

Submitter 211.

Queenstown Lakes Proposed District Plan: Rural Zone: Informal Airports.

Further Submission of the Aircraft Owners and Pilots Association of New Zealand.

1. My full name is Robin Vance Boyd. I am a local member of the AOPA (NZ) . I am a qualified commercial pilot. For the past 15 years I have been flying for private and recreational purposes.
2. I have been asked by the President to represent the association at this hearing.
3. The panel will be aware from our previous submission, which I am familiar with, that the panel represents the interests of private, recreational and private business aviators, not the hire and reward sector.
4. I note that the majority of submissions received relating to the proposals for informal airports were from this sector.
5. We fully support the Proposed Policy objectives outlined in the attached S32 Evaluation Report. These can be summarised as saying that rules can be improved to reduce the amount of resource consents required to land in rural locations, without these activities becoming a nuisance to people.
6. The original proposal provided for informal airports to be allowed subject to a 500m setback from roads and notional building platform boundaries, subject to a maximum of three flights (take off and landings) per week.
7. We note that Mr Barr, in his S42a Hearing Report concedes that a 500m setback from roads is unnecessary and we support this view.
8. We consider the proposed 500m setback from the notional boundary of a neighbouring building platform to be unjustified and excessive to the point that such a condition would simply frustrate the stated objective for no benefit. Depending on the location of building platforms up to 100 hectares of land would be required to comply. Land parcels of this size are rare in the Wakatipu and Wanaka basins apart from farms and aircraft activities ancillary to farming are catered for.
9. We accept the noise calculations contained in Dr Stephen Chiles 2012 report to council and in Dr Chiles evidence of 6 April 2016 but not the interpretation placed upon them in the S42a report. We note that Dr Chiles politely states that the proposed setback distances are "cautious" and "conservative".
10. It seems to be common ground that aircraft noise at a neighbouring building platform should not exceed 50 dBA Ldn (a 24 hr "noise bucket") although we note that noise levels from roads exceed this in many places.
11. The chart included in Dr Chiles report and evidence shows that if one flight per day (one take off and one landing) is undertaken with an average helicopter then the setback distance need be only about 100m and at two flights per day 200m and that is only in one direction. He comments on this on page 4 of his report. Although there are slight differences Dr Chile's findings are broadly similar to those contained within the reports of other noise experts. Council's report to the Commissioner hearing an application by the Helicopter Line contained a table prepared by Mr V.C. Goodwin of Environmental Noise Analysis and Advice Service designed to quickly allow setback distances to be known for a number of daily and weekly flights. For example this chart shows that for 5 daily flight movements a setback of 100m will achieve the 50 dB Ldn requirement rising to 300m for 216 daily and 1512 weekly movements. Looking at it another way a report prepared by Malcolm Hunt Associates in support of an application for an informal airport by Mr Bill Day found that at a house 357m away 2.28 movements per day or 16 per week produced an average daily noise level of 28 dBA Ldn while 16 movements (very excessive) on a single day still only produced 38 db at the same property. These findings were relative to a noisy type of twin engine helicopter.

12. We think that the outcomes of applications for informal airport consents may be of some help in determining what thresholds could be applied to achieve the stated objective. I have referred to the noise report for Mr Day's application. That application was granted. An application for a heliport (informal airport) at Gibbston Valley Lodge was considered in 2006 by Commissioners. Consideration was given to the 50 dBA Ldn requirement and the application granted, with conditions, for twenty flights per week with a maximum of eight per day. In 2013 Commissioners heard an application by D Storer for an informal airport. Evidence in that application was that at a neighbouring dwelling notional boundary noise levels would be in the order of 54dB LAeq (a more stringent 15 min noise bucket). They considered the effects of this to be no more than minor and granted eight movements per week with a maximum of 4 per day and two on public holidays.
13. While it is impossible and improper to predict the outcome of resource consent applications the inference to be taken from these and other unreported decisions is that as long as the 50 dBA Ldn requirement can be met it is likely that approval will be given. We suggest therefore that it would be reasonable to reduce the set back distances proposed.
14. What are we asking for? Most recreational and private pilots simply want the right to operate from their own properties or to visit friends. Movements tend not to be frequent or constant. Members are community people and have no wish to annoy or upset neighbours and try to select safe flight paths that achieve this objective. We consider that two movements per day with a setback of 100m would be reasonable with a limit of 10 per week. The expert noise evidence suggests that these limits should easily satisfy the 50 dBA Ldn requirement, achieve a significant reduction (over what is proposed) in consent applications and allow owners and pilots some freedom without annoying others.
15. I am aware of possible concerns about hours of operation. Most recreational and private pilots are not licensed for night operations and are restricted by CAA to daylight operations.

Vance Boyd

18 May 2016.

The measurements in the report produced by Mr Goodwin for the purposes of monitoring RM910025, shows measurements at the closest notional boundary. It is noted that a noise mitigation fence has recently been placed between the landing site and this notional boundary. The noise levels momentarily rise to between 80 and just below 90 dBA when a helicopter is landing. During the idling period the noise sits at 60-65dBA and at take off it momentarily rises again to between 80 and 90

Time period	Maximum number of flight movements ^{note 1}									
Daily limit ^{note 2}	2	5	9	14	22	34	55	86	138	216
Maximum on any one of 7 days ^{note 3}	4	10	18	27	43	69	109	173	276	432
7 day week total ^{note 4}	14	37	63	95	152	241	382	605	968	1512
Distance ^{note 5}	80m	100m	120m	140m	160m	180m	200m	225m	250m	300m

Instructions Select the relevant row for a given weekly total helicopter movement number, or a daily movement number, and look up the distance in metres in the table which is equal to or is the next highest value for the maximum number of flight movements found in the relevant row.

