

**IN THE MATTER** of the Resource Management Act 1991 (**RMA**)

**AND**

**IN THE MATTER** of Plan Change 58 to the Matamata-Piako District Plan

**Joint Witness Statement (JWS) – Noise**

## **Code of Conduct**

1. The experts that sign this statement acknowledge that they have read the 2023 Environment Court’s Code of Conduct for Expert Witnesses and have complied with it in the preparation of this statement and have not omitted to consider any material facts known to them that might alter or detract from the opinions I express.
2. Mathew Cottle (MC) (acoustic expert for the Applicant) and Neil Savory (NS) (acoustic expert for MPDC) have held discussions following circulation of the s42A Report (including the Noise Peer Review) and the Applicant’s evidence.
3. This JWS records the matters which have been discussed by the acoustic experts and their respective opinions regarding the proposed noise rule for the General Industrial Zone (GIZ) – GIZ-R2(6) – which is proposed to be introduced through Plan Change 58 (PC58).

## **Issues Discussed**

4. The noise issues discussed were:
  - Suitability of the site for rezoning from Rural to Industrial;
  - Noise rules for the proposed PC58 GIZ;
  - Existing noise environment surrounding the site;
  - Noise rules for the interface between the GIZ and surrounding general rural zone (GRUZ);
  - Area of difference (MPDC proposed noise control boundary – NCB)

## **Suitability of the Site for Rezoning from Rural to Industrial**

5. The proposed site is located close to State Highway 26 (SH26) to the south of the site. SH26 is a main arterial road west of Morrinsville. There is existing industrial land to the east of the site. Both experts support the rezoning of this land to industrial use owing to the proximity of SH26 and the current noise environment created by traffic on SH26. However, both agree that it is important to impose appropriate noise rules on activities in this new zone to protect the adjacent industrial sites and the amenity values of the rural sites to the north, west and south of the site.

### **Noise Rules for the proposed General Industrial Zone**

6. There is provision in the district plan to permit one ancillary residential unit on a site in the PC58 GIZ. NS proposed a maximum noise limit of 95 dB  $L_{AFmax}$  in addition to the 65 dB  $L_{AEQ}$  noise rating level at any location of an adjacent site within the GIZ. The intention of this is to avoid sleep disturbance effects on occupants of ancillary residential units which would be permitted in the PC58 GIZ.
7. MC noted that the 30 decibel relationship between the average level 'Leq' and maximum level 'Lmax' would be the same as provided for at the notional boundary of residential receivers. MC agrees with the proposed inclusion of the 'L<sub>max</sub>' criterion.
8. NS notes that noise insulation will be necessary for the residential unit to provide internal acoustic comfort. MC agrees but notes that this would be demonstrated at building consent stage.
9. There are no outstanding matters which are not agreed between MC and NS relating to noise received in the PC58 GIZ.

### **Existing Noise Environment Surrounding the Site**

10. The ANE reports the results of noise logging carried out at two sites adjacent to the site. One logger was located by the dwelling at 2579 SH26 being close to SH26 and the other located by the dwelling at 2469 SH26 being the dwelling furthest from SH26.
11. Both experts agreed with the methodology of the logging and the assessment of the existing noise environment reported by the logging. The logging showed the main source of existing noise at the site is from traffic on SH26, with higher noise levels at the location close to SH26 and lower noise levels at the location further from SH26.

### **Noise Rules for the Interface Between the GIZ and Surrounding Rural Zone**

12. The GRUZ land around the site contains four dwellings that represent the closest dwellings to the proposed site. These are 2581 SH26, 2579 SH26, 2559 SH26 and 2469 SH26. Dwellings at 2581 SH26 and 2579 SH26 are to the south of the site and close to SH26. Dwellings at 2559 SH26 and 2469 SH26 are more distant from SH26. Noise rules protecting the amenity of these dwellings is required. Attachment 1 is the Applicant's proposed noise rule.

Attachment 2 is the Council's proposed noise rule. There are areas of agreement in these rules and there are differences. These are set out below.

