

**UNDER** the Resource Management Act 1991 ("**RMA**")

**AND**

**IN THE MATTER OF** an application for resource consent to subdivide land at 60 Otatara Road and 190 Dunns Road, Otatara, Invercargill

## **STATEMENT OF THE ISSUES AND FACTS REGARDING AIRCRAFT NOISE**

### **INTRODUCTION**

1. The experts confirm they have read the Environment Court Consolidated Practice Note 2014 Code of Conduct and agree to abide by it. In particular, they have read the Environment Court Consolidated Practice Note 2014 in respect of Expert Witness Conferencing (section 7) and Alternative Dispute Resolution (section 5) and agree to abide by it.
2. The Commissioner for the hearing for this resource consent has asked the applicant's acoustic expert (Mr Jon Styles) and the submitter's acoustic expert (Mr Stephen Peakall) to identify the issues and facts regarding aircraft noise impacts on the proposed subdivision and to set out the matters of agreement and disagreement.
3. The facts and issues considered in this statement with recorded areas of agreement and disagreements between the experts, are:
  - (a) The New Zealand standard (NZS6805) for land use planning around airports.**

For ease of reference, we provide a summary of the intent of NZS 6805 noise boundaries.

NZS 6805 aims to establish compatible land use planning around an airport and to set noise limits for the management of aircraft noise. To achieve these objectives, NZS 6805 recommends:

- i) An Air Noise Boundary (ANB - based on the 65 dB  $L_{dn}$  future noise contour);
- ii) An Outer Control Boundary (OCB - based on the 55 dB  $L_{dn}$  future noise contour).

These boundaries have been implemented in the ICDP.

Clause 1.4.3.6 of NZS 6805 states that *“For smaller airports or airports with infrequent or irregular daily usage patterns, planning on the basis of sound exposure contours may not provide an adequate area around the airport to avoid sleep disturbance”*. Mr Peakall advises that an SESEB (based on the 95 dB  $L_{AE}$  contour (from the likely loudest night-time event)) has been implemented in Invercargill in response to this clause.

**(b) Does the proposal comply with the relevant noise-related rules of the ICDP?**

We agree that Appendix 15 of the ICDP sets out the relevant standards for insulation of dwellings from aircraft noise. In summary, Appendix 15 requires that:

- i) Dwellings between the OCB and the SESEB need to be provided with a ventilation system so that windows and doors can remain closed. This allows an appropriate outside-to-inside noise level reduction to be achieved; and
- ii) Dwellings inside the SESEB need the same ventilation system and to achieve an outside-to-inside noise level reduction of between 30dB (at the SESEB) and approximately 35dB at the properties closest to IAL.

Mr Styles advises that the applicant is now offering to increase the degree of acoustic insulation overall by offering a condition of consent that requires:

- i) All dwellings between the OCB and the SESEB must achieve an outside-to-inside noise level reduction of at least 30dB; and
- ii) All dwellings inside the SESEB must achieve an outside-to-inside noise level reduction of at least 35dB.

This will result in the requirements of Appendix 15 of the ICDP being met in all dwellings, and for the dwellings close to the SESEB and OCB, the internal noise levels will be 5dB lower (better) than what is required by the ICDP.

Mr Styles considers that this will further reduce the sleep disturbance effects from those he has set out in his primary statement of evidence.

Mr Peakall notes that if these noise reduction requirements are used, then a better acoustical outcome would be achieved for the internal noise environment. Mr Peakall also considers that if such a condition was imposed, then the internal noise levels would be lower than they

otherwise would be and result in correspondingly lower effects. Therefore Mr Peakall is not opposed to this approach.

**(c) Is the proposal consistent with NZS6805?**

The only area of disagreement relates to the application of part of Table 2 of NZS 6805. The relevant text in Table 2 states that within the OCB:

*“New residential, schools, hospitals or other noise sensitive uses should be prohibited unless a district plan permits such uses, subject to a requirement to incorporate appropriate acoustic insulation to ensure a satisfactory internal noise environment.*

*Alterations or additions to existing residences or other noise sensitive uses should be fitted with appropriate acoustic insulation and encouragement should be given to ensure a satisfactory internal environment throughout the rest of the building.”*

Mr Styles considers this part of NZS6805 simply makes it clear that noise sensitive activities that are not acoustically insulated should be prohibited, unless they are permitted by a district plan and appropriately acoustically insulated. If they are permitted and appropriately acoustically insulated, this part of NZS6805 places no further restriction on the development of noise sensitive activities. Mr Styles considers that the ICDP is consistent with this part of NZS6805, because it requires acoustic insulation of noise sensitive activities inside the OCB, and ‘permits’ or anticipates such uses subject to the acoustic insulation controls in its Appendix 15. Therefore, he considers that this proposal is consistent with NZS 6805.

