

BEFORE THE HEARING COMMISSIONERS
WAIKATO

IN THE MATTER OF the Resource Management Act 1991 (the Act)

AND

IN THE MATTER Waikato District Plan – Mercer Airport

SUPPLEMENTARY STATEMENT OF EVIDENCE OF RHYS LEONARD HEGLEY ON
BEHALF OF

NEALE RUSSELL LTD

(MERCER AIRPORT)

Acoustics

3 May 2021

INTRODUCTION

Qualifications and experience

1. My full name is Rhys Leonard Hegley. My qualifications and experience are set out in my Evidence in Chief.
2. I confirm that the evidence I present is within my area of expertise and I am not aware of any material facts which might alter or detract from the opinions I express. I have read and agree to comply with the Code of Conduct for expert witnesses as set out in the Environment Court Consolidated Practice Note 2014. The opinions expressed in this evidence are based on my qualifications and experience and are within my area of expertise. If I rely on the evidence or opinions of another, my evidence will acknowledge that position.

Purpose and scope of evidence

3. This evidence responds to the comments made by the reporting planner in the s42a report.

Response to s42a Report

4. The conclusion of the s42a report with respect to noise is that:
 - a. The existing resource consent conditions that Mercer Airport currently operate under should be retained; and
 - b. The submission made by Mercer Airport to include airport noise control boundaries and the resulting land use controls within those control boundaries be rejected.

Resource Consent Conditions

5. Given the planner's conclusions, it is useful to look at the current resource consent conditions that address noise from the operation of the airport. These are:
 - (g) Aircraft activity is not to exceed an average of 100 movements per day averaged over a rolling 3-month period ...

- (p) The consent holder shall ensure that all activities under this consent shall be conducted to ensure that aircraft noise does not exceed the 55dBA L_{dn} contour as shown on figure 3 of the Hegley Acoustic Consultants report 9387 dated July 2013 ...
- (l) That the proposed activities be operated in a manner that ensures that any noise, or other adverse effects on the environment are kept to acceptable levels in accordance with Section 16 and 17 of the Resource Management Act 1991. These sections place a duty on the applicant to avoid, remedy or mitigate and adverse effects.

Effect of Omitting Land Use Controls within the District Plan

6. Conditions (g) and (p) of the resource consent effectively gives the Airport a 'bucket' of noise that they can produce as, at the time of the consent, it was shown that the effects would be appropriate to the neighbouring properties. With this 'bucket' the Airport can operate as intended.
7. The issue with the existing consent is that it does not, and cannot, provide certainty to the Airport that future development on surrounding sites will not affect the operation of the airport.
8. The risk to the Airport is that the construction of new houses on the surrounding sites could result in levels of noise to those houses that, if left unmitigated, was considered unreasonable. Through condition (l), the Airport could be required to reduce noise, with the obvious method being through the reduction of flights. Essentially, the consent provides no long term certainty for the Airport. This situation is described as reverse sensitivity, which is the vulnerability of an established land use from a newly established land use.
9. While the surrounding area is currently rural, it is not unreasonable to assume that, over time, new development will occur making reverse sensitivity a real consideration.
10. My view is that if an airport is to form part of the community, it should be integrated into that community through a full suite of appropriate land use

controls. A failure to do so would leave the Airport's future to the mercy of future developments which, given a long enough time frame, could reasonably be expected to occur.

11. The recognised method of providing the necessary protection to airports is contained in NZS 6805:1992 Airport Noise Management and Land Use Planning ("NZS 6805"). As a summary, this document uses the concept of air noise boundaries (noise contours resulting from airport operations) and places limits on the activities permitted within the neighbouring sites. The proposal is that within the 65dBA air noise boundary, new habitable buildings would be a restricted discretionary activity. Between the air noise boundary, and the outer control boundary (55dBA), new dwellings would be permitted, provided they include some mitigation to control the internal levels of aircraft noise. Beyond the 55dBA contour, no controls are proposed.
12. I consider the above approach sensible and consistent with best practice. It provides certainty to the Airport as to its operations and future while at the same time, identifying to neighbouring landowners that there is a noise source in the area and their resulting obligations. The reporting planner makes the point that this approach requires regulation over the neighbouring properties and is of the opinion that, the costs to those neighbours outweigh the benefits to the community.
13. While this question is beyond the scope of my expertise, I can offer some information as to the imposition that the proposed land use controls would place on the neighbours. This discussion requires reference to the noise contours I presented as Figure 1 of my EIC. For convenience, I have repeated this Figure below but this time, I have also added the intervening contours.