### **Areas of Agreement**

13. The agreed noise limits applicable between the GIZ and GRUZ land are in summary:
  - A noise rating level of 55 dB  $L_{A_{EQ}}$  Monday to Saturday 7am to 10pm and Sunday and public holidays 9am to 6pm
  - A noise rating level of 45 dB  $L_{A_{EQ}}$  and 75 dB  $L_{A_{FMAX}}$  at all other times.
14. These noise limits align with the proposed update of the MPDC district plan. This will provide consistency with the rule for this zone and future rule for the interface between existing rural and industrial zones.
15. The noise rating levels are selected as a balance between providing suitable amenity for dwellings and permitting activity in the GIZ without the undue cost of noise attenuation and are in line with World Health Organisation guidelines.
16. The inclusion of Sundays and public holidays (between the hours of 9am and 6pm) is considered appropriate by both experts on the basis that daytime amenity expectations on these days is no different to other days of the week.
17. Regarding the night-time period (at all other times) the experts agree that the proposed limits are appropriate for the PC58 GIZ for the avoidance of sleep disturbance effects and to preserve night-time residential amenity.
18. There are no outstanding matters which are not agreed between MC and NS relating to numerical limits and applicable days.

### **Area of Difference – MPDC proposed Noise Control Boundary**

#### **MC view on the matter:**

19. In his peer review NS proposed an alternative noise rule for the PC58 GIZ which consisted of using an NCB approach. MC notes that this is a common approach to control noise emissions from dairy manufacturing sites which only have one noise emitter.

20. MC sets out his concerns with this approach for PC58 in detail in his evidence in chief<sup>1</sup>.
21. MC's overarching view is that the risk of reverse sensitivity effects is low. In addition, it would be problematic in this context to identify a non-compliant activity as there would be multiple noise emitters. Therefore, MPDC's approach would not offer any tangible benefit over the rule proposed by the Applicant and will actually add complexity.
22. NS explained that MPDC has concerns that it could be unclear to users of the district plan which residential units in the GRUZ existed at the date of notification of PC58 (which was 15 June 2023).
23. MC, having discussed this with Mr Inger (planner for the Applicant), has attached an updated version of the Avenue Development Area Plan to this JWS (refer to Attachment 3) which shows residential units existing on adjacent Rural zoned properties as of that date.

**NS view on the matter:**

24. At dwellings further from SH26 the noise logging shows a lower existing noise environment because of the greater distance from SH26. While I agree that the proposed noise limits will generally provide adequate amenity between the industrial and rural interface, this is a 'green field' development and there is the opportunity to tailor the noise rule to provide a better result for dwellings further from SH26.
25. To address the lower noise levels further from SH26 and avoid reverse sensitivity I propose an alternative approach. This is a Noise Control Boundary (NCB) concept. Such a concept is regularly used around industrial sites located in rural areas.
26. I propose to position an NCB around the site where the rural-industrial noise rule will apply. This is shown in Attachment 4. In my opinion an NCB has the benefits of:
  - Positioning the boundary further from dwellings at 2469 SH26 and 2559 SH26 thus offering better noise protection at these sites more in line with their lower existing noise environment.

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<sup>1</sup> MC evidence in chief paragraphs 62 to 65

- Provisioning a buffer zone around the proposed site to the west and north. Clearly showing on planning maps where the boundary lies and clearly defining the noise rules that apply.
- Resolving reverse sensitivity by adding into the noise rule a requirement for sound insulation and ventilation to any noise sensitive activity inside the NCB. This is consistent with other NCB implementations.
- Allowing consistency with the future district plan rules.

27. For clarity I have shown the proposed NCB on an aerial view of the site in Attachment 4. The proposed NCB is shown in yellow. The 'dated' notional boundary is also shown in blue.

Signed by:



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Mathew Cottle



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Neil Savory

## Attachment 1: Proposed noise rule – Applicant:

- (a) The noise rating level ( $L_{Aeq}$ ) as measured at any point within the boundary of any land zoned Residential or Rural Residential, or the notional boundary of any residential unit in the Rural Zone which was existing at (insert PC58 notification date), shall not exceed:
- (i). 55 dB  $L_{Aeq}$  Monday to Saturday – 7am to 10pm, and
  - (ii). Sunday and public holidays – 9am to 6pm, or and 40 45 dB  $L_{Aeq}$  at all other times, and
  - (iii). The  ~~$L_{max}$~~  maximum level shall be not exceed 65 75 dB  $L_{AFmax}$  between 10pm to 7am.
- (b) The noise rating level ( $L_{Aeq}$ ) as measured at any point on the boundary within the GIZ shall not exceed 65 ~~dB~~  $L_{Aeq}$ . The maximum level shall not exceed 95 dB  $L_{AFmax}$  between 10pm to 7am.
- (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 GIZ shall be designed, insulated or constructed and maintained to ensure that:
- (i) noise received shall not exceed 35 dB  $L_{Aeq}$  in bedrooms and 40 dB  $L_{Aeq}$  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.

