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4. DISTRICT WIDE ISSUES

4.9.3 – Objectives and Policies

Objective 7 – Queenstown Airport - Noise Management

Maintain and promote the efficient operation of Queenstown Airport and set appropriate noise limits in order to protect airport operations and to manage the effects of aircraft noise.

Policies

7.1 To ensure appropriate noise boundaries are established and maintained to enable operations at Queenstown Airport to continue and to expand over time.

7.2 To manage the adverse effects of noise from aircraft on any activity sensitive to aircraft noise within the Airport Noise Boundaries whilst at the same time providing for the efficient operation of Queenstown Airport.

Implementation Methods

i District Plan

The identification of noise contours within the District Planning Maps

The inclusion of rules to manage activity sensitive to aircraft noise around the airport.

ii Other Methods

Regular monitoring of aircraft noise to ensure compliance with noise boundaries

Regular monitoring of aircraft noise to determine the actual extent of the Air Noise Boundary (65dBA Ldn contour).

Queenstown Airport funded retrofitting over time of habitable rooms within existing buildings for an activity sensitive to aircraft noise within the Air Noise Boundary and Night-time Noise Boundary (SEL 95 dBA) contour to achieve an appropriate indoor sound level.

Consultation with residents and dissemination of information on the current levels of aircraft noise and future intentions.

Explanation and Principal Reasons for Adoption

Queenstown Airport is a significant asset to the region. It provides a transportation hub for residents, visitors and business travellers and offers both domestic and international scheduled flights. The Airport also facilitates and supports a number of local tourist and aviation related businesses.

The Airport has been established at its current location in Queenstown since 1936. Since then the Airport has faced pressure from urban development. It is essential that

such development is managed in a way that protects the current and future ability of the Airport to operate efficiently. It is also reasonable that noise boundaries are established for aircraft operations at the Airport in order to appropriately mitigate adverse effects on activity sensitive to aircraft noise in the surrounding environment.

Being within the township of Frankton, Queenstown Airport has some existing residential neighbours. It is recognised that the anticipated growth in operations at Queenstown Airport, including limited scheduled flying at night, will necessitate acoustic insulation and ventilation works to some existing, new, altered or extended properties in order to mitigate the effects of air noise.

Queenstown Airport Corporation will undertake regular monitoring to ensure properties are appropriately acoustically insulated as the need occurs.

The noise boundaries are also necessary to ensure new noise sensitive development does not occur in inappropriate locations or in appropriate locations new buildings are designed to achieve an appropriate level of internal acoustic insulation.

Objective 8 – Queenstown Airport – Urban Growth Management

Manage urban growth issues on land in proximity to Queenstown Airport to ensure that the operational capacity and integrity of the Airport is not compromised now or in the future.

Policies

- 8.1 To prohibit all new activity sensitive to aircraft noise within the Rural, Business and Industrial and Frankton Flats A Special Zone located within the Outer Control Boundary at Queenstown Airport.
- 8.2 To ensure that all new activity sensitive to aircraft noise located in the existing Residential zones and Remarkables Park Special Zone within the Queenstown Airport Sound Insulation Boundary are designed and built to achieve an appropriate internal noise environment and are appropriately ventilated.
- 8.3 To discourage plan changes or land use proposals which are promoted or initiated on land within the Outer Control Boundary at Queenstown Airport where these incorporate provisions for activity sensitive to aircraft noise on the basis that such activities have the potential to compromise the ongoing operational efficiency of the Airport.

Implementation Methods

i District Plan

The provision of rules to prohibit or otherwise control activity sensitive to aircraft noise in the Rural, Residential, Industrial, Frankton Flats and Remarkables Park zones.

Where appropriate the provisions of rules, standards and sound insulation and ventilation construction tables to ensure appropriate sound insulation is designed

into new building for any activity sensitive to aircraft noise in the Residential and Remarkables Park zones.

ii Other Methods

Consultation with Queenstown Airport Corporation on any Plan Change or other land use proposal affecting land within the Airport Outer Control Boundary.

