

BEFORE A HEARING COMMISSIONER

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

AND

IN THE MATTER of hearing submissions and further submissions in respect
of Matamata-Piako District Council - Plan Change 58 -
Avenue Business Park

**STATEMENT OF MATHEW JOHN COTTLE ON BEHALF OF WARWICK AND
MARION STEFFERT**

ACOUSTICS

14 FEBRUARY 2024

Introduction

- 1 My name is Mathew John Cottle. I am an Associate at the acoustical consulting practice of Marshall Day Acoustics (**MDA**). I am based in the Hamilton office.
- 2 I have a Master of Design Science (Audio and Acoustics) qualification from the University of Sydney, New South Wales, Australia. I am a current Member of the Acoustical Society of New Zealand. I am also a Member of the Resource Management Law Association.
- 3 For more than 17 years I have worked in the field of acoustics, noise measurement and control in both New Zealand and Australia. My experience in New Zealand includes the measurement, prediction, modelling and assessment of noise and vibration from large municipal water transfer, storage and treatment projects; grid-scale electrical infrastructure; large renewable energy schemes; dairy manufacturing; through to commercial and industrial developments; analysis of acoustic issues; the recommendation of mitigation measures; and peer review work.
- 4 I have provided expert evidence on acoustic matters in Council-level hearings and in the Environment Court.
- 5 My notable projects include the replacement Huia water treatment plant, Wairere Drive widening, Central Interceptor (wastewater tunnel), Waikato Expressway, Northern Interceptor (wastewater conveyance network), Southwest wastewater treatment plant designation, Higgins Road Hamilton asphalt plant, and consenting and noise attenuation projects for numerous dairy manufacturing facilities located around the North Island.
- 6 MDA has been engaged by the Applicant since 2021. My involvement with the project has included reviewing the Assessment of Noise Effects (**ANE**)¹ which was prepared by my colleague Mr. Bell-Booth; the s42A Council Officer's Report (**s42A**); and the supporting technical report prepared by Savory Acoustics (**peer review**).
- 7 In relation to this hearing, I am authorised to give evidence on behalf of Warwick and Marion Steffert (**Steffert**).

¹ MDA report Rp 001 r01 20211116 *Avenue Business Park Private Plan Change* (11 Jan 2024)

Code of Conduct

- 8 I have read the Environment Court's 'Code of Conduct for Expert Witnesses' as contained in the Environment Court's Consolidated Practice Note 2023 and agree to comply with it. I have complied with it when preparing my written statement of evidence and I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Executive Summary

- 9 The proposed Plan Change 58 (**PC58**) for land near the western edge of Morrinsville would provide for approximately 10.1 hectares of developable land to the industrial land supply for Morrinsville once expected non-developable areas such as roads, stormwater and wastewater infrastructure are excluded.
- 10 Below is a summary of the position reached in this evidence on the significant matters:
- (a) 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. Essentially, PC58 would move the existing interface between the Rural zone and Industrial Zone.
 - (b) With respect to the existing noise environment, I consider that:
 - (i) The existing noise environment is typical for a site adjacent to a state highway with traffic as a considerable source of noise in the area.
 - (ii) The existing Industrial Zone and the local roads are an active area with associated noise that also contributes to the existing noise environment, and
 - (iii) Development of the consented Avenue Industrial Business Park (Stage 1), including new roads, will likely introduce more noise to the area.
 - (c) I have reviewed the operative District Plan (**Plan**) noise and vibration performance standards for the Rural Zone and Industrial Zone, and the proposed PC58 performance standards for the General Industrial Zone (**GIZ**) which were originally developed for

another private plan change in conjunction with Matamata Piako District Council (**MPDC**) (Plan Change 57 — **PC57**). I consider the PC58 noise provisions for the GIZ are generally appropriate, albeit a little onerous. I consider the vibration standards for the Industrial Zone are generally appropriate albeit, outdated, and I support their proposed adoption for the GIZ.

