

**BEFORE THE HEARINGS PANEL
FOR THE QUEENSTOWN LAKES PROPOSED DISTRICT PLAN**

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of Hearing Stream 05 –
District Wide

**REPLY OF RUTH CHRISTINE CAMERON EVANS
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

NOISE CHAPTER (36)

22 September 2016

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1. INTRODUCTION

- 1.1** My name is Ruth Christine Cameron Evans. I prepared the section 42A report for the Noise chapter of the Proposed District Plan (**PDP**). My qualifications and experience are listed in that s 42A report dated 17 August 2016.
- 1.2** I have reviewed the evidence filed by other expert witnesses on behalf of submitters, attended part of the hearing on the 12 September 2016 and have been provided with information from submitters and counsel at the hearing, including reports of what has taken place each day.
- 1.3** This reply evidence covers the following issues:
- (a) scope to amend (notified) Table 6 (redraft Table 5) consistent with (notified) Table 5;
 - (b) an alternative noise limit for a helicopter landing area at the Skyline;
 - (c) scope to change (notified) Rule 36.6.3 to refer to 1m rather than 1-2m in relation to the measurement distance from a ventilation system;
 - (d) the underlying zoning of the Queenstown Airport designation;
 - (e) information regarding complaints from noise located on the surface of water;
 - (f) reference to section 29A or 29B of the Civil Aviation Act 1990 in section 36.1 Purpose;
 - (g) proposed amendments to Objective 36.2.1 and Policy 36.2.1.1;
 - (h) reference to 'back up' in Rule 36.4 Table 1;
 - (i) reference to 'land based activities' or 'non-aviation activities' in Rule (notified) 36.5.2 (redraft 36.5.15);
 - (j) reference to designated airports in (redraft) Rule 36.5.11;
 - (k) application of (redraft) Rule 36.5.14 to all craft (not just commercial);
 - (l) clarifying that the Air Noise Boundary is 'as shown on the planning maps' in relation to Rule 36.6.2;

- (m) amending definition of 'notional boundary' to be consistent with the New Zealand Standard;
- (n) the relationship of Rural Zone chapter rules and Noise chapter rules and control of informal airports;
- (o) addition of an advice note regarding sound from helicopters;
- (p) removing 'P' in relation to (redraft) Rule 36.5.3;
- (q) the higher noise limit for airport noise;
- (r) amendments required to the Queenstown Air Noise Boundary map;
- (s) activity status for non-compliance with noise standards in Jacks Point Zone and objective and policy support for any non-compliance;
- (t) proposed amendments to Clarification 36.3.2.1 to provide better clarity; and
- (u) noise limits for activities on the surface of water and the appropriate measurement distance/location.

1.4 Where I am recommending changes to the provisions as a consequence of the Hearing evidence, I have included these in **Appendix 1 (Revised Chapter)**. I have attached a section 32AA evaluation in **Appendix 2**, that addresses the further changes recommended in this reply. Amendments outlined in my summary of evidence presented at the hearing are also included in the Revised Chapter.

2. CLARIFICATIONS AND GENERAL QUESTIONS

2.1 The Panel sought clarification on a number of minor matters which I address below. The recommended changes outlined in this section are for clarification and certainty, and are not of any substance.

2.2 The reference to the Civil Aviation Act 1990 in the fourth paragraph of section 36.1 Purpose should be 29B, not 29A. This has been corrected in the Revised Chapter attached as **Appendix 1**.

2.3 It was discussed at the hearing that Clarification 36.3.2.1 is not particularly clear. I agree that it could benefit from better wording. In my opinion the purpose of this clarification is to specify an activity

status (non-complying) where a standard (for example notified 36.6, 36.7 or 36.8.) is not met. The first half of this clarification could be deleted. I have made this amendment in the Revised Chapter at **Appendix 1**.

- 2.4** In relation to the proposed inclusion of a permitted activity for sound from emergency and backup generators, the Panel questioned if 'backup' requires further defining, to ensure that providing for noise from backup generators did not have the unintended consequence of a series of backup generators being established in urban areas for the purpose of line drop outs on the basis that they are a permitted activity. The intention is only to provide for those instances where a backup is required when there are unscheduled outages or maintenance requirements. I have therefore included this clarity in (redraft) Rule 36.4.7.
- 2.5** In relation to (notified) Rule 36.5.13 (redraft) Rule 36.5.11, the Panel suggested it may be beneficial to list the particular designated airports to which the rule does not apply. These include Queenstown Airport and Wanaka Airport, but for consistency with the Council's position in the Rural Hearing Stream would not include Glenorchy Airport. In the Revised Chapter in **Appendix 1**, these two airports have been specifically listed. The same change has been made in relation to (notified) Rule 36.5.14 (redraft) Rule 36.5.12 for consistency. These changes are for clarification and certainty, and are not of any substance.
- 2.6** In relation to (redraft and notified) Rule 36.6.2, the Panel suggested the words 'as shown on the planning maps' could be added to the end of the sentence. I agree this would be helpful and have made this amendment in the Revised Chapter attached at **Appendix 1**. I note that this approach could also be applied to other parts of the PDP where a particular overlay such as an Air Noise Boundary is referred to.
- 2.7** The activity status for (redraft) Rule 36.5.3 currently specifies a permitted activity status. However it is noted that there are no instances where the rule cannot be complied with, therefore a '-' is

considered more appropriate. This amendment has been made in the Revised Chapter.

- 2.8 With regard to the definition of 'notional boundary', Dr Chiles has reviewed the definition provided in the New Zealand Standard, which is as follows:

A line 20 metres from any side of a dwelling or the legal boundary where this is closer to the dwelling.

- 2.9 As the proposed wording in the redrafted chapter filed with the section 42A report reflects the New Zealand Standard, I do not consider it should be amended to refer to 'any façade'.

3. AMENDMENTS TO OBJECTIVES AND POLICIES

- 3.1 The Panel raised the potential for further amendments to the objective and policies for Chapter 36.

- 3.2 I agree that (notified and redraft) Objective 36.2.1 and (notified and redraft) Policy 36.2.1.1 could benefit from further refining to better outline what the Council's intention is for the Noise Chapter and improve the wording generally. I have made some suggested changes in the Revised Chapter at **Appendix 1**.

- 3.3 The proposed changes do not alter the intent of the objective and policy. The reworded Objective makes it clear that the intent is to control adverse noise effects (either at source or at the receiver). Redrafted Policy 36.2.1.1 has been reworded to reflect the intent to avoid, remedy or mitigate noise effects from land use and development. Reference to subdivision has been removed from the policy as subdivision itself does not create noise effects, it is the development that comes after. With regard to construction noise from subdivision, this is captured under development activities, therefore removal of this reference is not substantive.

- 3.4 With regard to the Panel's question of whether the noise reverse sensitivity effects are to be managed in all instances, including in

relation to airport noise, in my opinion (notified) Policy 36.2.1.2 provides for this by providing for mitigation, with options such as insulation and ventilation.

- 3.5** I consider these changes to be non-substantive, as the intent and subject of the objective and policies have not changed. These amendments have been made in the Revised Chapter attached as **Appendix 1**.

4. JACKS POINT ZONE

- 4.1** Mr Chris Fergusson, for the various Jacks Point entities (632) considered that the proposed objective and policies are more aligned with a restricted discretionary activity status, rather than non-complying. While I acknowledge that the objective and policies do not provide an absolute indication towards a non-complying activity status, I consider that they do provide the necessary support for this activity status, as adverse noise effects are to be avoided, remedied or mitigated. If effects cannot be managed to a minor extent, which may be the case in some instances, then consent should not be granted and non-complying activity status, along with the objective and policies, gives the Council necessary support to do so. I have recommended some non-substantive changes to the chapter objective, and Policy 36.2.1.1. The objective is broad, and outlines the PDP's aim to manage adverse effects, which will in some case be achieved by avoiding them. Both notified and redrafted Policy 36.2.1.1 provide for avoiding adverse effects, as well as remedying or mitigating them. This provides policy support for a non-complying activity status where the standard is exceeded.

- 4.2** Mr Fergusson also suggested that the EIC Activity Area be included alongside the Village Activity Area as one of the activity areas for which a higher noise limit applies under Rule (notified) 36.5.6 (redraft) 36.5.4). I agree that this is appropriate given the commercial nature of the EIC Activity Area. I have included this change in the Revised Chapter.