For example, for a 7 day weekly total of 100 movements, select the "7 day week total" row and find the value in that row which is equal to or closest above 100. The nearest value is "152" and the corresponding distance is 160m. Therefore if the helipad is greater than 160 metres from the notional boundary of the nearest house on another site, it will probably not exceed the 50 dB L_{DN} daily limit. Distances and movement numbers can be interpolated in this rough guide.

dBA. All the idling periods measured were shorter than 10 minutes, and mostly shorter than five minutes. The peaks are of short duration, of the order of 30 seconds. Dr Chiles states in his report that the monitoring undertaken by him at the site is consistent with Mr Goodwin's measurements of May 2008. The graph of measurements taken by Mr Goodwin is included here as Figure 8.1. The complete reports are attached as Appendix E.

The Gantley's staff accommodation notional boundary represents the next closest notional and is in the opposite direction, meaning the new noise fencing is not located between this dwelling and the landing site. Measurements here show peaks at landing times of between 80 and 85 dBA. Idling is recorded at between 60 and 67 dBA and taking off shows peaks of between 75 and 90 dBA.

Considering that at over 65 dBA conversation will be completely drowned out, and at over 55 dBA normal conversation is substantially affected, it must be concluded that at both these dwellings every landing and take off will drown out conversation. Even during the idling period it is likely that a normal conversation will not be possible. Assuming that the applicant will volunteer a condition restricting the number of take offs and landings to four a day (two take offs and two landings), the effect to be assessed is of conversation being drowned out for two periods of around 5 minutes each, every day.

It has not been established how many more dwellings will experience this effect.

8.1.3 Number of Flights

Permitted Baseline

The effect established above needs to be balanced against the permitted baseline to determine the extent of the increase of the adverse effects.

The permitted baseline here must consist of the noise restrictions for the zone, which are detailed in Zone Standard 12.4.5.2 (iii) whereby non-residential activities are to be conducted so that the following noise limits are not exceeded:

Daytime 0800 – 2000 hours 50dBA L10
 Night time 2000 – 0800 hours 40 dBA L10 and 70 dBA Lmax

As discussed above, it appears that the measuring of helicopter noise is a different science than the measuring of "normal residential noise". This is supported to the extent that the New Zealand Standards promote separate standards for the measuring of helicopter noise. Although this implies there is a permitted level of noise, the comparison of this accepted level with helicopter noise is not

2-28 movements per day = 16 per week
 16 movements on single day!

Table D summarises the predicted results and provides a comparison with NZS6807 limits of acceptability for each of the dwellings for which affected party's approvals have not been obtained.

At Notional Boundary.....	Predicted	Predicted	NZS 6807 Limit of Acceptability L _{dn} dBA	COMPLY WITH NZS 6807 Limits of Acceptability?
	L _{dn} dBA	L _{dn} dBA		
	Scenario A:	Scenario B:		
	7 DAY AVERAGE	SINGLE DAY WORST CASE		
1 Dwelling to West 130 m	22 dB	31 dB	50 dB	YES
12. Benfiddich Estate Limited 357	28 dB	38 dB	50 dB	YES
13. Benfiddich Estate Limited 385	27 dB	37 dB	50 dB	YES
14. Michael Spackman 452	27 dB	37 dB	50 dB	YES
15. Matthew & Lisa Scott 478	26 dB	36 dB	50 dB	YES
16. Dupont Family Trust 475	25 dB	35 dB	50 dB	YES
18. Raylene Jelley - western boundary 725	22 dB	32 dB	50 dB	YES
19. Alan and Andrea Monro, Gavin Prebble 717	20 dB	30 dB	50 dB	YES

Table D: Predicted noise levels at closest dwellings [L_{dn} dB] compared to NZS 6807 limits of acceptability.

L_AF_{max} noise limits of NZS6807:1994 do not apply to this application as no movements are proposed between 8.00am to 8.00pm.

5.2 Predicted L_{Aeq} [15 min]

Although helicopter noise is not usually assessed in this manner, the District Plan sets out as an assessment matter for airports in the rural zone that assessment should be in accordance with NZS 6807:1994 "excluding the levels contained in Table 1 of Section 4.2.2 to the intent that the levels specified in Table 1 do not override the noise limits specified in Rule 5.3.5.2.v[a]".

As explained above at Section 3.2.2, for completeness we have assessed compliance of projected maximum helicopter noise in terms of L_{Aeq}[15 min] dB at the following locations where affected party approvals have not been obtained;

- A At the notional boundary to dwellings in the Rural Zone; and
- B On all parts of the site[s] anywhere on Rural Lifestyle zone

In order to calculate a meaningful maximum L_{Aeq}[15 min] We have adopted methods based on ISO9613-Part 2 which are consistent with the recommendations of Appendix B of NZS6801:2008. The method predicts equivalent A-weighted sound levels at distance from a source under meteorological conditions favourable to the propagation of sound. The distance is based on the shortest distance to the flight tracks or the helipad itself, which is the lesser.

The source helicopter sound levels are based on compliance with ICAO ANNEX 16 Chapter 8 helicopter noise limits which are assessed at a reference distance of 157 metres from the flight path, this level being then further adjusted depending upon the location of the receiver location. The design helicopter is marketed as fully compliant with ICAO ANNEX 16 Chapter 8 noise limits for helicopters.

The predictions are for an expected maximum use of the helipad which is ONE arrival plus ONE departure per 15 minutes.

Table E below sets out the calculated L_{Aeq}[15 min] level for the 20 metre notional boundary to dwellings in the area for which affected party's approvals have not been obtained [location of dwellings is shown in Figure 3 above]. Dwellings located at greater distances to the landing pad will receive lower levels of noise.