- (d) I have recommended retaining the notified GIZ noise and vibration provisions for PC58. The provisions allow for the proposed activities to occur whilst ensuring that the adverse effects of noise are avoided, remedied, or mitigated. I have, however, also identified that alternative night-time limits in the peer review may have some merit. I will discuss this with Mr Savory and provide an update to the Hearing Panel at the hearing.
- (e) I do not support the Noise Control Boundary approach that is proposed as an 'alternative solution' for PC58 in the peer review.
- (f) In the context of an anticipated changing (increasing) noise environment even without the plan change, I consider the potential for noise effects resulting from the plan change is of little appreciable significance.

Scope of Evidence

- 11 This evidence has been prepared on behalf of the applicants, the Stefferts, who have requested a private plan change to the Matamata-Piako District Plan to rezone approximately 13.4 hectares of rural land from Rural Zone to GIZ on the western side of Morrinsville, between Avenue Road North and SH26.
- 12 My evidence addresses acoustic matters and responds to submissions made on the PC58 application and relevant parts of the s42A Report.
- 13 My evidence covers:
 - (a) Application Site and Surrounding Area;
 - (b) Relevant noise and vibration performance standards;
 - (c) An overview of PC58 and its potential acoustic effects;
 - (d) Submissions pertaining to noise and vibration; and
 - (e) A response to the s42A report.
- 14 In the course of preparing this evidence I have considered:

- (a) The application lodged with Council on 22 December 2022 and further information provided on 1 May 2023 and 30 November 2023;
 - (b) The 14 submissions received and one further submission; and
 - (c) The s42A report dated (7 February 2024).
- 15 My evidence is to be read in conjunction with the PC58 application and further information referred to above, and the evidence presented by the other experts on behalf of the Stefferts.

Application Site and Surrounding Area

- 16 The Site that is proposed to be rezoned is shown on the plan in **Attachment 1**. The Site and neighbouring sites are all located within Matamata-Piako District. The Site is presently zoned Rural in the Plan.
- 17 The neighbouring sites to the east are within the Industrial Zone. The neighbouring activities in the Industrial Zone to the east include:
- (a) Bowers Concrete, and
 - (b) Avenue Business Park (Stage 1) which has been granted a resource consent in early 2022 and is currently under construction.
- 18 The Site is proposed to be Stage 2 of the Avenue Business Park development.
- 19 The other neighbouring sites to the north, west and south are within the 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).
- 20 The closest Rural Zone dwellings are:
- (a) 2581 SH26 – south of the site (owned by the applicant);
 - (b) 2597 SH26 – ~120m south of the site
 - (c) 2587 SH26 – ~ 135m south of site
 - (d) 2579 SH26 – ~50m west of the site;
 - (e) 2561 SH26 – ~150m south of the site;
 - (f) 2559 SH26 – ~170m west of the site;
 - (g) 2491B SH26 - ~615m to west of site; and
 - (h) 2469 SH26 – ~185m north of the site.

These locations are shown marked up on an aerial image in Attachment 2.

- 21 SH26 is approximately 175m south of the Site.
- 22 The Site is currently accessed via 2581 SH26. The proposal is for access to be through Avenue Business Park (Stage 1) via a new road off Avenue Road North (refer Figure 1) which is called Magistrate Avenue.
- 23 The ANE characterises the noise environment based on the surveyed noise level, existing activities that occur in the area, and the permitted activities that will contribute to noise in the area. The ANE found that:
- (a) Traffic is a considerable source of noise in the area with SH26 being the primary source of ambient noise.
 - (b) The existing Industrial Zone and the local roads are an active area with associated noise.
 - (c) The development and activation of the Avenue Business Park (Stage 1) will likely further contribute to change (an increase – albeit small) in noise level when it is in operation.
- 24 I concur with the findings of the ANE.