5. QUEENSTOWN AIRPORT

- 5.1 I have considered the zone underlying the Queenstown Airport designation and in my view it is only the Airport Mixed Use.
- 5.2 The Panel sought clarification as to why the rules provided for a higher level of noise to be generated by the Airport Mixed Use Zone and received in other zones. Dr Chiles has advised that he cannot see any justification for this. I note that the section 32 report states that the higher limit will enable the airport to function effectively and efficiently. The PDP limits are the same as under the ODP, albeit they have now been extended to include rural zones under the PDP which did not exist in the ODP.
- 5.3 The Panel also raised the question of whether it is difficult to monitor the noise emissions received in these zones and generated in the Airport Mixed Use Zone (or another zone) as it is necessary to know what the source zone is. I have referred this question to Dr Chiles, who advised that this is not too much of a problem in practice. Dr Chiles explained that most sound sources are not continuous and measurement of one source occurs when the other source is not operating. Dr Chiles further advised that another factor is that the distance to sources varies, or you can make the distance vary by standing closer to a source so it is louder and easier to measure, but then make an adjustment for the distance.
- 5.4 The Panel suggested that the words 'non-aviation activities' could replace 'land based activities' in notified Rule 36.5.15 (notified Rule 36.5.2). I agree an amendment could be made, and on further reflection consider that 'excluding sound from airport operations' might be more appropriate, as the phrase 'non-aviation activities' may have an unintended consequence if 'aviation activities' was interpreted as applying to a range of ancillary activities, for which noise should be controlled under this rule. I have therefore recommended the words 'excluding airport operations' to be included in the rule in the Revised Chapter at **Appendix 1** and consider this provides necessary clarity to ensure that ancillary activities are captured. This is a minor change and is also within the scope of the

Queenstown Airport Submission (433) regarding clarification that the noise standard only applied to land based activities.

5.5 As discussed in my summary of evidence, I recommend that Redraft Rule 36.5.15 (notified Rule 36.5.2) be moved to Table 3, to reflect the wording of the rule and its application to noise generators, rather than the receiving zone as shown in **Appendix 1**. This is not a change of substance, and improves the application of the rule.

5.6 I also recommend that the rule for ventilation requirements, (redraft) Rule 36.6.3 be updated to remove reference to G4 of the Building Code, and instead included a requirement of 0.5 air changes per hour (as shown in **Appendix 1**), which achieves the same outcome. This change is not substantive.

6. HELICOPTER NOISE

6.1 The Panel suggested that there may be a deemed compliance with (redraft) Rule 36.5.11 if the rules in the Rural Zone relating to the number of helicopter movements are met. I have discussed this further with Dr Chiles and he advised that while most of the time compliance with the zone rules will achieve compliance with the noise rules, this is not always the case. In some instances the Chapter 36 rules will be more stringent. An advice note could potentially be included in (redraft) Rule 36.5.11 alerting users to the additional rules contained in Chapter 21. However, I note that this is a district wide chapter and should be read as such. The noise rules are in addition to all zone rules, and activities managed under these chapters, therefore advice notes could in theory be scattered throughout the plan. For this reason I do not consider an advice note to be necessary.

7. NOISE FROM VESSELS

7.1 The Panel asked if the Council has any history of complaints regarding noise from the surface of water. I have discussed this with Mr Anthony Hall, Council's Principal Enforcement Officer. Mr Hall advised that there is very minimal history, with less than half a dozen

complaints received over the last two years which were generally resolved through the respective parties talking to each other and the Council and coming to a resolution.

7.2 The Panel sought clarification from the Council regarding the application of (redraft) Rule 36.5.14 (notified Rule 36.5.16) and whether this should extent to all motorised craft, not just commercial motorised craft. I have given this further consideration, and also discussed with Mr Craig Barr, Council's Acting Manager, Policy Planning. We both agree that it would be very difficult to regulate in terms of ascertaining compliance and monitoring from a resource management perspective. Accordingly, any rule would likely be ineffective. The Council can rely on section 16 of the Resource Management Act 1991 if the noise is unreasonable, and it is my understanding from Mr Barr that this is the Council's preference.

7.3 With regard to the measurement distance of 25m from the boat in (redraft) Rule 36.5.14 (notified Rule 36.5.16), the Panel suggested that this may be problematic. I have discussed this further with Dr Chiles. My understanding is this is the best available test and is intended to apply under controlled conditions, rather than 'on the run'. Dr Chiles advise that there is no fair and reasonable test that could be applied at an arbitrary distance from a vessel operating under unknown conditions. In the instance that there is disturbance caused, it is anticipated that the Council would follow up with the vessel operator to arrange a test under controlled conditions, or require proof of compliance to be provided.

8. AMENDMENTS TO (NOTIFIED) RULE 36.6.3 TABLE 5 AND (NOTIFIED) RULE 36.7 TABLE 6

Scope to amend (notified) Table 6 consistent with (notified) Table 5

8.1 The revised chapter filed with the section 42A report contained changes to Table 6 (redraft Table 5) of Rule 36.7, to make it consistent with (notified) Table 5 of Rule 36.3.3. In the notified chapter, these tables were identical. Amendments were sought by submitters to (notified) Table 5 and a redrafted Rule 36.6.3 was

prepared for ventilation. Because the notified rules were identical, the two rules were combined in the redrafted chapter, for consolidation and efficiency purposes.

8.2 QAC (433) in its evidence and legal submissions questioned the scope to change Table 6. There do not appear to be any submissions coded to the Noise hearing that provide scope to make this change. I have therefore reinstated Table 6 (renumbered as Table 5) in the Revised Chapter. I have also removed the range provided for in Rule 36.7 and changed this to 2m, to remove the ambiguity from the notified rule, consistent with the changes made to (redraft) Rule 36.6.3 and commented on further in paragraph 8.4 below.

8.3 I note that there is a typographical error (discussed at the hearing) in the 'Low Setting' column of (redraft) Table 5 of Rule 37.6. As notified this referred to 1-2 ac/hr, when the correct requirement should be 0.5 air changes per hour. I understand this is a typographical error that was carried over from the ODP. 0.5 air changes per hour is utilised as this achieves compliance with the Building Code. I consider that there may not be scope through submission to do this as I have not identified a submission requesting the change. If the Panel are of a view to correct this error, I note that 0.5 air changes per hour is a more liberal requirement.

Scope to change (notified) Rule 36.6.3 to refer to 1m rather than 1-2m in relation to the measurement distance from a ventilation system

8.4 QAC (433) in its evidence and legal submissions questioned the scope to reduce the distance to 1m, and sought 2m instead as this is in the upper limit of the notified rule. While Dr Chile's evidence is that 1m is more appropriate, it is acknowledged that there may not be scope to adopt the more stringent measurement distance. To remove the ambiguity, it is therefore recommended that 2m be used in all instances where 1-2m is specified in this rule – 2m was a possible measuring point under the notified Plan, and it is likely that most developers would use the more lenient measuring point.

9. HELICOPTER LANDING AREA AT SKYLINE GONDOLA

9.1 The Panel sought clarification at the hearing regarding the Council's position on a higher noise limit being provided for the recently consented helicopter landing area at the Gondola. In my opinion it is not appropriate to include a specific noise limit for a specific consented activity within the PDP. If this approach was taken then the PDP could be littered with specific noise limits for consented activities. Further, I note that the consent was issued by the Environment Court with a five year duration. Providing the higher limit in a rule in the PDP allows the higher limit to be in place for the life of the activity, rather than the shorter timeframe deemed appropriate by the Environment Court.

10. CONCLUSION

10.1 Overall, I consider that further refinements can be made to the Noise Chapter for both a substance and clarification purposes. I consider that the Revised Chapter as set out in **Appendix 1** is the most appropriate way to meet the purpose of the RMA.



Ruth Christine Cameron Evans

Consultant Planner

22 September 2016

APPENDIX 1
REVISED CHAPTER

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Key:

Recommend changes to notified chapter are shown in red underlined text for additions and ~~red strike~~ through text for deletions. Appendix 1 to Right of Reply, dated 22 September 2016.