Explanation and Principal Reasons for Adoption

Some types of activity on land adjacent to the Airport may give rise to issues of reverse sensitivity. It is essential for the current and future operation of Queenstown Airport that appropriate measures are taken in regard to noise sensitive activity in the vicinity of the Airport to ensure reverse sensitivity issues are avoided. The Airport is a key strategic asset for the district and makes a significant contribution to the district's economic, social and cultural well-being. Appropriate management of land use activities on land around the Airport in order to protect its ongoing function and operation is a critical imperative. Such land use management will also manage the adverse effects on residential amenity, in particular indoor amenity, and community well-being by avoiding unnecessary exposure to higher than desirable levels of aircraft noise.

5. RURAL AREAS

Policies

- 3.6 To require acoustic insulation and mechanical ventilation of buildings containing activities sensitive to aircraft noise located within an airport's Outer Control Boundary.
- 3.7 To prohibit all new activity sensitive to aircraft noise on any rural zoned land within the Outer Control Boundary at Queenstown Airport to avoid adverse effects arising from aircraft operations on future activities sensitive to aircraft noise.
- 3.8 To require acoustic insulation and mechanical ventilation of buildings which are being altered or added to, where the activity contained is sensitive to aircraft noise on land located within the Sound Insulation Boundary of Queenstown Airport.

Implementation Method

- (i) Provision of rules to control subdivision and the provision of controls and performance standards to protect the amenity and environmental quality of the Rural Zones.
- (ii) The provision of rules to prohibit new activity sensitive to aircraft noise within the Outer Control Boundary of Queenstown Airport.
- (iii) The provision of rules and sound insulation construction tables to ensure appropriate acoustic insulation and ventilation is designed into any alterations or additions to activity sensitive to aircraft noise within the Sound Insulation Boundary of Queenstown Airport.
- (iv) The New Zealand Standard 6805: 1992 – "Airport Noise Management and Land Use Planning" will be used as the basis for establishing noise boundaries and

associated rules in the District Plan in relation to controlling noise from airports in the District while also protecting those airports from the reverse sensitivity effects associated with activities which are sensitive to aircraft noise.

Explanation and Principal Reasons for Adoption

The rural environment has particular amenity and environmental values, which are important to rural people. These include privacy, rural outlook, spaciousness, ease of access, clean air, and at times, quietness. However, a wide range of activities occur in the rural areas, including traditional livestock farming and the growing of supplementary crops, as well as more intensive new pastoral and horticultural enterprises. These result in levels of noise, dust, traffic generation and smell that are an integral part of rural amenity values, and which will be noticeable to residents in rural areas. Queenstown Airport is also located such that the effects of aircraft operations are experienced within some parts of the rural environment. Provided that these effects do not constitute a general nuisance or health risk, the Council considers they should be accepted as anticipated components of rural amenity values; however the potential for conflicts between such amenity values and the expectations of rural residents should be avoided, as far as possible.

Objective 7

Retention of a greenfields area or an area for Airport related activities or where appropriate an area for activities not sensitive to aircraft noise, within an airport's Outer Control Boundary to act as a buffer between airports and other land use activities.

Policy

- 7.1 *To retain a greenfields area within the Outer Control Boundary of airports in order to provide a buffer, particularly for safety and noise measures, between the airport and other activities.*
- 7.2 To prohibit the location of any new activity sensitive to aircraft noise on land within the Outer Control Boundary around Queenstown Airport.
- 7.3 To discourage plan changes or land use proposals which are promoted or initiated on land within the Outer Control Boundary at Queenstown Airport where these incorporate provision for activity sensitive to aircraft noise on the basis that such activities have the potential to compromise the ongoing operational efficiency of the Airport.
- 7.4 To require acoustic insulation and mechanical ventilation of buildings that contain any new activity sensitive to aircraft noise or where an existing building is being altered or added to on land within the Sound Insulation Boundary of Queenstown Airport.