Relevant noise and vibration performance standards which presently apply

- 25 The noise rules and limits in Section 5 of the Plan:
- (a) Acknowledge the likelihood of the types of activities that might occur in each zone, and
 - (b) Provide appropriate controls for those identified activities.
- 26 The current noise rules have some shortcomings which are outlined in the ANE. Rectifying all the shortcomings is beyond the scope of PC58.
- 27 Despite the identified shortcomings and inconsistencies described in the ANE, I understand the rules presently achieve the desired outcomes. I also understand that MPDC is in the early stages of an update to the Plan to address some of these matters, including updates to the construction noise and vibration standards. None of the shortcomings identified represent a critical problem for PC58, particularly given that the applicant seeks to adopt a different zoning for the Site - GIZ - which is not presently within the Plan and given the likelihood of district-wide changes to the Plan in the near future.
- 28 New noise standards are proposed through PC58 for the GIZ, as discussed below. I understand it is MPDC's intention that the GIZ will

eventually replace the existing Industrial Zone throughout the district. I comment later in my evidence on a draft noise rule in the peer review which I understand is intended by MPDC to apply to other GIZ locations in the district in the future.

Proposed noise and vibration performance standards

29 The proposed GIZ provisions for PC58 are as follows:

- (a) *The noise 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 ~~55dB~~ L_{Aeq} Monday to Saturday – 7am to 10pm, ~~or and 40 dB~~ L_{Aeq} at all other times. The ~~L_{max}~~ maximum level shall ~~be~~ not exceed 65dB L_{AFmax} between 10pm to 7am.*
- (b) *The noise level (~~L_{Aeq}~~) as measured at any point on the boundary within the GIZ shall not exceed 65 ~~dB~~ dBA L_{Aeq} .*
- (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 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.*

Also refer to section 5.2

30 This rule is based on the provisions in PC57 which have been developed in conjunction with MPDC for a private plan change for a rezoning from Rural Zone to GIZ in Matamata. The noise provisions for PC58 are the same as the proposed PC57 provisions except with an addition to address potential for reverse sensitivity and minor editorial updates that I recommend (shown underlined and in strikethrough).

- 31 The proposed GIZ noise provisions address some shortcomings of the Plan's current noise rules in that they:
- (a) Follow the National Planning Standards format in adopting the L_{Aeq} parameter and referring to the latest versions of the relevant standards for noise measurement and assessment; and
 - (b) Address reverse sensitivity to encroachment via a reference to the plan change date.
- 32 I consider the rule to be conservative in that a low noise limit applies on Sunday during the daytime and on any night a more stringent 65 dB L_{AFmax} criterion applies. I comment further on this in relation to the peer review later in my evidence.
- 33 A shortcoming which is not addressed in the proposed GIZ noise provisions is that the Construction Noise Standards which apply district-wide under the Plan are those contained in NZS 6803P:1984. That version of the standard was provisional and has since been superseded by NZS 6803:1999 which is the current Construction Noise Standard that is commonly adopted in New Zealand. As I have explained above, I understand that MPDC is in the process of updating the district-wide construction noise rule to reference NZS 6803:1999.
- 34 The PC58 provisions also make one ancillary residential unit per site a permitted activity in the GIZ with associated noise standards that require:
- (a) noise received inside an ancillary residential unit meet a suitable level,
 - (b) alternative ventilation be provided where windows are required to be closed to meet the internal noise levels, and
 - (c) an acoustic design report is prepared and submitted to MPDC confirming compliance.
- 35 The current vibration standards for the Industrial Zone in the Plan are also proposed to be adopted for the GIZ. I consider that those provisions are acceptable albeit, outdated.