Recommend changes to notified chapter are shown in underlined text for additions and ~~strike through text~~ for deletions. Appendix 1 to section 42A report, dated 17 August 2016.

36 Noise

36.1 Purpose

The purpose of this section is to manage the effects of noise in the District. Noise is part of the environment. While almost all activities give rise to some degree of noise, noise can cause nuisance ~~and give rise to~~ adverse effects on amenity values and the health and wellbeing of people and communities. Adverse effects may arise where the location, character, frequency, duration, or and timing of noise is inconsistent or incompatible with anticipated or reasonable noise levels.

Comment [RE1]: Non-substantive clarification

Comment [RE2]: Submission 649

Comment [RE3]: Submission 649

The Resource Management Act (RMA) 1991 requires every occupier of land and every person carrying out an activity to adopt the best practicable option to ensure noise does not exceed a reasonable level. The RMA also defines noise to include vibration. "Reasonable" noise levels are determined by the standard of amenity and ambient noise level of the receiving environment and the Council provides direction on this through the prescription of noise levels limits for each Zone. Noise is also managed by the Council through the use of relevant New Zealand Standards for noise. Land use and development activities, including activities on the surface of lakes and rivers should be managed in a manner that avoids, remedies or mitigates the adverse effects of noise to a reasonable level.

Comment [RE4]: Submission 649

In most situations, activities should consider the control of noise at the source and the mitigation of adverse effects of noise on the receiving environment. However, the onus on the reduction of effects of noise should not always fall on the noise generating activity. In some cases it may be appropriate for the noise receiver to avoid or mitigate the effects from an existing noise generating activity, particularly where the noise receiver is a noise sensitive activity.

Overflying aircraft have the potential to adversely affect amenity values. The Council controls noise emissions from airports, including take-offs and landings, via provisions in this District Plan, and Designation conditions. However, this is different from controlling noise from aircraft that are in flight. The RMA which empowers territorial authorities to regulate activities on land and water affecting amenity values, does not enable the authorities to control noise from overflying aircraft. Noise from overflying aircraft ~~can be controlled through~~ is controlled under section 29AB of the Civil Aviation Act 1990.

Comment [RE5]: Submission 649

Comment [RE6]: Amended to reflect correct section of Civil Aviation Act.

Comment [RE7]: Added for clarity

Comment [RE8]: Added for clarity

With the exception of ventilation requirements for the Queenstown and Wanaka town centres contained in 36.7, n ~~Noise in relation to received within~~ town centres is not addressed in this chapter, but rather in the Queenstown, Wanaka and Arrowtown Town Centres Zone chapters. This is due to the town centre-specific complexities on noise in those zones, and its fundamental nature as an issue that inter-relates with all other issues in those zones. Noise generated in the town centres but received outside of the town centres is ~~still~~ is managed under this chapter.

Comment [RE9]: Deleted for clarity.

Comment [RE10]: Added for clarity

Comment [RE11]: Added for clarity.

36.2 Objectives and Policies

36.2.1 ~~Objective - Control the adverse effects~~ The adverse effects of noise emissions are controlled to a reasonable level ~~to manage and manage~~ the potential for conflict arising from adverse noise effects between land use activities is managed.

Comment [RE12]: Objective rephrased in accordance with the Panel's procedural minute of 8 April 2016.

Comment [RE13]: Reworded for clarity.

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Policies

- 36.2.1.1 ~~Manage subdivision, land use and development activities in a manner that avoids, remedies or mitigates the adverse effects of unreasonable noise from land use and development.~~
- 36.2.1.2 Avoid, remedy or mitigate adverse noise reverse sensitivity effects.

Comment [RE14]: Reworded for clarity.

Comment [RE15]: Reworded for clarity.

36.3 Other Provisions

36.3.1 District Wide

Attention is drawn to the following District Wide Chapters. All provisions referred to are within Stage 1 of the Proposed District Plan, unless marked as ~~Operative District Plan (ODP)~~.

Comment [RE17]: Changes made for consistency with other chapters. Plan guidance only, no change in substance.

<u>1 Introduction</u>	<u>2 Definitions</u>	<u>3 Strategic Direction</u>
<u>4 Urban Development</u>	<u>5 Tangata Whenua</u>	<u>6 Landscapes</u>
24—Signs (18 Operative ODP)	25—Earthworks (22 Operative ODP)	<u>26 Historic Heritage</u>
<u>27 Subdivision</u>	<u>28 Natural Hazards</u>	29—Transport (14 Operative ODP)
30 Energy and Utilities and Renewable Energy	34 Hazardous Substances (16 Operative ODP)	<u>32 Protected Trees</u>
<u>33 Indigenous Vegetation</u>	<u>34 Wilding Exotic Trees</u>	<u>35 Temporary Activities and Relocated Buildings</u>
<u>36 Noise</u>	<u>37 Designations</u>	<u>Planning Maps</u>

Comment [RE16]: Change to reflect incorrect chapter reference.

36.3.2 Clarification

- 36.3.2.1 ~~The following tables describe activities, standards and subsequent level of activity for resource consent purposes.~~ Any activity that is not Permitted requires resource consent, ~~and a~~ Any activity that ~~does not specify an activity status for non-compliance is not specifically identified in a level of activity,~~ but breaches a standard, requires resource consent as a Non-complying activity.

Comment [RE18]: Non-substantive amendment for clarity and efficiency.

- 36.3.2.2 The following abbreviations are used in the tables:

P	Permitted	C	Controlled
RD	Restricted Discretionary	D	Discretionary
NC	Non Complying	PR	Prohibited

- 36.3.2.3 Sound levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics - Measurement of Environmental Sound and NZS 6802:2008 Acoustics - Environmental Noise, except where another Standard has been referenced in these rules, in which case that Standard should apply.
- 36.3.2.4 Any activities which are Permitted, Controlled or Restricted Discretionary in any section of the District Plan must comply with the noise standards in Tables 2, 3, 4 and 5 below, where that standard is relevant to that activity.
- 36.3.2.5 In addition to the above, the noise from the following activities listed in Table 1 shall be Permitted activities in all zones (unless otherwise stated). For the

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avoidance of doubt, the activities in Table 1 are exempt from complying with the noise standards set out in Table 2.

- 36.3.2.6 Notwithstanding compliance with Rules 36.5.13 (Helicopters) and 36.5.14 (Fixed Wing Aircraft) in Table 3, informal airports shall be subject to the rules in the applicable zones.
- 36.3.2.7 Sound from non-residential activities, visitor accommodation activities and sound from stationary electrical and mechanical equipment must not exceed the noise limits in Table 2 in each of the zones in which sound from an activity is received. The noise limits in Table 2 do not apply to assessment locations within the same site as the activity.
- 36.3.2.8 The noise limits contained in Table 2 do not apply to sound from aircraft operations at Queenstown Airport or Wanaka Airport.
- 36.3.2.9 Noise standards for noise received in the Queenstown, Wanaka and Arrowtown Town Centre, Local Corner Shopping and Business Mixed Use zones are not included in this chapter. Please refer to Chapters 12, 13, 14, 15 and 16. The noise standards in this chapter still apply for noise generated within these zones but received in other zones.
- 36.3.2.10 The standards in Table 3 are specific to the activities listed in each row and are exempt from complying with the noise standards set out in Table 2.

Comment [RE19]: Submission 433

Comment [RE20]: Added for clarity

Comment [RE21]: Amended to reflect the correct zone name.