Implementation Methods

Objective 7 and associated policies will be implemented through a number of methods including:

i District Plan

- (a) Zoning undeveloped areas within the Outer Control Boundary of airports as Rural where this is practicable.
- (b) Provision of zone rules ~~restricting~~ prohibiting any activity sensitive to aircraft noise within the Outer Control Boundary in the Rural Zone of Queenstown Airport.
- (c) Provision of zone rules to ensure that the airport and neighbouring land use activities do not adversely affect each other.
- (d) Identification of an Outer Control Boundary.
- (e) Identification of a Sound Insulation Boundary, a Night-time Noise Boundary and an Air Noise Boundary on the District Plan Maps for Queenstown Airport.

Rural Areas – Rules

5.3.1 Zone Purpose

5.3.1.1 Rural General Zone

The purpose of the Rural General Zone is to manage activities so they can be carried out in a way that:

- protects and enhances nature conservation and landscape values;
- sustains the life supporting capacity of the soil and vegetation;
- maintains acceptable living and working conditions and amenity for residents of and visitors to the Zone;
- protects the on-going operations of Queenstown Airport

5.3.3.2 Controlled Activities

5.3.3.2vi Additions and Alterations to Buildings (excluding any non-critical listening environment) within the Outer Control Boundary, Sound Insulation Boundary - Queenstown Airport

Any alteration or addition to a building or part of a building to be used for ~~residential activities, visitor accommodation or community activities~~ an activity sensitive to aircraft noise on any site located within the Sound Insulation Boundary (including the Air Noise Boundary and the Night-time Noise Boundary) as indicated on the District Plan Maps in respect of the design, construction, orientation and location of the building to achieve adequate indoor sound insulation in respect of design and construction to achieve the sound insulation requirements specified in rule 5.3.5.2vii.

5.3.3.5 Prohibited Activities

5.3.3.5 iii Activities within the Outer Control Boundary– Queenstown Airport

On any site located within the Outer Control Boundary, which includes the Sound Insulation Boundary, the Night-time Noise Boundary and the Air Noise Boundary, as indicated on the District Plan Maps, any new ~~residential activities, visitor accommodation or community~~ activity sensitive to aircraft noise shall be a Prohibited Activity.

5.3.5.2 Zone Standards

5.3.5.2vii Airport Noise – Alteration or addition to existing buildings (excluding any non-critical listening environment) within the ~~Outer Control Boundary– Queenstown Airport Noise Boundaries~~

- ~~(a) On any site located within the Outer Control Boundary as indicated on the District Plan Maps any alteration or addition to a building or part of a building to be used for residential activities, visitor accommodation or community activities shall be designed and constructed from aircraft noise so as to meet and indoor design sound level of 40dBA Ldn based on an external noise level determined by the District Plan Maps, except for non-critical listening environments where no special sound insulation is required.~~
- ~~(b) This control shall be met in either of the following two ways:~~
- ~~EITHER~~
- ~~(i) By providing a certificate from a recognized acoustic engineer stating that the proposed construction will achieve the internal design noise level.~~
- ~~OR~~
- ~~(ii) The buildings shall be constructed and finished in accordance with the provisions of Table 1 in part 5.3.5.2.~~

- (a) Within the Night-time Noise Boundary (NNB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Night-time Noise Boundary shall be fitted with sound insulation as shown in Table 1 of Appendix 13 and ventilation requirements as shown in Table 3 of Appendix 13.**
- (b) Within the Air Noise Boundary (ANB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Air Noise Boundary shall be fitted with sound insulation as shown in Table 2 of Appendix 13 and shall be constructed to meet ventilation requirements as shown in Table 3 of Appendix 13.**
- (c) Within the Sound Insulation Boundary (SIB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Sound Insulation Boundary shall be fitted with ventilation requirements as shown in Table 3 of Appendix 13.**
- (d) Where construction alternatives to those listed in Tables 1 and 2 of Appendix 13 are proposed to be used, a certificate from a recognised and suitably qualified acoustic engineer stating that the proposed construction will achieve the internal design noise level shall be provided to Council.**
- (e) Where a ventilation system (or systems) is required by this rule, noise from such a system shall not exceed 35 dBA L_{eq} on High Setting and 30 dBA L_{eq} on Low Setting (Table 3 of Appendix 13). Noise levels shall be measured a minimum of 1m from any diffuser.**