Overview of the Plan Change and its potential acoustic effects

- 36 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.
- 37 PC58 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.
- 38 The neighbours to the Site would be more likely to receive up to the proposed GIZ limits of 55 dB L_{Aeq} during the day and 40 dB L_{Aeq} during the night from activities within the proposed GIZ. 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.
- 39 The existing noise levels have been quantified, and when compared 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.
- 40 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 construction of new local roads. Therefore, the noise levels in the area are anticipated to change (increase) anyway irrespective of PC58.
- 41 The change (increase) in noise levels associated with PC58 (as well as proposed roads and consented developments, when constructed) will not necessarily result in a change in character. I 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 PC58 is granted.
- 42 In this situation (including where an increase in noise levels is expected, but not entirely due to activity within the PC58 area), I consider the potential for noise effects from PC58 is of little appreciable significance. The proposed GIZ noise provisions will maintain an appropriate level of amenity for neighbouring properties.
- 43 The internal noise standards which are proposed for ancillary residential units in the GIZ will achieve an appropriate level of internal acoustic amenity for residents.

Response to matters raised in Submissions

- 44 Three of the fourteen submissions to PC58 raise noise or vibration as a concern. I consider my responses below adequately address all submitter concerns.
- 45 Submission 8 from Warren and Sandra Davenport² raises concerns with:
- (a) vibration from vehicles using the proposed road corridor adjacent their property at 2579 SH26;
 - (b) a lack of trees in the buffer zone between the proposed GIZ and Rural Zone to (amongst other things) '*help with the dispersal of sound energy from industrial businesses*'; and
 - (c) alarms associated with wastewater pumping station in the utility reserve.
- 46 I respond by saying that:
- (a) The potential future vehicle connection to SH26 that was shown on the notified Avenue Business Park Development Area Plan (**ADAP**) has now been removed in response to a submission by Waka Kotahi and following discussions between the applicant and MPDC staff. The amended ADAP is included in **Attachment 1**.
 - (b) The proposal seeks to limit noise primarily through rules. That is, the activity within the Site will be controlled by the proposed GIZ noise limits irrespective of any buffer. The principal purpose of the proposed buffer is for landscape and visual reasons, rather than noise. I note that trees and vegetation do not have any tangible objective noise mitigation value.
 - (c) Alarms associated with the wastewater pumping station are typically inaudible alerts that are remotely monitored, as is also explained in Mr Suljic's evidence.
- 47 Submission 10 from The Glencoe Family Trust³ raises concerns with the proposal for noise compliance at the notional boundary of existing house sites, and the extra costs that may be incurred by the property owner if new houses were built.

² 2579 SH26

³ 2469 SH26

- 48 I respond by saying that the proximity of existing dwellings to the proposed GIZ and the requirement to meet the proposed noise standards at their notional boundary is likely to dictate the potential for noise generation from activities within the GIZ such that the levels will be relatively low. There is no requirement within PC58 for a new dwelling within the Rural Zone adjacent to the GIZ to be sound insulated. Even if a new dwelling were to be constructed closer to the proposed GIZ than the existing dwellings the extent of any noise mitigation would be at the dwelling developers discretion. I anticipate the extent of mitigation required would not be overly onerous. Provision of a mechanical ventilation system to allow for closed windows and thus a reasonable internal noise level is the likely extent.
- 49 Furthermore, I understand that the submitter's property (2469 State Highway 2) already contains three existing dwellings and that resource consent would likely be required for any additional dwellings on the property.
- 50 Submission 13⁴ and a further submission from Peter Hexter raises concerns with:
- (a) An apparent lack of 'direct assessment' of noise on their property including insufficient noise testing.
 - (b) Noise 'pollution' to the submitter's property and neighbouring properties from the earthworks, construction and then the operational noise (including transport noise) from the GIZ given the 'lay of the land', and
 - (c) Swale and tree planting not being sufficient to 'deal with' noise
- 51 I respond by saying that:
- (a) The submitters property is west of the proposed GIZ.
 - (b) Noise monitoring was undertaken at two locations:
 - (i) Between the proposed site and SH26 (close to the highway), and
 - (ii) North of the development (further from the highway).
 - (c) The submitters dwelling is between these two monitoring locations.