Comment [RE22]: Added for clarity

36.4 Rules - Activities

Table 1 – Activities

	Activity	Activity Status
36.4.1	Sound from vehicles on public roads or trains on railway lines (including at railway yards, railway sidings or stations).	P
36.4.2	Any warning device that is activated in the event of intrusion, danger, an emergency or for safety purposes, provided that vehicle reversing alarms are a broadband directional type.	P
36.4.3	Sound arising from fire stations (including rural fire stations), fire service appliance sirens and call-out sirens for volunteer brigades.	P
36.4.4	Sound from temporary military training activities.	P
36.4.5	In the Rural Zone and the Gibbston Character Zone, sound from farming and forestry activities, and bird scaring devices, other than sound from stationary motors and stationary equipment.	P
36.4.6	Sound from aircraft movements within designated airports.	P
36.4.7 36.4.6	Sound from telecommunications cabinets in road reserve.	P
36.4.7	<p><u>Sound from emergency and backup electrical generators:</u></p> <p><u>(a) operating for emergency purposes; or</u></p> <p><u>(b) operating for testing and maintenance for less than 60 minutes each month during a weekday between 0900 and 1700.</u></p> <p><u>For the purpose of this rule backup generators are generators only used when there are unscheduled outages of the grid (other than routine testing</u></p>	P

Comment [RE23]: Submission 433

Comment [RE24]: Submission 635

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	Activity	Activity Status
	<u>or maintenance provided for in (b) above).</u>	

36.5 Rules- Standards

Standard					Non-compliance status
Table 2	Activity or sound source Zones sound is received in	Assessment location	Time	Noise limits	
36.5.1	Rural Zone (Note: refer 36.5.2 for noise received in the Rural Zone from the Queenstown Airport Mixed Use Zone).	Any point within the notional boundary of a residential unit	0800h to 2000h	50 dB L _{Aeq(15 min)}	NC
	Gibbston Character Zone		2000h to 0800h	40 dB L _{Aeq(15 min)} 75 dB L _{AFmax}	NC
36.5.2	Sound from land based activities in the Queenstown Airport Mixed Use Zone received in the Residential Zones, Remarkables Park Zone and the Rural Zone, excluding sound from aircraft operations.	At any point within the Residential Zone and at any point within the notional boundary in the Rural Zone	0700h to 2200h	55 dB L_{Aeq(15 min)}	RD
			2200h to 0700h	45 dB L_{Aeq(15 min)} 75 dB L_{AFmax}	Discretion is restricted to the extent of effects of noise generated on adjoining zones.
36.5.3	Millbrook Resort Zone	Any point within the Residencies / Residential Activity Areas	0800h to 2000h	50 dB L _{Aeq(15 min)}	NC
	Jacks Point Resort Zone		2000h to 0800h	40 dB L _{Aeq(15 min)}	NC
	(see also 36.5.17)			75 dB L _{AFmax}	

Comment [RE25]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE26]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE27]: Correction to column heading, to reflect purpose of rule as set out in 36.3.2.7.

Comment [RE28]: Submission 433

Comment [RE29]: Submission 433

Comment [RE30]: Moved from Table 2 to Table 3 to reflect wording of rule and applicable column 2 heading.

Comment [RE31]: Moved to notified 36.5.4 (redraft 36.5.3) with minor amendment to align with structure of notified 36.5.4 (redraft 36.5.3)

Comment [RE32]: Note that this will require updating with the Jacks Point Zone Chapter rule reference as notified 36.5.17 is recommended to be transferred to the zone chapter.

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Table 2	Standard	Assessment location	Time	Noise limits	Non-compliance status
36.5.432	Low, Medium, and High Density and Large Lot Residential Zones (Note: refer 36.5.2 for noise received in the Residential Zones from the Queenstown Airport Mixed Use Zone).	Any point within any site.	0800h to 2000h	50 dB L _{Aeq(15 min)}	NC
	Arrowtown Residential Historic Management Zone Rural Residential Zone Rural Lifestyle Zone Townships Zones		2000h to 0800h	40 dB L _{Aeq(15 min)} 75 dB L _{AFmax}	
	Waterfall Park Resort Zone				
	Rural Visitor Zones (excluding the Rural Visitor Zone Walter Peak).				
	Quail Rise Special Zone				
	Meadow Park Special Zone				
	Ballantyne Road Special Zone (excluding Activity Area C)				
	Shotover Country Special Zone (Activity Areas 11a-1e, 4 and 5a-5e)				
	Penrith Park Special Zone				
	Bendemeer Special Zone				
	Mt Cardrona Station Special Zone (Activity Areas 2, 3 and 4)				
	Kingston Village Special Zone (Activity Areas 1,3 and 4)				
	Millbrook Resort Zone (Residential Activity Area)				
	Jacks Point Resort Zone (Residential Activity Area)				

Comment [RE25]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE26]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE27]: Correction to column heading, to reflect purpose of rule as set out in 36.3.2.7.

Comment [RE33]:
Correct terminology for zone name

Comment [RE34]: Submission 621

Comment [RE35]: Correct terminology for zone name

Comment [SG36]: Clarification

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Standard					Non-compliance status
Table 2	Activity or sound source Zones sound is received in	Assessment location	Time	Noise limits	
36.5.543	Queenstown Airport Mixed Use Zone	At any point within the zone.	Any time	No limit	P
36.5.654	Shotover Country Special Zone (Activity Areas 2a-2c and 3) Mt Cardrona Station Special Zone (Activity Area 1) Ballantyne Road Special Zone (Activity Area C) Jacks Point Resort Zone (Village Activity Area and EIC Activity Area)	Any point within any site	0800h to 2200h	60 dB L _{Aeq(15 min)}	NC
			2200h to 0800h	50 dB L _{Aeq(15 min)}	NC
				75 dB L _{AFmax}	
36.5.765	Kingston Village Special Zone (Activity Area 2) Industrial Zones	36.5.76.1 Any point within Activity Area 2 boundary	0800h to 2000h	60 dB L _{Aeq(15 min)}	NC
			2000h to 0800h	50 dB L _{Aeq(15 min)}	NC
				75 dB L _{AFmax}	
			2200h to 0700h	45 dB L _{Aeq(15 min)}	NC
			75 dB L _{AFmax}		
		0700h to 2200h	60 dB L _{Aeq(15 min)}	NC	
		36.5.76.2 Any point within the boundary of Activity Areas of 2a, 3, 4, 5, 6, 7 and 8	2200h to 0700h	50 dB L _{Aeq(15 min)}	NC
				75 dB L _{AFmax}	
2000h to 0800h	40 dB L _{Aeq(15 min)}		NC		
	75 dB L _{AFmax}				
2200h to 0800h	65dB A _{dB} L ₄₉ A _{eq(15 min)}				

Comment [RE25]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE26]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE27]: Correction to column heading, to reflect purpose of rule as set out in 36.3.2.7.

Comment [RE37]: Compliance will always be achieved, therefore no activity status necessary.

Comment [RE38]: Correct terminology for zone name

Comment [RE39]: Submission 632

Comment [RE40]: Submission 632

Comment [RE42]: Amended to reflect consequential renumbering.

Comment [RE41]: Submission 746.

Comment [RE43]: Amended to reflect consequential renumbering.

Comment [RE44]: Submission 649

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Table 2	Standard				Non-compliance status
	Activity or sound source	Zones sound is received in	Assessment location	Time	
					75dBA L _{max}
				2000h to 0800h	65dBA L ₁₀ 75dBA L _{max}

Comment [RE25]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE26]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE27]: Correction to column heading, to reflect purpose of rule as set out in 36.3.2.7.

Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
36.5.8 76	Certain Telecommunications Activities in Road Reserve The Resource Management (National Environmental Standards for Telecommunications Facilities "NESTF") Regulations 2008 provide for noise from telecommunications	36.5.8.1 36.5.7.1 Where a cabinet located in a road reserve in an area in which allows residential activities, the noise from the cabinet must be measured and assessed at 1 of the following points: a. if the side of a building containing a	0700h to 2200h	50 dB L _{Aeq(5 min)}	Refer
			2200h to 0700h	40 dB L _{Aeq(5 min)}	NESTF

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE47]: Amended to reflect consequential renumbering

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Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
	<p>equipment cabinets located in the road reserve as a permitted activity, subject to the specified noise limits.</p> <p>The noise from the cabinet must be measured in accordance with NZS 6801: 2008 Acoustics – Measurement of environmental sound, the measurement must be adjusted in accordance with NZS 6801: 2008 Acoustics – Measurement of environmental sound to a free field incident sound level, and the adjusted measurement must be assessed in accordance with NZS 6802: 2008 Acoustics – Environmental noise.</p>	<p>habitable room is within 4 m of the closest boundary of the road reserve, the noise must be measured—</p> <ul style="list-style-type: none"> • at a point 1 m from the side of the building; or • at a point in the plane of the side of the building: <p>b. in any other case, the noise must be measured at a point that is—</p> <ul style="list-style-type: none"> • at least 3 m from the cabinet; and • within the legal boundary of land next to the part of the road reserve where the cabinet is located. 	<p>2200h to 0700h</p>	<p>65 dB L_{AFmax}</p>	
		<p>36.5.8.2 36.5.7.2 Where a cabinet is located in a road reserve in an area in which does not allow residential activities, the noise from the cabinet must be measured and assessed at 1 of the following</p>	<p>Any time</p>	<p>60 dB L_{Aeq(5 min)}</p>	
			<p>2200h to</p>	<p>65 dB L_{AFmax}</p>	