5.4.2 Assessment Matters

5.4.2.3ix Controlled Activity – Addition or alteration to Buildings within the Sound Insulation Boundary – Queenstown Airport and Buildings within the Outer Control Boundary – Wanaka Airport

Conditions may be imposed to ensure the design, construction, orientation and location of buildings for residential activities, visitor accommodation or community activities within Wanaka Airport's Outer Control Boundary, or the alteration or addition to an existing building or part of a building used for an activity sensitive to aircraft noise ~~noise sensitive activities visitor accommodation or community activities~~ within Queenstown Airport's Sound Insulation Boundary, Night-time Noise Boundary and Air Noise Boundary is such to ensure the indoor design sound levels (Wanaka) or indoor sound insulation levels and mechanical ventilation (Queenstown) specified in Zone Standards 5.3.5.2(vii) and (x) are met.

6. QUEENSTOWN AIRPORT MIXED-USE ZONE – RULES

6.2.3.5 Prohibited Activities

6.2.3.5 Prohibited Activities

The following shall be **prohibited**:

- i. Forestry Activities
- ii. Visitor Accommodation
- iii. ~~Residential Activities~~ Activity Sensitive to Aircraft Noise
- iv. Commercial Recreation Activity
- v. ~~Community Activities~~
- ~~vi~~ Farming
- ~~vii~~ Factory Farming
- ~~viii~~ Mining Activities
- ~~ix~~ Any activity requiring an Offensive Trade Licence under the Health Act 1956
- xix Residential Flat

7. RESIDENTIAL AREAS

7.1.2 Objective 3 Policy Framework

Objective 3

Pleasant living environments within which adverse effects are minimised while still providing the opportunity for individual and community needs.

Policies

- 3.10 To require acoustic insulation and mechanical ventilation of any activity sensitive to aircraft noise ~~buildings~~ within the Queenstown Airport Outer Control Boundary Sound Insulation Boundary, Night-time Noise Boundary and Air Noise Boundary ~~that contain critical listening environments.~~

Implementation Methods

(i) District Plan

- (f) Rules to require acoustic insulation and mechanical ventilation of buildings that contain any new activity sensitive to aircraft noise or where an existing building is being altered or added to on land within the Sound Insulation Boundary.

(g) Notification through Land Information Memorandum of the requirement to sound insulate new or alterations or additions to buildings containing noise sensitive activities within the Sound Insulation Boundary.

(h) Queenstown Airport funded retrofitting over time of habitable rooms within existing buildings for an activity sensitive to aircraft noise within the Air Noise Boundary and Night-time Noise Boundary (SEL 95 dBA) contour to achieve an appropriate indoor sound level.

Explanation and Principal Reasons for Adoption

...

...

The residential areas are sensitive noise environments and this is a major factor which must be taken into account when considering the impact of other activities. Noise in a residential area is likely to result from non-residential activities and as such the plan includes provisions setting noise standards for non-residential activities in the residential zones. Noise from normal residential living, including animals and social events will be controlled through the excessive noise provisions of the Act. Noise from Queenstown Airport will be managed in line with the Airport Noise Designation to contain noise levels to the Noise Boundaries set out in the District Planning Maps. Acoustic insulation and mechanical ventilation requirements will help to maintain the indoor amenity for any building used for an activity sensitive to aircraft noise in the Residential Zone.

7.2 Queenstown Residential Areas

Sunshine Bay-Fernhill, Queenstown Bay, Frankton Road, Frankton and Kelvin Peninsula.

7.2.2 Issues

- Protection of airport operations from noise sensitive activities from any activity sensitive to aircraft noise within the Outer Control Boundary, Sound Insulation Boundary, Night-time Noise Boundary and Air Noise Boundary.