⁴ 2559 SH26

- (d) I consider the extent of monitoring as sufficient to quantify the existing acoustic environment – for all the nearby neighbours. Given the highway is the primary noise source in the area, measurements of noise at the submitter’s property would yield levels that fall between the levels observed in the two locations.
- (e) I consider that the proposed noise performance standards for the GIZ will ensure noise levels from earthworks, construction and operational noise will be limited to an appropriate level of acoustic amenity.
- (f) I have responded to another submission on the adequacy of landscape buffers in paragraph 46.

Response to matters raised in s42A Report

- 52 I have reviewed the s42A Report prepared by Mr Whittaker as it relates to my area of expertise. Mr Whittaker relies on the expert opinion of Mr Savory⁵ who has undertaken a peer review⁶ of the ANE for Council.
- 53 Mr Savory has explained that a review of the noise rules in the Plan is currently being undertaken to bring the Plan into line with the National Planning Standards. His peer review includes his preliminary recommendation to MPDC for a noise rule for the GIZ. I understand the GIZ is the zoning that will apply to most of the land that is currently zoned Industrial under the Plan.
- 54 Mr Savory also outlines an ‘alternative solution’ that he proposes for PC58 which is to implement a Noise Control Boundary (**NCB**) over areas of Rural zoned land to the north, west and south of the PC58 site.
- 55 I address both these matters below.

Standardisation of GIZ noise rule

- 56 Mr Savory’s preliminary recommendation to MPDC for a noise rule for the GIZ is set out below (from Section 4 of his peer review). To be clear, I understand that Mr Savory has recommended to MPDC that this rule should apply to all future GIZ locations in the district, but his peer review suggests a different approach for the PC58 site.

⁵ Savory Acoustics

⁶ Technical Appendix 2 to s42A report

- (a) The noise rating level from any activity in an GIZ when measured at any point within the boundary of any land zoned GRZ, or the notional boundary of any residential unit in a GRUZ or RLZ 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 an GIZ when measured at any point within the boundary of any adjacent property in the COMZ must not exceed the following.

Monday to Sunday	7.00am to 10.00pm	60dB LAeq
At all other times		60dB LAeq and 90dB LAFmax

- (c) The noise rating level from any activity in an 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

- 57 This is the first example I have seen of Council's proposed standardisation of rules to align to the National Planning Standards.
- 58 Mr Savory's proposed rule (a) requires noise from any activity in the GIZ to comply with limits of 55 dB LAeq daytime / 45 dB LAeq and 75 dB LAFmax night-time as measured at the notional boundary of General Rural zoned (GRUZ) or Rural Lifestyle zoned (RLZ) land or within the property boundary of General Residential zoned (GRZ) land.
- 59 I note the following in comparing the noise performance standards I propose for PC58 to those proposed by Mr Savory for the GIZ as well as the current permitted activity standards for the Industrial Zone in the Plan:
- (a) The proposed 55 dBA daytime numerical limit is the same (noting that the Plan uses the outdated L₁₀ descriptor); and
- (b) The night-time limits proposed by Mr Savory are more permissive than I propose and also what is permitted in the Industrial Zone (numerical limits of 40 dBA and 65 dB LAFmax in both cases).
- 60 Based on my initial review, I am of the opinion that the night-time levels in Mr Savory's proposed rule may have some merit for the PC58 site. This is because in my experience the different night-time limits i.e., 45 dB LAeq and 75 dB LAFmax, represent reasonable levels of sound, particularly in the

context of the existing acoustic environment, whilst allowing for future development to occur. There would also be benefits with a consistent approach to noise rules for the GIZ across the district.

61 It is my intention to discuss these matters with Mr Savory, although I have not had time to do this prior to completing my evidence. I will update the Hearing Panel on this at the hearing.