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE48]: Amended to reflect consequential renumbering

NOISE 36

Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
		<p>points:</p> <p>c. if the side of a building containing a habitable room is within 4 m of the closest boundary of the road reserve, the noise must be measured—</p> <ul style="list-style-type: none"> • at a point 1 m from the side of the building; or • at a point in the plane of the side of the building: <p>d. in any other case, the noise must be measured at a point that is—</p> <ul style="list-style-type: none"> • at least 3 m from the cabinet; and • within the legal boundary of land next to the part of the road reserve where the cabinet is located. 	0700h		
36.5.987	<p>Wind Turbines</p> <p>Wind farm sound must be measured and assessed in accordance with NZS 6808:2010 Acoustics – Wind Farm Noise.</p>	At any point within the notional boundary of any residential unit.	Any time	40 dB $L_{A90(10 \text{ min})}$ or the background sound level $L_{A90(10 \text{ min})}$ plus 5 dB, whichever is higher	NC

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

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Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
36.5.1098	<p>Audible Bird Scaring Devices</p> <p>The operation of audible devices (including gas guns, audible avian distress alarms and firearms for the purpose of bird scaring, and excluding noise arising from fire stations).</p> <p>In relation to gas guns, audible avian distress alarms and firearms no more than 15 audible events shall occur per device in any 60 minute period.</p> <p>Each audible event shall not exceed three sound emissions from any single device within a 1 minute period and no such events are permitted during the period between sunset and sunrise the following day.</p> <p>The number of devices shall not exceed one device per 4 hectares of land in any single land holding, except that in the case of a single land holding less than 4 hectares in area, one device shall be permitted.</p>	<p>36.5.10.1 36.5.9.1 At any point within a Residential Zone or the notional boundary of any residential unit, other than on the property in which the device is located.</p>	Hours of daylight but not earlier than 0600h.	65 dB L _{AE} shall apply to any one event	NC
		<p>36.5.10.2 36.5.9.2 In any public place.</p>	At any time	90 dB L _{AE} is received from any one noise event	
36.5.14109	<p>Frost fans</p> <p>Sound from frost fans.</p>	At any point within the notional boundary of any residential unit, other than residential units on the same site as the activity.	At any time	<p>85 dB L_{AFmax} 55 dB L_{Aeq(15min)}</p>	NC

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE49]: Amended to reflect consequential renumbering

Comment [RE50]: Amended to reflect consequential renumbering

Comment [RE51]: Amended to reflect consequential renumbering

Comment [RE52]: Submission 649

NOISE 36

Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
36.5.12 <u>36.5.11</u>	<p>Vibration</p> <p>Vibration from any activity shall not exceed the guideline values given in DIN 4150-3:1999 Effects of vibration on structures at any buildings on any other site.</p>	On any structures or buildings on any other site.	Refer to relevant standard	Refer to relevant standard	NC
36.5.13 <u>36.5.11</u>	<p>Helicopters</p> <p>Sound from any helicopter landing area must be measured and assessed in accordance with NZ 6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas.</p> <p>Sound from helicopter landing areas must comply with the limits of acceptability set out in Table 1 of NZS 6807.</p> <p>For the avoidance of doubt this rule does not apply to designated airports. Queenstown Airport and Wanaka Airport.</p>	<p>At any point within the notional boundary of any residential unit, other than residential units on the same site as the activity.</p> <p>*Note: The applicable noise limit in this rule and in rule 36.5.14 below for informal airports/landing strips used by a combination of both fixed wing and helicopters shall be determined by an appropriately qualified acoustic engineer on the basis of the dominant aircraft type to be used.</p>	At all times	50 dB L _{dn}	NC

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE53]: Clarification to specifically list designated airports, to avoid the risk that other informal airports could seek designations in the future and the rule not apply.

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Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
36.5.14 13 12	<p>Fixed Wing Aircraft</p> <p>Sound from airports/landing strips for fixed wing aircraft must be measured and assessed in accordance with NZS 6805:1992 Airport Noise Management and Land Use Planning.</p> <p>For the avoidance of doubt this rule does not apply to designated airports. Queenstown Airport and Wanaka Airport.</p>	<p>At any point within the notional boundary of any residential unit and at any point within a residential site other than residential units on the same site as the activity.</p> <p>*Note: The applicable noise limit in this rule and in rule 36.5.13 above for informal airports/landing strips used by a combination of both fixed wing and helicopters shall be determined by an appropriately qualified acoustic engineer on the basis of the dominant aircraft type to be used.</p>	At all times	55 dB L _{dn}	NC
36.5.15 14 13	<p>Construction Noise</p> <p>Construction sound must be measured and assessed in accordance with NZS 6803:1999 Acoustics - Construction Noise. Construction sound must comply with the recommended upper limits in Tables 2 and 3 of NZS 6803. Construction sound must be managed in accordance with NZS 6803.</p>	At any point within any other site.	Refer to relevant standard	Refer to relevant standard	D

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE54]: Clarification to specifically list designated airports, to avoid the risk that other informal airports could seek designations in the future and the rule not apply.

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Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
36.5.16 36.5.14	<p>Commercial Motorised Craft</p> <p>Motorised craft on the surface of lakes and rivers must be operated and conducted such that a maximum sound level is not exceeded, when measured and assessed in accordance with 36.8</p> <p><u>Sound from motorised craft must be measured and assessed in accordance with ISO 2922:2000 and ISO 14509-1:2008.</u></p>	Refer 36.8 25 metres from the craft	Refer 36.8	<p>77 dB L_{Asmax}</p> <p>0800h to 2000h 77 dB L_{Asmax}</p> <p>2000h to 0800h 67 dB L_{Asmax}</p>	NC
36.5.17	Jacks Point State Highway Noise	Any residential activities located within 80 m of the seal edge of State Highway 6, shall be designed and constructed to meet noise performance standards for noise from traffic on the State Highway that will not exceed 35dBA Leq(24 hour) in bedrooms and 40 dBA (Leq (24 hour) for other habitable rooms in accordance with the satisfactory sound levels recommended by Australian and New Zealand Standard AS/NZ2107:2000 Acoustics Recommended design sound levels and reverberation times for building interiors.			NC

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE55]: Consolidated with 36.8 for efficiency reasons due to duplication between this rule and 36.8.

Comment [RE56]: Relocated to Jacks Point zone chapter for consistency and structural reasons, as the other residential chapters will contain noise rules associated with SH setbacks.

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Table 3	Standard				Non-compliance status
	Activity or sound source	Assessment location	Time	Noise limits	
36.5.15	Sound from land based activities in the Queenstown Airport Mixed Use Zone received in the Residential Zones, Remarkables Park Zone and the Rural Zone, excluding sound from aircraft operations.	At any point within the Residential Zone and at any point within the notional boundary in the Rural Zone	0700h to 2200h	55 dB $L_{Aeq(15\ min)}$	RD Discretion is restricted to the extent of effects of noise generated on adjoining zones.
			2200h to 0700h	45 dB $L_{Aeq(15\ min)}$ 75 dB L_{AFmax}	

Comment [RE45]: Consequential rule renumbering in this column to reflect the deletion of 36.5.3

Comment [RE46]: Further consequential renumbering to reflect move of 36.5.2 to Table 3 (renumbered as 36.5.15)

Comment [RE57]: Submission 433

Comment [RE58]: Submission 433

Comment [RE59]: Moved from Table 2 to Table 3 to reflect wording of rule and applicable column 2 heading.

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36.6 Airport Noise

36.6.1 Wanaka Airport

Within the Rural Visitor Zone, the construction of, alteration, or addition to any building containing an activity sensitive to aircraft noise shall be designed to achieve an internal design sound level of 40 dB Ldn, based on the 2036 noise contours, at the same time as meeting the ventilation requirements in ~~Table 5 Rule 36.6.3~~. Compliance can either be demonstrated by submitting a certificate to Council from a person suitably qualified in acoustics stating that the proposed construction will achieve the internal design sound level, or by installation of mechanical ventilation to achieve the requirements in ~~Table 5-Rule 36.6.3~~.

