undertake a vibration assessment to determine whether it will be an issue for their particular development.**

**Explanation**

Vibration that is generated by business and industrial activities can cause discomfort or annoyance when it is transmitted to adjacent sites. Vibration produces complex sensations the location and character of which vary according to the vibration frequency, direction of vibration and other factors.

The vibration limits were chosen after consideration of the guidelines in the British Standard 6841:1987 and the Draft ISO Standard Dis 2634/2:(1987). The night time limit for residential areas and rural dwellings is set at just above the threshold of perception as it was considered necessary to provide a high degree of protection against sleep disturbances. During the day a limit of 3 times the threshold was chosen as a reasonable balance between residential amenity and the need for business activities to be able to generate a reasonable level of vibration.

<sup>†</sup> Amended on 15 August 2022

APPENDIX C GIZ NOISE PROVISIONS FOR PC58 & PROPOSED AMMENDMENTS TO PART B OF THE MATAMATAPIAKO DISTRICT PLAN

C1 Excerpt of Proposed GIZ noise provisions for PC58

**(8) Noise**

- (a) The noise level ( $L_{Aeq}$ ) as measured at any point within the boundary of any land zoned ~~r~~Residential, or the notional boundary of any ~~rural~~ dwelling in the Rural Zone which was existing at (insert PC58 notification date), shall not exceed 55dB Monday to Saturday – 7am to 10pm, or 40dB at all other times. The  $L_{max}$  shall be 65dB  $L_{AFmax}$  between 10pm to 7am.
- (b) The noise level ( $L_{Aeq}$ ) as measured at any point on the boundary within the ~~zone~~ GIZ shall not exceed 65dBA.
- (c) The noise must be measured in accordance with the requirements of NZS6801:2008 – Acoustics – Measurement of Environmental Sound and assessed in accordance with the requirements of NZS6802:2008 Acoustics – Environmental Noise.
- (d) *Ancillary residential units* located within the ~~zone~~ GIZ shall be designed, insulated or constructed and maintained to ensure that:
  - (i) noise received shall not exceed 35dB  $L_{Aeq}$  in bedrooms and 40dB  $L_{Aeq}$  to all other habitable spaces from noise not on the same site; and
  - (ii) if windows are required to be closed to achieve the noise limits in clause (i) above, the building must be designed and constructed to provide an alternative means of ventilation in accordance with Clause G4 of the New Zealand Building Code; and
  - (iii) an acoustic design report prepared by an appropriately qualified practitioner confirming compliance with clause (i) and (ii) above must be submitted to Council as part of resource or building consent application.
- (e) Noise mitigation for noise sensitive activities refer to Rule 5.2.9.
- (f) Also refer to section 5.2

**(15) District Plan Linkage Rules – Performance Standards**

All activities shall comply with the relevant performance standards identified in the following sections of the District Plan.

- Rule 1.2 Development Suitability
  - Rule 2.2.9.1 and 2.2.9.2 Clean fill activities
  - Rule 3.5 Activities adjacent to the National Grid
  - Rule 3.6 Development adjacent to sub-transmission lines
  - Rule 3.7 Approach and restart sight triangles at railway level crossings
  - Rule 3.8 Activities adjacent to Flood Control Assets
  - Rule 3.9 Signage
  - Rule 5.2 Noise
  - Rule 5.3 Vibration
  - Rule 5.4 Lighting and Glare
  - Rule 5.5 Air Emissions
  - Rule 5.7 Use and Storage of Hazardous Substances
  - Rule 5.9 Infrastructure and servicing
  - Section 7 Development Contributions
  - Section 8 Works and network utilities
  - Section 9 Transportation
-

C2 Proposed Amendments to Part B – Section 5: Performance standards – all activities

Amend Rule 5.2.4 to read as follows:

5.2.4 Industrial Zone (excluding the General Industrial Zone)

Amend Rule 5.3 to read as follows:

5.3 Vibration

- (i) Industrial (including the General Industrial Zone) and Business Activities

**Advice note: This Section does not include vibration created as a result of blasting. See Section 4.9.1 for rules related to blasting.**

Vibration from Industrial and Business activity shall not exceed the following average levels:

- (a) At or within the boundary of any site zoned Residential, or within 20m of any dwelling in the Rural or Rural-Residential zones:

Time	Average weighted vibration level (Wb or Wd)
Monday to Saturday: 7.00am to 6.00pm (0700 to 1800)	45 mm/s <sup>2</sup>
At all other times	15 mm/s <sup>2</sup>

- (b) At or within the boundary of any adjacent site zoned Business or Industrial (including the General Industrial Zone):

Time	Average weighted vibration level (Wb or Wd)
At all times	60 mm/s <sup>2</sup>

The weighted vibration levels Wb and Wd shall be measured according to BS6841:1987. The average vibration shall be measured over a time period not less than 60 seconds and not longer than 30 minutes. The vibration shall be measured at any point where it is likely to affect the comfort or amenity of persons occupying an adjacent site.