Also refer to section 5.2

**Attachment 2: Proposed noise rule – MPDC:**

- (a) The noise rating level from any activity in a GIZ when measured at any point within the boundary of any land zoned Residential, or the Noise Control Boundary of any land in the Rural Zone must not exceed the following:

Monday to Saturday Sunday and Public Holidays	7.00am to 10.00pm 9am to 6pm	55dB LAeq
At all other times		45dB LAeq and 75dB LAFmax

- (b) The noise rating level from any activity in a GIZ when measured at any point within the boundary of any adjacent property in the GIZ must not exceed the following:

Monday to Sunday	7.00am to 10.00pm	65dB LAeq
At all other times		65dB LAeq and 95dB LAFmax

- (c) The noise rating level 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 GIZ shall be designed, insulated, or constructed and maintained to ensure that:

- (iv) noise received shall not exceed 35dB LAEQ(15min) in bedrooms and 40dB LAEQ(15min) to all other habitable spaces from noise not generated on the same site; and
- (v) if windows are required to be closed to achieve the noise limits in clause (i) above, the building must be designed and constructed to include a Mechanical Ventilation System: and
- (vi) 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) Any noise sensitive activity located within the Noise Control Boundary shall be designed, insulated, or constructed and maintained to ensure that:

- (i) noise received shall not exceed 35dB LAEQ(15min) in bedrooms and 40dB LAEQ(15min) to all other habitable spaces from noise not generated 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 include a Mechanical Ventilation System: 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.
- (f) For the purposes of this rule, a Mechanical Ventilation System means:
- (i) An outdoor air system complying with the requirements of the Building Code (NZS 4303) for mechanical ventilation (refer Clause G4). This is to provide a minimum level of air quality.
  - (ii) **and** a mechanical heating/cooling system (e.g., heat pump) designed by a suitably qualified engineer. This is to provide thermal comfort. The heating/cooling system must:
    - i. be capable of maintaining an internal temperature of 18C° in all bedrooms at all times with all bedroom doors closed.
    - ii. be capable of maintaining a maximum internal temperature of 22°C in all other habitable rooms at all times with all bedroom doors closed.
    - iii. be designed to NIWA 2.5% design weather dataset.
    - iv. allow the on/off operation to be controlled by the occupant.
    - v. allow the set temperature of each heating/cooling unit to be controllable between 18°C to 25°C by the occupant.
  - (iii) System noise must be designed so that the combined level from the outdoor air system and heating/cooling system does not exceed 35dB  $L_{Aeq(30s)}$  in bedrooms and 40dB  $L_{Aeq(30s)}$  in other habitable rooms.

### **Definition of Terms**

The following terms are defined below for the purposes of implementing the above Noise Rules:

**Habitable room** means:

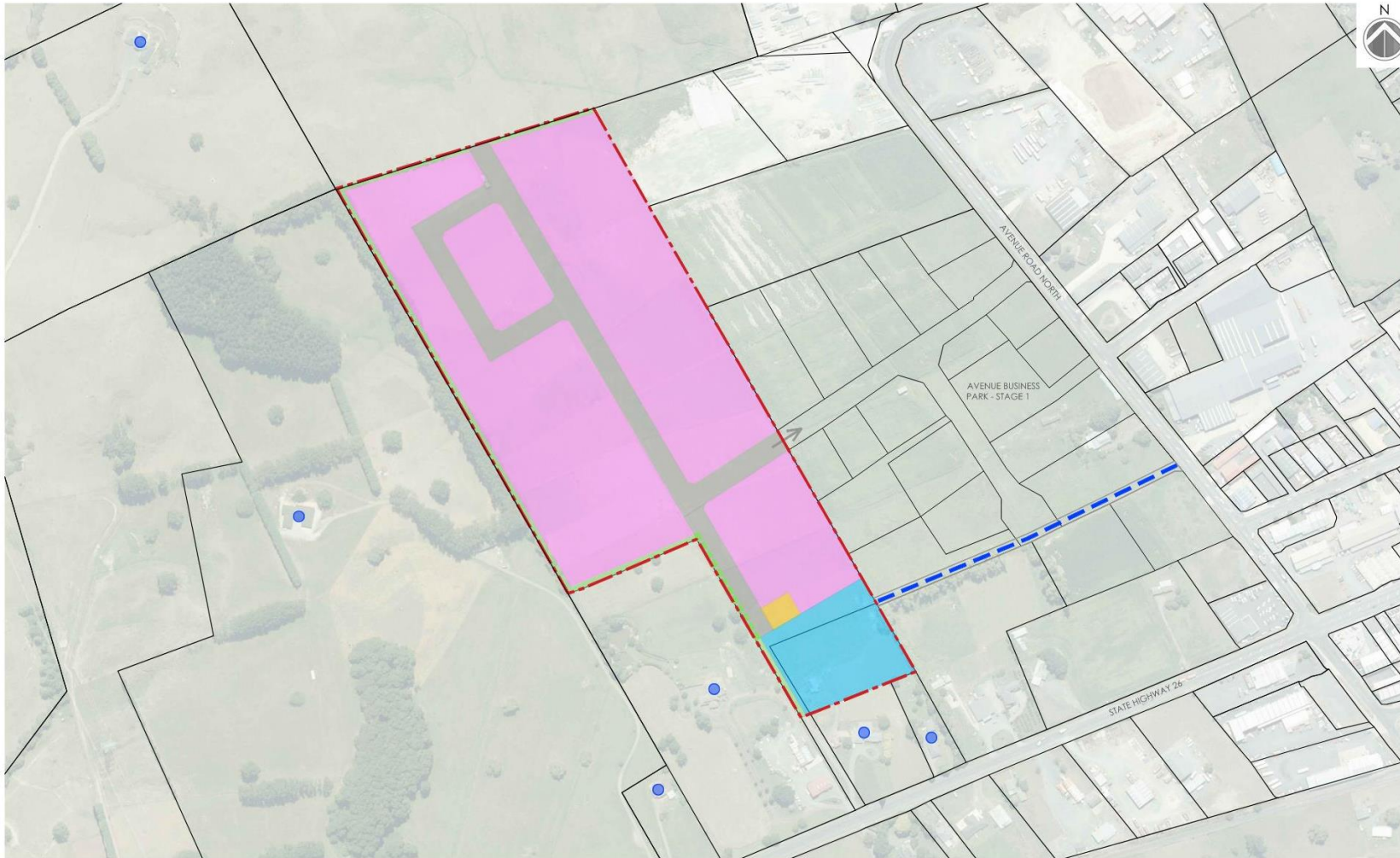
- a) any room used for the purposes of teaching or used as a living room, dining room, sitting room, bedroom, office, or other room specified in the Plan to be a similarly occupied room.

**Noise sensitive activity** means:

- a) any residential activity (including visitor accommodation and retirement accommodation)
- b) any educational activity

- c) any healthcare activity
- d) any congregations within places of worship or marae.

**Attachment 3: Amended Avenue Business Park Development Area Plan**




**AVENUE BUSINESS PARK  
DEVELOPMENT AREA PLAN**

**LEGEND**

-  DEVELOPMENT PLAN AREA
-  INDUSTRIAL AREA
-  INDICATIVE LOCAL ROAD NETWORK
-  EXISTING RURAL ZONE HOUSE

-  INDICATIVE STORMWATER MANAGEMENT RESERVE
-  INDICATIVE UTILITY RESERVE
-  PROPOSED LANDSCAPE BUFFER (5m)

-  PROPOSED LANDSCAPE BUFFER - ROAD BERM (5m)
-  VEHICLE CONNECTION TO AVENUE ROAD NORTH
-  CONVEYANCE SWALE

**Attachment 4: MPDC Proposed NCB and Applicant proposed 'Dated' Notional Boundary**