Comment [RE60]: Amended to reflect correct reference.

Comment [RE61]: Amended to reflect correct reference.

36.6.2 Sound Insulation Requirements for the Queenstown and Wanaka Airport - Acceptable Construction Materials (Table 4).

The following table sets out the construction materials required to achieve appropriate sound insulation within the airport Air Noise Boundary (ANB) as shown on the planning maps.

Comment [RE62]: Added for clarity.

Building Element	Minimum Construction	
External Walls	Exterior Lining:	Brick or concrete block or concrete, or 20mm timber or 6mm fibre cement
	Insulation:	Not required for acoustical purposes
	Frame:	One layer of 9mm gypsum or plasterboard (or an equivalent combination of exterior and interior wall mass)
Windows/Glazed Doors	4mm glazing with effective compression seals or for double glazing 6mm-6mm airgap-6mm Double-glazing with 4 mm thick panes separated by a cavity at least 12 mm wide.	
Pitched Roof	Cladding:	0.5mm profiled steel or masonry tiles or 6mm corrugated fibre cement
	Insulation:	100mm thermal insulation blanket/batts
	Ceiling:	1 layer 9mm gypsum or plaster board
Skillion Roof	Cladding:	0.5mm profiled steel or 6mm fibre cement
	Sarking:	None Required
	Insulation:	100mm thermal insulation blanket/batts
	Ceiling:	1 layer 19mm gypsum or plasterboard
External Door	Solid core door (min 24kg/m ²) with weather seals	

Comment [RE63]: Submission 383

Comment [RE64]: Correction of typographical error; submission 433

Note: The specified construction materials in this table are the minimum required to meet the Indoor Design Sound Level. Alternatives with greater mass or larger thicknesses of insulation will be acceptable. Any additional construction requirements to meet other applicable standards not covered by this rule (eg fire, Building Code etc) would also need to be implemented.

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36.6.3 Ventilation Requirements for the Queenstown and Wanaka Airport (Table 5)

The following table sets out applies to the ventilation requirements within:

- (a) the airport Outer Control Boundary (OCB) and Air Noise Boundary (ANB); ~~and~~
- ~~(b) the Wanaka and Queenstown Town Centre Zones, Local Shopping Centre Zone and the Business Mixed Use Zone;~~

Critical Listening Environments must have a ventilation and cooling system designed, constructed and maintained to achieve the following:

~~i. Ventilation must be provided to A minimum of 0.5 air changes per hour meet clause G4 of the New Zealand Building Code.~~ At the same time, the sound of the system must not exceed 30 dB LAeq(30s) when measured 1.2 m away from any grille or diffuser.

ii. The occupant must be able to control the ventilation rate in increments up to a high air flow setting that provides at least 6 air changes per hour. At the same time, the sound of the system must not exceed 35 dB LAeq(30s) when measured 1.2 m away from any grille or diffuser.

iii. The system must provide cooling that is controllable by the occupant and can maintain the temperature at no greater than 25°C and no less than 18°C. At the same time, the sound of the system must not exceed 35 dB LAeq(30s) when measured 1.2 m away from any grille or diffuser.

- Comment [RE65]:** Amended to reflect reinstatement of (notified) Table 6 (redraft) Table 5
- Comment [RE66]:** Submission 80
- Comment [RE67]:** Evidence of Dr Chiles for QLDC and Mr Day for 433
- Comment [RE68]:** Clarification
- Comment [RE69]:** Clarification
- Comment [RE70]:** Clarification
- Comment [RE71]:** Submissions 80 and 433

Room Type	Outdoor Air Ventilation Rate (Air Changes Room Type per Hour, ac/hr)	
	Low Setting	High Setting
Bedrooms	4-2 ac/hr	Min. 5 ac/hr
Other Critical Listening Environments	4-2 ac/hr	Min. 15 ac/hr
Noise from ventilation systems shall not exceed 35 dB LAeq(1 min), on High Setting and 30 dB LAeq(1 min), on Low Setting. Noise levels shall be measured at a distance of 1 m to 2 m from any diffuser.		
Each system must be able to be individually switched on and off and when on, be controlled across the range of ventilation rates by the occupant with a minimum of 3 stages.		
Each system providing the low setting flow rates is to be provided with a heating system which, at any time required by the occupant, is able to provide the incoming air with an 18 °C heat rise when the airflow is set to the low setting. Each heating system is to have a minimum of 3 equal heating stages.		
If air conditioning is provided to any space then the high setting ventilation requirement for that space is not required.		

36.7 Ventilation Requirements for other Zones (Table 65)

The following table (Table 65) sets out the ventilation requirements in the Wanaka and Queenstown Town Centre Zones, the Local Shopping Centre Zone and the Business Mixed Use Zone.

- Comment [RE72]:** Table number updated to reflect removal of Table 5 from Rule 36.6.3
- Comment [RE73]:** Rule reinstated due to lack of scope to consolidate with Rule 36.6.3
- Comment [RE74]:** Table number updated to reflect removal of Table 5 from Rule 36.6.3

Room Type	Outdoor Air Ventilation Rate (Air Changes Room Type per Hour, ac/hr)	
	Low Setting	High Setting

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Bedrooms	<u>1-2 ac/hr</u>	<u>Min. 5 ac/hr</u>
Other Critical Listening Environments	<u>1-2 ac/hr</u>	<u>Min. 15 ac/hr</u>
<u>Noise from ventilation systems shall not exceed 35 dB LAeq(1 min), on High Setting and 30 dB LAeq(1 min), on Low Setting. Noise levels shall be measured at a distance of 1 m to 2 m from any diffuser.</u>		
<u>Each system must be able to be individually switched on and off and when on, be controlled across the range of ventilation rates by the occupant with a minimum of 3 stages.</u>		
<u>Each system providing the low setting flow rates is to be provided with a heating system which, at any time required by the occupant, is able to provide the incoming air with an 18 °C heat rise when the airflow is set to the low setting. Each heating system is to have a minimum of 3 equal heating stages.</u>		
<u>If air conditioning is provided to any space then the high setting ventilation requirement for that space is not required.</u>		

Comment [RE75]: Removal of range within rule. Non-substantive as provides for the upper limit of the rule.

36.8 Acoustic Measurement and Assessment

Comment [RE76]: Submissions 607 and 621, and consolidated with 36.5.16 for plan efficiency reasons.

36.8.1 ~~Acoustic Measurement and Assessment of Motorised Craft on the Surface of Rivers and Lakes~~

- 36.8.1.1 ~~All motorised craft operating on the surface of lakes and rivers within the District must have and display a current acoustic certificate of fitness. Testing shall be undertaken on a strictly controlled "test" day, and shall be conducted by an enforcement officer appointed pursuant to the Act.~~
- 36.8.1.2 ~~The measured sound pressure level shall not exceed a maximum A weighted level:~~
- ~~• 77 dB LASmax for vessels to be operated between the hours of 0800 to 2000;~~
 - ~~• 67 dB LASmax for vessels to be operated between the hours of 2000 to 0800.~~
- 36.8.1.3 ~~Retesting will be undertaken at not more than 12 monthly intervals. Additional monitoring measurements shall be performed in order to check that the noise of the craft remains within the prescribed limits and no noticeable changes have occurred since the previous testing of the craft and/or allowing modification to the same.~~
- 36.8.1.4 ~~All sound measuring equipment and methods used shall be in compliance with the standards stated in the above references.~~
- 36.8.1.5 ~~The following test conditions shall be complied with as closely as possible, but if unavoidable variations have to be made, these must be stated in the test report. In no instance shall the integrity of the test be compromised.~~
- 36.8.1.6 ~~The noise emitted by warning devices and the like are excluded, however ancillary noise generated or associated with the operation of the craft, other than the motive device, may be measured separately or in conjunction with the test.~~

36.8.2 Test Conditions

- 36.8.2.1 ~~The following instrument shall be used:~~

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- ~~A class 1 sound level meter and an acceptable wind screen.~~
- ~~A sound level calibrator.~~
- ~~A wind speed anemometer.~~
- ~~An engine speed tachometer.~~