7.2.3 Objectives and Policies – Queenstown Residential Areas

9. To require acoustic insulation and mechanical ventilation of buildings that contain any new activity sensitive to aircraft noise or where an existing building is being altered or added to on land within the Sound Insulation Boundary.

Implementation Methods

The objectives and policies will be implemented through:

(i) District Plan

- a. To enable a broad range of residential areas.
- b. Rules to require acoustic insulation and mechanical ventilation of buildings that contain any new activity sensitive to aircraft noise or where an existing building is being altered or added to on land within the Sound Insulation Boundary.

(ii) Other Methods

- a. A requirement within the Aerodrome designation for Queenstown Airport Corporation to prepare and implement a noise mitigation plan in consultation with affected property owners within the ANB and NNB.

Explanation and Principal Reasons for Adoption

The policies reinforce the District wide objectives for residential activity of consolidation and enhancement of residential amenity values. In addition the policies seek to maintain the general character of the majority of the existing residential environment which will provide a degree of certainty and security for residents by limiting changes to the scale, density and type of activity in the residential area. This policy recognises the importance of the living environment to the social well-being of the residents. The policy relating to sound insulation from the noise effects of aircraft using Queenstown airport seeks to manage the adverse effects on the health and well-being of the residential community around the Airport as far as practicable.

7.5.5.2 Zone Standards – Residential Activities and Visitor Accommodation in the High Density Residential Zone.

7.5.5.2v Airport Noise – Queenstown Airport (excluding any non-critical listening environment)

(Delete entire rule and replace with the following)

- (a) Within the Night-time Noise Boundary (NNB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Night-time Noise Boundary shall be fitted with sound insulation as shown in Table 1 of Appendix 13 and ventilation requirements as shown in Table 3 of Appendix 13.
- (b) Within the Air Noise Boundary (ANB) – Any new activity sensitive to aircraft noise or alterations or additions to an existing activity sensitive to aircraft noise located within the Air Noise Boundary shall be fitted with sound insulation as shown in Table 2 of Appendix 13 and shall be constructed to meet ventilation requirements as shown in Table 3 of Appendix 13.
- (c) Within the Sound Insulation Boundary (SIB) – Any new activity sensitive to aircraft noise or alterations or additions to an existing activity sensitive to aircraft noise located within the Sound Insulation Boundary shall be fitted with ventilation requirements as shown in Table 3 of Appendix 13.
- (d) Where construction alternatives to those listed in Tables 1 and 2 of Appendix 13 are proposed to be used, a certificate from a recognised and suitably qualified acoustic engineer stating that the proposed construction will achieve the internal design noise level shall be provided to Council.
- (e) Where a ventilation system (or systems) is required by this rule, noise from such a system shall not exceed 35 dBA L_{eq} on High Setting and 30 dBA L_{eq} on Low Setting (Table 3 of Appendix 13). Noise levels shall be measured at a minimum of 1m from any diffuser.

7.5.6.2 Zone Standards – Non Residential Activities (other than Visitor Accommodation in the High Density Residential Zone)

7.5.6.2viii Airport Noise – Queenstown Airport (Excluding any non-critical listening environment)

(delete entire rule and replace with the following:)

- (a) **Within the Night-time Noise Boundary (NNB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Night-time Noise Boundary shall be fitted with sound insulation as shown in Table 1 of Appendix 13 and ventilation requirements as shown in Table 3 of Appendix 13.**
- (b) **Within the Air Noise Boundary (ANB) – Any new activity sensitive to aircraft noise or alterations or additions to an existing activity sensitive to aircraft noise located within the Air Noise Boundary shall be fitted with sound insulation as shown in Table 2 of Appendix 13 and shall be constructed to meet ventilation requirements as shown in Table 3 of Appendix 13.**
- (c) **Within the Sound Insulation Boundary (SIB) – Any new activity sensitive to aircraft noise or alterations or additions to an existing activity sensitive to aircraft noise located within the Sound Insulation Boundary shall be fitted with ventilation requirements as shown in Table 3 of Appendix 13.**
- (d) Where construction alternatives to those listed in Tables 1 and 2 of Appendix 13 are proposed to be used, a certificate from a recognised and suitably qualified acoustic engineer stating that the proposed construction will achieve the internal design noise level shall be provided to Council.
- (e) Where a ventilation system (or systems) is required by this rule, noise from such a system shall not exceed 35 dBA L_{eq} , on High Setting and 30 dBA L_{eq} , on Low Setting (Table 3 of Appendix 13). Noise levels shall be measured at least 1m away from any diffuser.