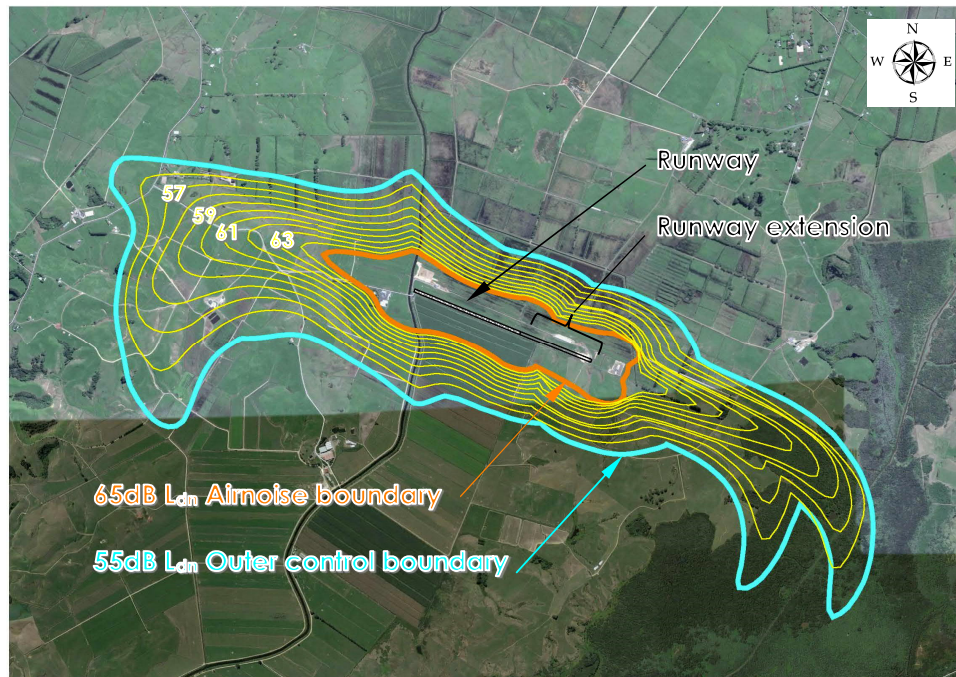


Figure 1. Proposed Air noise and Outer Control Boundaries

14. Firstly, the air noise boundary (65dBA contour) where a new residential dwelling would be a restricted discretionary activity, is relatively small and located close to the Airport itself. In terms of the risk of adversely affecting a neighbours' ability to develop their site, I consider the risk to be small.
15. For any new dwellings between the 55dBA and 65dBA contours, the proposal is that the façade of those dwelling is designed to control the internal level of aircraft noise to levels that are considered reasonable for residential amenity. As aircraft noise increases closer to the Airport, the façade requirements would also increase. While the exact requirements of each new dwelling would be specific to the dwelling, the following provides examples of what would be considered typical for a bedroom that is nominally 3m wide by 3m long.
16. Between the 55 and 60dBA L_{dn} contours, no change to the building fabric beyond what could be considered typical would be required. This means weather board cladding and a profiled metal roof with a plasterboard wall

lining and 4mm thick, single pane glazing. What would be required is the ability to close the windows to control noise and this, in turn necessitates alternative ventilation, which typically takes the form of mechanical fans or air conditioning. The ability to open and close the windows remains with the occupant but, an alternative means of ventilation is required so that windows can be closed (to control noise) while, at the same time, the room is adequately ventilated.

17. Between the 60 – 65dBA L_{dn} contours, the closed window/ ventilation requirement would continue. In addition, the construction of the building envelope starts to increase until, by the 65dBA contour, the same profiled metal roof and weatherboard clad walls would require a double layer of plasterboard wall lining.

Conclusions

18. In conclusion, it is my view that if the consented Airport is to remain a viable ongoing concern, it requires adequate protection from reverse sensitivity effects from encroaching development. NZS 6805 provides a recognised method of doing so through land use controls on surrounding sites based on expected levels of aircraft noise. Such land use controls would vary depending on their locations but are generally minor for the proposal and a necessary tool for the successful operation of an airport.

Rhys Hegley

3 May 2021

Appendix A – Track Usage

Table 1. Fixed Wing Tracks and Usage

Runway	Operation	Track	Usage
09	Approach/ Departure	North	60%
		East	10%
		South	10%
		South Overhead	20%
	Departure	North	60%
		East	10%
		South	30%
27	Approach	North	10%
		North Overhead	50%
		East	10%
		South	10%
		South Overhead	20%
	Departure	North	50%
		North Overhead	10%
		East	5%
		Mercer	5%
		South	30%

The exception to the above is the Cresco, which is dedicated to skydiving. This aircraft departs on specific tracks from 09 and 27 that end above the airfield. The Cresco approaches on the standard track of the appropriate as described in the table immediately above.

Table 2. Helicopter Tracks and Usage

Pad	Operation	Track	Usage
1	Approach	North	65%
		South	35%
	Departure	North	65%
		South	35%

Table 3. Over-flight Movements

Runway	Operation	Track	Usage
09	Over-flight	North	63 ¹ / ₃ %
		East	0%
		South	13 ¹ / ₃ %
		South Overhead	23 ¹ / ₃ %
27	Over-flight	North	12.5%
		North Overhead	52.5%
		East	0%
		South	12.5%
		South Overhead	22.5%

Appendix B – Aircraft Usage

Generic Aircraft Type	INM Aircraft Type	% Usage
Single Engine, Fixed Pitch	CNA172	24.5
	GASEPF ¹	24.5
Single Engine, Variable Pitch	CNA182	16.8
	Cresco	4.2
Twins	BEC58P	5.0
	DHC6	5.0
Caltalina	DC3	5.0
Helicopter	A109	3.0
	AS355	3.0
	EC130	3.0
	R44	3.0
	S70	3.0

1. Generic INM aircraft