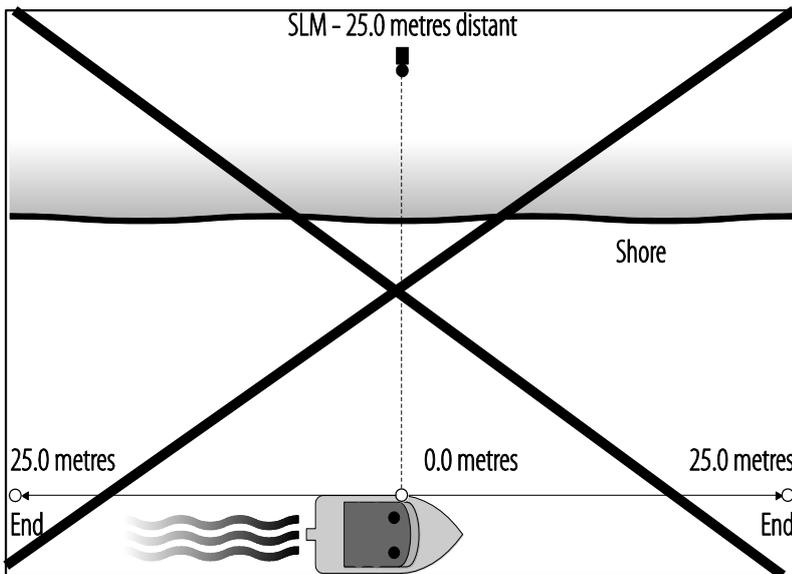
36.8.2.2 ~~Measured Quantities – "A" weighted, slow response sound level, expressed in decibels (dB).~~

36.8.2.3 ~~Acoustic Environment – The test site shall be such that sufficient free field sound propagation exists, (ie 30m clearance from reflective surfaces).~~

36.8.2.4 ~~There shall be no obstacles between the craft and the microphone and the area between shall be open and free from sound absorbing materials. Meteorological conditions shall be within standard acceptable limits and the wind velocity shall not exceed 5m/sec.~~

36.8.2.5 ~~Test Course – The depth of water must be sufficient for the normal operation of the craft.~~

- ~~Craft shall run either against the stress or current or in slack water.~~
- ~~A set straight line course shall be used to ascertain the acoustic measurements, as detailed:~~



36.8.2.6 ~~Operating Conditions – The test run shall commence at sufficient distance downstream to obtain stabilised engine conditions when the craft passes the microphone. The craft shall be driven by a competent person who is mutually acceptable to the operator of the craft and the enforcement officer. The loading condition of the craft shall be stated in the report. All openings and hatches shall be set and located in their normal operational condition and the craft's engine system shall be at normal operating temperature.~~

36.8.2.7 ~~The boat shall pass all three markers on a straight course at wide open throttle with the engine operating at the midpoint of the manufacturer's recommended full throttle rpm range.~~

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- 36.8.2.8 ~~The engine speed tolerance shall be ± 100 rpm if this falls within the full throttle speed range. If a single top speed rpm is recommended, the tolerance shall be $\pm 0, -100$ rpm.~~
- 36.8.2.9 ~~Boats which are sold with the power units installed (for example, outboards and stern drives) shall be tested in this combination. Outboard motorboats shall be tested with a motor or motors for which the boat is rated, since sound level is dependent upon boat design and construction.~~
- 36.8.2.10 ~~The boat shall pass within 0.5m to 1.0m on the far side of all three markers.~~
- 36.8.2.11 ~~Test Procedure – Principally that the maximum A – weighted – sound pressure level indicated during the passage of the craft be retained. The sound level will be accumulated as the craft passes at right angles to the microphone and will be measured until the craft has travelled a distance of 25 m. The meter shall be set for slow response.~~

~~Two passes shall be made and the mean value of the measurements rounded to the nearest integral decibel shall be obtained. If the sound intensity is louder along one side of the craft, then the measurements shall be conducted at this side. The background noise level shall be recorded and shall be at least 10dBA lower than measured level for the boat being tested.~~

~~All craft may not be able to be recorded according to the above method and any deviation shall be in compliance with ISO 2922:2000 or ISO 14509-1:2008. Other statistical and accumulated sound levels may also be recorded and retained for evaluation.~~

36.8.3 Test Report

- 36.8.3.1 ~~The test report shall include a reference to the Standards and all relevant details concerning:~~
- ~~• The nature of the tests.~~
 - ~~• The craft design or make, operator, engine and exhaust system.~~
 - ~~• The test site locality, water conditions, meteorological conditions, for example temperature, and wind velocity, if relevant.~~
 - ~~• The measurement equipment.~~
 - ~~• The background noise level.~~
 - ~~• The loading of the craft.~~
 - ~~• The A weighted sound pressure levels.~~
 - ~~• The presence of pure tones or noise of an impulsive character.~~
 - ~~• A conclusion, evaluating the test results and considerations.~~
- 36.8.3.2 ~~The craft shall, upon compliance and following testing exhibit a current acoustic certificate label in a prominent place, which will be issued by the enforcement officer.~~
- 36.8.3.3 ~~All craft shall be retested, should any modification be made to the craft or engine componentry that could alter the acoustic integrity and another certificate, upon compliance, will be issued.~~

~~REFERENCES: IEC 61672-1:2002, IEC 60942:2003, ISO 2922:2000, ISO 14509-1:2008~~

Comment [RE77]: Deleted for plan efficiency reasons as unnecessary and confusing text. The two IEC references are not used, and the two ISO references are included in the rule they relate to (Notified Rule 36.3.16, redrafted Rule 36.3.15).

DEFINITIONS

The following definitions have submission points coded to them for this chapter are included here for reference:

Critical listening environment

Means any space that is regularly used for high quality listening or communication for example principle living areas, bedrooms and classrooms but excludes non-critical living environments.

Design sound level

Means 40 dB Ldn in all Critical Listening Environments.

Indoor design sound level

Means 40 dB Ldn in all Critical Listening Environments.

Noise

Acoustic terms shall have the same meaning as in NZS 6801:2008 Acoustics – Measurement of environmental sound and NZS 6802:2008 Acoustics – Environmental noise.

Ldn: Means the day/night level, which is the A-frequency-weighted time-average sound level, in decibels (dB), over a 24-hour period obtained after the addition of 10 decibels to the sound levels measured during the night (2200 to 0700 hours).

LAeq(15 min): Means the A-frequency-weighted time-average sound level over 15 minutes, in decibels (dB).

LAFmax: means the maximum A-frequency-weighted fast-time-weighted sound level, in decibels (dB), recorded in a given measuring period.

Noise Limit: Means a LAeq(15 min) or LAFmax sound level in decibels that is not to be exceeded.

In assessing noise from helicopters using NZS 6807: 1994 any individual helicopter flight movement, including continuous idling occurring between an arrival and departure, shall be measured and assessed so that the sound energy that is actually received from that movement is conveyed in the Sound Exposure Level (SEL) for the movement when calculated in accordance with NZS 6801: 2008.

Non-critical listening environment

Means any space that is not regularly used for high quality listening or communication including bathroom, laundry, toilet, pantry, walk-in-wardrobe, corridor, hallway, lobby, cloth-drying room, or other space of a specialised nature occupied neither frequently nor for extended periods.

Notional boundary

Means a line 20m from the façade any side of any residential unit or the legal boundary whichever is closer to the residential unit.

Comment [RE78]: Submission 649

APPENDIX 2
SECTION 32AA ASSESSMENT

Appendix 2

Section 32AA Assessment

Note: The relevant provisions from the revised chapter are set out below, showing additions to the notified text in underlining and deletions in ~~strike-through~~ text from the s42A report and recommended changes from the Reply are shown in red underlined text for additions and ~~red strike-through~~ text for deletions, (ie as per the revised chapter).

The section 32AA assessment then follows in a separate table underneath each of the provisions.