7.7 Resource Consents – Assessment Matters Residential Zones

7.7.1(iii) Controlled Activity – Buildings for Non-residential Activities

- (e) Sound insulation and mechanical ventilation in relation to aircraft noise at Queenstown Airport for buildings containing activity sensitive to aircraft noise.

11. BUSINESS AND INDUSTRIAL AREAS

11.3.3.2 Controlled Activities

11.3.3.2iii Additions and Alterations to Buildings (excluding any non-critical listening environment) within the Outer Control Boundary Sound Insulation Boundary – Queenstown Airport

Any alteration or addition to an existing building or part of the building to be used for residential activities, visitor accommodation or community activities an activity sensitive to aircraft noise on any site located within the Outer Control Boundary Sound Insulation Boundary as indicated on the District Plan Maps, in respect of the design, construction, orientation and location of the building to achieve adequate indoor sounds insulation and mechanical ventilation in terms of ~~from~~ aircraft noise.

11.3.3.5 Prohibited Activities

11.3.3.5i Activities within the Outer Control Boundary – Queenstown Airport

On any site located within the Outer Control Boundary as indicated on the District Plan Maps, any new Residential Activities, Visitor Accommodation or Community Activities activity sensitive to aircraft noise shall be a Prohibited Activity.

11.3.5.2 Zone Standards

11.3.5.2 iii Queenstown Airport – excluding any non-critical listening environment

(Delete entire rule and replace with:)

- (a) Within the Night-time Noise Boundary (NNB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Night-time Noise Boundary shall be fitted with sound insulation as shown in Table 1 of Appendix 13 and ventilation requirements as shown in Table 3 of Appendix 13.
- (b) Within the Air Noise Boundary (ANB) - Alterations and Additions to existing buildings for an activity sensitive to aircraft noise located within the Air Noise Boundary shall be fitted with sound insulation as shown in Table 2 of Appendix 13 and shall be constructed to meet ventilation requirements as shown in Table 3 of Appendix 13.
- (c) Within the Sound Insulation Boundary (SIB) - Alterations and Additions to existing buildings for an activity sensitive to aircraft noise located within the Sound Insulation Boundary shall be fitted with ventilation requirements as shown in Table 3 of Appendix 13.
- (d) Where construction alternatives to those listed in Tables 1 and 2 of Appendix 13 are proposed to be used, a certificate from a recognised and suitably qualified acoustic engineer stating that the proposed construction will achieve the internal design noise level shall be provided to Council.
- (e) Where a ventilation system (or systems) is required by this rule, noise from such a system shall not exceed 35 dBA L_{eq} on High Setting and 30 dBA L_{eq} on Low Setting (Table 3 of Appendix 13). Noise levels shall be measured at a minimum of 1m from any diffuser.

11.4.2 Assessment Matters

11.4.2x Controlled Activity – Addition or Alteration to Buildings within the ~~Outer Control Boundary~~ Sound Insulation Boundary– Queenstown Airport

Conditions may be imposed to ensure the design, construction, orientation and location of all alterations to an existing building or part of a building used for ~~residential activities, visitor accommodation or community activities~~ an activity sensitive to aircraft noise within Queenstown Airport's Sound Insulation Boundary ~~Outer Control Boundary~~ is such to ensure the indoor design sound levels specified in Zone Standard 11.3.5.2(iii) are met.