Proposed Noise Control Boundary

62 I now address Mr Savory's proposed 'alternative solution' with respect to the control of GIZ activity noise for PC58. My understanding is that this would be a bespoke approach for the PC58 site as an alternative to both the notified noise rule for PC58 and the draft noise rule that he has recommended for the GIZ elsewhere in the district. The numerical limits that would apply at the NCB are the same as the numerical limits that he has recommended for the GIZ elsewhere in the district.

63 The primary motivation for this approach appears to be Mr Savory's concern relating to reverse sensitivity effects. Reverse sensitivity occurs where a new noise sensitive land use establishes closer to an existing lawful land use (which generates noise) and results in non-compliant noise levels and / or noise effects where before there were none.

64 The proposed NCB sets noise limits of 55 dB L_{Aeq} daytime / 45 dB L_{Aeq} and 75 dB L_{AFmax} night-time which would be measured and assessed at the nominated NCB. Any dwelling which proposes to locate within the NCB overlay would be required to sound insulate to provide for good acoustic amenity inside habitable rooms.

65 I do not agree with Mr Savory's alternative solution, for the following reasons:

- (a) Based on my experience with NCBs for dairy manufacturing sites, they are intended to control noise from a sole noise emitter e.g., Fonterra, Open Country Dairy etc. I envisage enforcing NCB compliance across multiple noise emitters operating within the GIZ would be problematic;
- (b) It is my understanding that Council has no intention of controlling noise emissions using an NCB approach in other industrial zones such as this. The draft noise rule that Mr Savory has recommended for the GIZ elsewhere in the district is similar to the notified PC58

rule and the current plan rule in that they all require noise from the GIZ/Industrial Zone to be measured at the notional boundary in the Rural Zone. This is a common approach for controlling noise between industrial and rural zones. I see no logic in a completely different approach to be taken for the noise rule for PC58;

- (c) The proposed NCB is tangibly different to the noise performance standards for Avenue Business Park (Stage 1). I recommend that a consistent approach be adopted across both stages of the development which enables ease of noise measurement and assessment of compliance; and
- (d) The risk of reverse sensitivity effects for the PC58 site is low, in my opinion, because:
 - (i) All the adjacent Rural zoned properties already contain dwellings, including three dwellings on the property to the north (2469 SH26);
 - (ii) The Plan enables up to three dwellings on a Rural zoned property (including one accessory dwelling associated with farming/forestry and one dependent persons dwelling). There are already three dwellings on the property to the north, as I note above. None of the properties to the south or south-west are used for farming or forestry;
 - (iii) Even if additional dwellings were to be added on the adjacent properties to the north and west, they are large properties and it would be fanciful to anticipate dwellings being constructed near the boundary of the PC58 site when there would be other locations where dwellings could be built further away;
 - (iv) The buffer zone that the NCB overlay creates is relatively small and the likelihood of new dwellings lawfully locating within this area is low.