Mr Styles has adopted the dictionary meaning of the words permitted and prohibited, rather than the formal activity status definitions as used in the ICDP and the RMA. In particular, he has applied the word ‘permitted’ as meaning anticipated or provided for, perhaps as a Permitted Activity or by way of resource consent.

Mr Peakall considers it is inconsistent with NZS 6805, insofar that NZS 6805 seeks in Table 2 as a starting point to ensure new noise sensitive activity seeking to establish inside the OCB is prohibited. Mr Peakall notes that Clause 1.4.2.1 states that *“the outer control boundary defines an area outside the airnoise boundary within which there shall be no new incompatible land uses”*

In all other respects we agree with the use of NZS 6805. This is therefore the only area we have disagreement on.

**(d) The noise levels within the 55 dB  $L_{dn}$  contour (OCB) and the 95 dB  $L_{AE}$  contour (SESEB)**

We agree the site is potentially exposed to noise levels of 55-60  $L_{dn}$  and 95-100 dB  $L_{AE}$  at night.

Mr Styles considers that the noise levels are higher than what would be ideal for residential development. However, he considers that the internal noise levels can be adequately mitigated. This leaves the outdoor effects which are confined to a limited number of noisy over-flights, many of which are inaudible, some of which are very low in level and some of which would be very disruptive for their short duration.

In Mr Peakall's opinion, for noise sensitive activity, noise levels of 55-60 dB  $L_{dn}$  are moderately high to high, and at night-time, noise levels of 95-100 dB  $L_{AE}$  are significantly high.

**(e) The acceptability of residential activity establishing inside a 55 dB  $L_{dn}$  contour (OCB) and a 95 dB  $L_{AE}$  contour (SESEB).**

Mr Styles considers that noise exposure is one of many factors in the development of district plan provisions that manage the development of noise sensitive activities inside the OCB. He considers that the indoor effects can be adequately mitigated but that there will be intermittent outdoor effects that cannot be mitigated. He considers that the 'acceptability' of these effects in this case needs to be considered in the context of the broader planning framework. He considers that it involves a broader judgement and consideration of more than just the noise effects.

Mr Peakall considers that it is inappropriate for residential activity to establish inside the 55 dB  $L_{dn}$  contour (OCB) because of the extent of the noise levels received. Mr Peakall recognises that this is however sometimes allowed in other districts, for a number of reasons. Whilst he notes it is not desirable from an effects perspective, he acknowledges that NZS 6805 provides a mechanism to be followed if a particular Council thinks it is acceptable to allow residential development at such noise levels.

Because of the very high noise levels, Mr Peakall is of the opinion that noise sensitive activity should not be allowed to establish inside the SESEB, irrespective of the underlying zoning or the Council's intentions.

**(f) The level of amenity (in the indoor and outdoor environment) in areas that are subject to noise exposure of greater than 55 dB  $L_{dn}$  and 95 dB  $L_{AE}$ .**

Mr Styles considers that overall, the indoor noise levels will be reasonable. The outdoor noise levels will vary from unnoticeable for the quieter over-flights or flights over the city to very disruptive for the short duration of the less frequent and louder over-flights over Otatara.

Mr Peakall is of the opinion in the outdoor noise environment that aircraft noise events will have a moderate to significant adverse impact on amenity, that cannot be mitigated.

Indoors, Mr Peakall acknowledges that the impact on amenity is reduced through the use of mitigation but considers that some impact remains.

**(g) The appropriateness of utilising noise mitigation to manage the effects of aircraft noise on residential activity in the indoor and outdoor environment**

We agree that the internal noise environment can be mitigated in an appropriate way by using the requirements of Appendix 15 of the ICDP, but that noise effects would still be present. We consider that the use of Appendix 15 is a minimum requirement. By using the proposed condition framework of (b) above, then the mitigation requirements for indoor noise are acceptable. We agree that the outdoor impacts on amenity are not able to be mitigated.

**DATED 3 MAY 2022**

**SIGNED BY:**



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**STEPHEN PEAKALL**



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**JON STYLES**