<p>Recommended Amendments to Objective 23.1.1</p> <p>Objective - Control the adverse effects <u>The adverse effects</u> of noise emissions <u>are controlled</u> to a reasonable level <u>to manage</u> and manage the potential for conflict arising from adverse noise effects between land use activities <u>is managed</u>.</p>

<p>Appropriateness (s32(1)(a))</p> <p>The objective provides two clear environmental outcomes: to control adverse effects of noise and manage potential for conflict between noise and land use.</p>

<p>Recommended Amendments to Policy 36.2.1.1</p> <p>Manage subdivision, land use and development activities in a manner that a<u>voids, remedies</u> or mitigates the adverse effects of unreasonable noise <u>from land use and development</u>.</p>
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Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Rewording does not change the intent of the policy but improves clarity. 	<ul style="list-style-type: none"> • Effective and efficient due to the improved clarity in the policy.

<p>Recommended Amendments to Rule 36.4.7</p>		
<p><u>36.4.7</u></p>	<p><u>Sound from emergency and backup electrical generators:</u></p> <p><u>(a) operating for emergency purposes; or</u></p> <p><u>(b) operating for testing and maintenance for less than 60 minutes each month during a weekday between 0900 and 1700.</u></p> <p><u>For the purpose of this rule backup generators are generators only used when there are unscheduled outages of the grid (other than routine testing or maintenance provided for in (b) above).</u></p>	<p>P</p>

Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> • None identified. 	<ul style="list-style-type: none"> • Provides clarity regarding the purpose of a backup generator. 	<ul style="list-style-type: none"> • This change is efficient and effective as it removes potential for unintended consequences if 'backup' was not sufficiently defined

		within the rule.
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Recommended Amendments to (notified) Rule 36.5.2 (Table 2) / (redraft) Rule 36.5.15 (Table 3)

36.5.15	Sound from land based activities in the Queenstown Airport Mixed Use Zone received in the Residential Zones, Remarkables Park Zone and the Rural Zone, excluding sound from aircraft operations.	At any point within the Residential Zone and at any point within the notional boundary in the Rural Zone	0700h to 2200h	55 dB $L_{Aeq(15\ min)}$	RD Discretion is restricted to the extent of effects of noise generated on adjoining zones.
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Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> • Nil 	<ul style="list-style-type: none"> • Makes it clear that the rule applies to noise from activities other than aircraft operations. 	<ul style="list-style-type: none"> • Improves efficiency through improved clarity.

Recommended Amendments to (notified) Rule 36.5.5 (redraft) Rule 36.5.4 (Table 2)

36.5.5 3	Queenstown Airport Mixed Use Zone	At any point within the zone.	Any time	No limit	P
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Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> • None identified. 	<ul style="list-style-type: none"> • Removes unnecessary activity status. 	<ul style="list-style-type: none"> • Efficient and effective as a permitted activity status is not applicable when the standard will always be met.

Recommended Amendments to (notified) Rule 36.5.5 (redraft) Rule 36.5.4 (Table 2)

36.5.5 4	Shotover Country Special Zone (Activity Areas 2a-2c and 3) Mt Cardrona Station Special Zone	Any point within any site	0800h to 2200h	60 dB $L_{Aeq(15\ min)}$	NC
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(Activity Area 1) Ballantyne Road Special Zone (Activity Area C) <u>Jacks Point Resort Zone (Village Activity Area and EIC Activity Area)</u>	2200h to 0800h	50 dB L _{Aeq(15 min)} 75 dB L _{AFmax}	NC
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Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> None identified. 	<ul style="list-style-type: none"> Provides for appropriate level of noise to be received in the EIC Activity Area, similar to the Village Activity Area, both of which have a commercial component. 	<ul style="list-style-type: none"> Effective as ensures that noise received in the EIC Activity Area is of an acceptable level for the nature of this activity area.

Recommended Amendments to (notified) Rule 36.5.13 (redraft) Rule 36.5.11 (Table 3)					
36.5.43 4211	<p>Helicopters</p> <p>Sound from any helicopter landing area must be measured and assessed in accordance with NZ 6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas.</p> <p>Sound from helicopter landing areas must comply with the limits of acceptability set out in Table 1 of NZS 6807.</p> <p>For the avoidance of doubt this rule does not apply to designated airports.<u>Queenstown Airport and Wanaka Airport.</u></p>	<p>At any point within the notional boundary of any residential unit, other than residential units on the same site as the activity.</p> <p>*Note: The applicable noise limit in this rule and in rule 36.5.14 below for informal airports/landing strips used by a combination of both fixed wing and helicopters shall be determined by an appropriately qualified acoustic engineer on the basis of the dominant aircraft type to be used.</p>	At all times	50 dB L _{dn}	NC

Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> None identified. 	<ul style="list-style-type: none"> Clarifies which airports are excluded. 	<ul style="list-style-type: none"> Efficient and effective as ensures PDP users know what airports are excluded from the rule and avoids informal airports seeking designations in the future and avoiding compliance with the rule.

Recommended Amendments to (notified) Rule 36.5.14 (redraft) Rule 36.5.12 (Table 3)

36.5.44 1312	<p>Fixed Wing Aircraft</p> <p>Sound from airports/landing strips for fixed wing aircraft must be measured and assessed in accordance with NZS 6805:1992 Airport Noise Management and Land Use Planning. For the avoidance of doubt this rule does not apply to designated airports-Queenstown Airport and Wanaka Airport.</p>	<p>At any point within the notional boundary of any residential unit and at any point within a residential site other than residential units on the same site as the activity.</p> <p>*Note: The applicable noise limit in this rule and in rule 36.5.13 above for informal airports/landing strips used by a combination of both fixed wing and helicopters shall be determined by an appropriately qualified acoustic engineer on the basis of the dominant aircraft type to be used.</p>	At all times	55 dB L _{dn}	NC
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Costs	Benefits	Effectiveness & Efficiency
<ul style="list-style-type: none"> • None identified. 	<ul style="list-style-type: none"> • Clarifies which airports are excluded. 	<ul style="list-style-type: none"> • Efficient and effective as ensures PDP users know what airports are excluded from the rule and avoids informal airports seeking designations in the future and avoiding compliance with the rule.

Recommended Amendments to Rule 36.6.3

36.6.3 Ventilation Requirements ~~for the Queenstown and Wanaka Airport (Table 5)~~

The following ~~table sets out~~ applies to the ventilation requirements within:

- ~~(a) the airport Outer Control Boundary (OCB) and Air Noise Boundary (ANB); and~~
- ~~(b) the Wanaka and Queenstown Town Centre Zones, Local Shopping Centre Zone and the Business Mixed Use Zone.~~

Critical Listening Environments must have a ventilation and cooling system designed, constructed and maintained to achieve the following:

i. ~~Ventilation must be provided to A minimum of 0.5 air changes per hour meet clause G4 of the New Zealand Building Code.~~ At the same time, the sound of the system must not exceed 30 dB LAeq(30s) when measured ~~4 2~~ m away from any grille or diffuser.

ii. The occupant must be able to control the ventilation rate in increments up to a high air flow setting that provides at least 6 air changes per hour. At the same time, the sound of the system must not exceed 35 dB LAeq(30s) when measured ~~4 2~~ m away from any grille or diffuser.

iii. The system must provide cooling that is controllable by the occupant and can maintain the temperature at no greater than 25°C and no less than 18°C. At the same time, the sound of the system must not exceed 35 dB LAeq(30s) when measured 1.2 m away from any grille or diffuser.

Costs	Benefits	Effectiveness & Efficiency
<p><i>Reference to Building Code</i></p> <ul style="list-style-type: none"> • Nil <p><i>Amendment to 1m for measurement point</i></p> <ul style="list-style-type: none"> • Using the lower end of the 1-2m range (requiring measurement at 2m) may result in adverse effects as the noise effect may be greater within the 1-2m range. 	<p><i>Reference to Building Code</i></p> <ul style="list-style-type: none"> • Removes reference to the Building Code which is a separate requirement outside the PDP that does not need to be repeated here. Replaced with equivalent standard. <p><i>Amendment to 1m for measurement point</i></p> <ul style="list-style-type: none"> • Removes ambiguity in the notified rule which was 1-2m, provides for 2m which is the upper limit and most likely to be applied in practice. 	<p><i>Reference to Building Code</i></p> <ul style="list-style-type: none"> • Effective as removes reference to a duplicate requirement in the Building Code and replaces with requirement that achieves the same outcome. <p><i>Amendment to 1m for measurement point</i></p> <ul style="list-style-type: none"> • Effective and efficient as provides for the upper limit (2m) as opposed to the lower limit (1m) of the notified rule which provided a range.