12. REMARKABLES PARK ZONE

12.10.3 Objectives and Policies

Objective 1

Implementation Methods

i. District Plan

- a. ...
- b. ...

- c. *Notification through Land Information Memorandum of the restrictions on properties ~~between~~ within the Sound Insulation Boundary 58 and 60dBA Ldn contours.*
- d. *Inclusion of noise control and noise attenuation standards.*
- e. *Noise contours identified in the District Plan Maps*

12.10.4 Environmental Results Anticipated

- *Recognition of the Queenstown Airport operational requirements and buffering between the Airport and the development areas of the RPZ.*

12.11.5.2 Zone Standards

12.11.5.2iv Airport Measures – Queenstown Airport – (excluding any non-critical listening environment)

- (a) ~~On any site within the grey hatched or the grey shaded area on Figure 2 – “Airport Measures”, any building, or any alteration to a building or part of a building to be used for residential activities, visitor accommodation or community activities any activity sensitive to aircraft noise shall be constructed in accordance with the following: acoustically insulated from aircraft noise so as to achieve an indoor design sound level of 40dBA L_dn, except for non-critical listening environments where no special sound insulation is required.~~
- (b) ~~This control shall be met in either of the following two ways:~~
- (a) **Within the Night-time Noise Boundary (NNB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise located within the Night-time Noise Boundary shall be fitted with sound insulation as shown in Table 1 of Appendix 13.**
- (b) **Within the Air Noise Boundary (ANB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise (ASAN) located within the Air Noise Boundary shall be fitted with sound insulation as shown in Table 2 of Appendix 13 and shall be constructed to meet ventilation requirements as shown in Table 3 of Appendix 13.**
- (c) **Within the Sound Insulation Boundary (SIB) - Alterations and Additions to existing buildings containing an activity sensitive to aircraft noise (ASAN) located within the Sound Insulation Boundary shall be fitted with ventilation requirements as shown in Table 3 of Appendix 13.**
- (d) Where construction alternatives to those listed in Tables 1 and 2 of Appendix 13 are proposed to be used, a certificate from a recognised and suitably qualified acoustic engineer stating that the proposed construction will achieve the internal design noise level shall be provided to Council.
- (e) Where a ventilation system (or systems) is required by this rule, noise from such a system shall not exceed 35 dBA L_{eq} on High Setting and 30 dBA L_{eq} on Low Setting (Table 3 of Appendix 13). Noise levels shall be measured at least 1m away from any diffuser.

12. FRANKTON FLATS

12.18.3.5 Prohibited Activities

- (iv) **Activities sensitive to aircraft noise within the Outer Control Boundary or Sound Insulation Boundary – Queenstown Airport**
On any site located on land within the Outer Control Boundary or Sound Insulation Boundary, as indicated on the District Plan Maps, any activity sensitive to aircraft noise shall be a Prohibited Activity.

12.18.5.2 Zone Standards

12.18.5.2iii Air Noise – Queenstown Airport

~~On any site located within the Outer Control Boundary as indicated on the District Plan Maps any building or part of a building to be used for any activity specified below shall be insulated from aircraft noise so as to meet the indoor design noise levels specified for the particular activity:~~

Activities	Design Noise Levels	
	L _{max} dBA	L _d n dBA
Visitors Accommodation	55	40

<i>Community Activity (indoor)</i>	<i>55</i>	<i>40</i>
<i>Offices</i>	<i>65</i>	<i>50</i>
<i>Commercial Activity (indoor)</i>		
<i>excluding offices</i>	<i>75</i>	<i>60</i>
<i>Service Activities</i>	<i>75</i>	<i>60</i>
<i>Recreational Activities</i>	<i>75</i>	<i>60</i>
<i>Educational Activities</i>	<i>55</i>	<i>40</i>
<i>Residential</i>	<i>55</i>	<i>40</i>

DEFINITIONS

Air Noise Boundary Queenstown (ANB) – means a boundary as shown in District Plan Map 31A, the location of which is based on the predicted day/night sound level of L_{dn} 65 dBA from future airport operations.

