

**Before the Queenstown Lakes District Council**

In the Matter of                      the Resource Management Act 1991

And

In the Matter of                      the Queenstown Lakes Proposed District Plan

**Chapter 36 (Noise)**

**Summary Evidence of Christopher Day  
(Submitter 433 and Further Submitter  
1340)**

Dated: 13 September 2016

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## INTRODUCTION

1. My name is Christopher William Day. I am a Director of Marshall Day Acoustics Ltd with 40 years experience in acoustics and environmental noise. I have been providing advice to Queenstown Airport Corporation Limited (QAC) on airport noise related matters since 1992.
2. I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses contained in the Practice Note 2014. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.
3. Inappropriate land use planning around airports allowing residential encroachment exposes communities to the adverse effects of aircraft noise and exposes the airport operator to potential reverse sensitivity effects.
4. New Zealand Standard NZS 6805:1992 "Airport Noise Management and Land Use Planning" provides councils with a consistent approach to noise planning around New Zealand airports with a goal to minimise these adverse effects.
5. The Standard uses the "Noise Boundary" concept as a mechanism for local authorities to:
  - (a) "establish compatible land use planning around an airport"; and
  - (b) "set noise limits for the management of aircraft noise at airports."
6. In 1995 airport noise boundaries were introduced into the Queenstown Lakes District Plan based on the recommendations within NZS 6805. The airport operational projections were updated in 2007 with associated noise contours. These contours were adopted in PC35 and PC35 was subsequently confirmed by the Council and the Environment Court.<sup>1</sup>
7. The Operative Queenstown Lakes District Plan (**ODP**), as amended by PC35, includes land use controls for a number of zones which are affected by aircraft noise associated with the OCB and ANB for Queenstown

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<sup>1</sup> Excepting the location of the noise boundaries within the vicinity of 'Lot 6', in respect of which the Court is yet to make a final decision.

Airport. The ODP also specifies noise mitigation in the form of sound insulation and mechanical ventilation in certain situations.

8. As notified, the Proposed District Plan (**PDP**) incorporates some of these provisions, and amends others.
9. QAC made submissions on the PDP. My evidence primarily addresses its submission on the mechanical ventilation requirements. I also comment on proposed changes to the sound insulation requirements, and very generally addresses some other provisions in Chapter 36 which I consider may require amendment to ensure they are clear and workable.
10. Specifically:
  - (a) I agree with the proposal to upgrade the airport related ventilation requirements (Rule 36.6.3, Table 5) to include air conditioning. This provides a better opportunity for occupants to keep their windows closed and thus avoid the effects of airport noise;
  - (b) I agree with Mr Roberts' recommendation to remove the reference to Clause G4 of the Building Code (as recommended by Dr Chiles) from these ventilation requirements to avoid confusion;
  - (c) I recommend the measurement distance for noise from these ventilation systems should be 2m to remove the ambiguity in the notified rule. This measurement distance accords with the closest point to the system from where noise from system will likely be heard;
  - (d) I agree the specified sound insulation constructions (Rule 36.6.2, Table 4) should be amended to provide for common double glazing configurations, as recommended by Dr Chiles;
  - (e) I have made a number of comments on drafting ambiguities in the Chapter 36 noise rules including the issue of the zoning of the noise source and the location of the noise receiver.

**C Day**