Conclusion

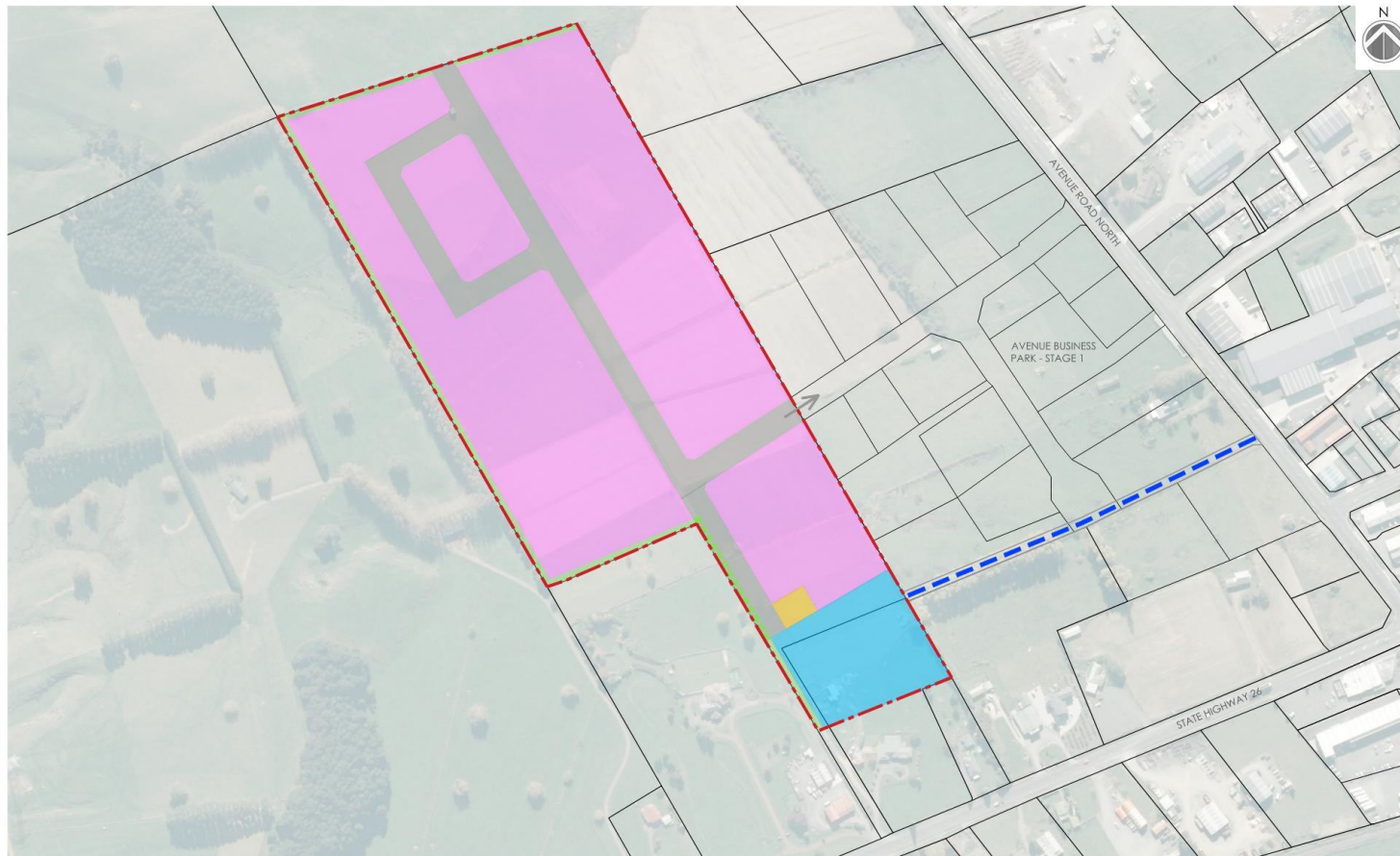
- 66 The PC58 noise and vibration provisions allow for the proposed activities to occur whilst ensuring that adverse acoustic effects are avoided, remedied, or mitigated.



Mathew John Cottle










Attachment 1

Site Plan (Avenue Business Park Development Area Plan)



AVENUE BUSINESS PARK DEVELOPMENT AREA PLAN

LEGEND

- | | | |
|---|--|--|
|  DEVELOPMENT PLAN AREA |  INDICATIVE STORMWATER MANAGEMENT RESERVE |  PROPOSED LANDSCAPE BUFFER - ROAD BERM (5m) |
|  INDUSTRIAL AREA |  INDICATIVE UTILITY RESERVE |  VEHICLE CONNECTION TO AVENUE ROAD NORTH |
|  INDICATIVE LOCAL ROAD NETWORK |  PROPOSED LANDSCAPE BUFFER (5m) |  CONVEYANCE SWALE |

Attachment 2 Noise Submission and Closest Rural Zone dwellings