Night Noise Boundary Queenstown (NNB) – means a boundary as shown in District Plan Map 31A, the location of which is based on the sound exposure level (SEL) 95 dBA contour for the arrival of a Boeing 737-800 and Airbus A320 or equivalents, adjusted for reverse thrust as used at Queenstown Airport.

Sound Insulation Boundary (SIB) – means a boundary as shown in District Plan Map 31A, the location of which is based on the predicted day/night sound level of L_{dn} 58 dBA from future airport operations.

Outer Control Boundary Queenstown (OCB) - means a boundary as shown in District Plan Map 31A, the location of which is based on the predicted day/night sound level of L_{dn} 55 dBA from future airport operations.

Annual Airport Noise Contours (AANC) Queenstown – means the Annual Airport Noise Contours calculated using the Integrated Noise Model (INM) developed by the US Federal Aviation Authority and a record of the actual aircraft movements recorded over the past year. The same version of the INM and the same methodology as used for the District Plan contours shall be used for the AANC. The version used for the District Plan noise control boundaries is INM v7a.

Activity Sensitive to Aircraft Noise (ASAN) – means any Residential Activity, Visitor Accommodation, Community Activity and Day Care Facility including all outdoor spaces associated with any education facility but excludes police stations, fire stations, courthouses, probation and detention centres, government and local government offices.

Aircraft Operations – includes the operation of aircraft during landing, take-off and taxiing but excludes:

- aircraft operating in an emergency;
- aircraft using the Airport as a planned alternative to landing at a scheduled airport;
- military aircraft movements;
- Airshows
engine testing refer to designation 2

AF1.1 Proposed Sound Insulation Construction Tables

Table 1: Sound Insulation Requirements – Acceptable Constructions.

<i>Building Element</i>	<i>Minimum Construction</i>		
<i>External Walls</i>	<i>Exterior Lining:</i>	Brick or concrete block or concrete, or 20mm timber or 6mm fibre cement	
	<i>Insulation:</i>	75mm thermal insulation blanket/batts	
	<i>Frame:</i>	Two layers of 9mm gypsum or plasterboard (or an equivalent combination of exterior and interior wall mass)	
<i>Windows/Glazed Doors</i>	6mm glazing with effective compression seals or for double glazing 8mm-12mm airgap-6mm		
<i>Pitched Roof</i>	<i>Cladding:</i>	0.5mm profiled steel or masonry tiles or 6mm corrugated fibre cement	
	<i>Insulation:</i>	100mm thermal insulation blanket/batts	
	<i>Ceiling:</i>	2 layers 9mm gypsum or plaster board	
<i>Skillion Roof</i>	<i>Skillion Roof Option 1</i>	<i>Skillion Roof Option 2</i>	
	<i>Cladding:</i>	0.5mm profiled steel or 6mm fibre cement	0.5mm profiled steel or 6mm fibre cement
	<i>Sarking:</i>	20mm particle board or plywood	None Required
	<i>Insulation:</i>	100mm thermal insulation blanket/batts	100mm thermal insulation blanket/batts
	<i>Ceiling:</i>	1 layer 9mm gypsum or plasterboard	2 layers 9mm gypsum or plaster board
<i>External Door</i>	Solid core door (min 24kg/m ²) with weather seals		

Note: The specified constructions in this table are the minimum required to meet the acoustic standards. 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

Table 2: Sound Insulation Requirements – Acceptable Constructions.

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

Note: The specified constructions in this table are the minimum required to meet the acoustic standards. 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.

Table 3: Ventilation Requirement

<i>Room Type</i>	<i>Outdoor Air Ventilation Rate (Air Changes per Hour)</i>	
	<i>Low Setting *</i>	<i>High Setting *</i>
<i>Principle living areas</i>	<i>1-2 ac/hr</i>	<i>Min. 15 ac/hr</i>
<i>Other habitable areas</i>	<i>1.2 ac/hr</i>	<i>Min. 5 ac/hr</i>

* 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 degC 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.