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RC210098: HANMER SPRINGS FLYRIDE - NOISE CONDITIONS

As discussed, I provide comment on noise conditions relevant to the above consent. I have no interest in whether Council approves the consent or not, simply wishing to assist your neighbours group in (a) explaining the effect of the lack of a suitable consent condition controlling operational noise, and (b) proposing a suitable noise condition based on the available evidence, including a mechanism to avoid technical difficulties likely to be experienced when attempting to measure compliance with the LAFMax 45 dB noise criteria described by the noise experts providing evidence to the hearing.

Need For Operational Noise Limit Condition

The following extract from the review carried out by Council's acoustic advisor (Mr Walton) indicates a desire for measurements of operational noise to be undertaken once the activity becomes operational:

As suggested in the noise report, it may be difficult to define a simple and appropriate performance standard for the purpose of protecting amenity. However, we agree that at the least, measurements should be conducted once the ride is operational to verify that noise emissions are in accord with those estimated in the application.

Despite Mr Walton's recommendation that measurements be performed, no operational noise limit condition is recommended in the officer's s.42A report. This means the verification measurements Mr Walton recommends would have no purpose, even if the noise readings indicated the source levels used in the Applicant's noise predictions were found to be exceeded.

However, this is a minor problem compared to the difficulties encountered if consent were approved without an operational noise limit condition. With no operational noise limit condition attached to any consent granted, the RMA requires that the activity would be legally obliged to comply with the District Plan permitted activity noise standard (Open space Rule 4.21). My reading of the evidence is that both the Applicant's noise advisor and Mr Walton agree the District Plan permitted activity noise limit for the Open Space zone would be exceeded beyond some parts of the site boundary under normal operation of the proposed activity, even though this non-compliance is described as a 'technical non-compliance' by the experts. Thus, if Council were to approve the Application, Council would find themselves in the position of approving an activity which, according to noise evidence before the committee, could not operate in compliance with the only applicable noise limits - the District Plan permitted activity noise standards for the site.

Recommended Operational Noise Conditions

If consent were to be approved, I therefore believe it is imperative a noise limit be applied to consented activities. On the basis of the available evidence, I recommend noise emissions from fly-ride activities do not exceed LAFMax 45 dB within any residentially zoned site. This is a low level of sound and would provide a good standard of protection against adverse noise effects within any residentially zoned site and is consistent with the views expressed in reports by the two noise experts.

However, based on my experience and the evidence on ambient daytime noise levels presented within the Applicant's noise assessment, it will be almost impossible to directly measure compliance with such a low noise limit at residential sites owing to the presence of ambient sound.

In order to overcome this difficulty, I recommend an approved "Noise Compliance Measurement & Assessment Plan" (NCMAP) be developed for determining compliance with the recommended noise limit. The difficulties with measuring 45 dB within normal daytime ambient sound levels can be avoided if measurements are taken close to the source (say within a few metres of people using the fly-ride facility). These measured LAFMax sound levels can then be used to calculate the sound level likely to be received within the more distant residentially zoned sites using an established and agreed calculation method set out within the approved NCMAP.

The details of the NCMAP need not divert the attention of the current decision-making process. Instead, a consent condition is proposed which would require the consent holder to develop a suitable NCMAP at a later date and for this plan to be submitted to Council for approval. It would be wise for a noise expert to review the plan on Council's behalf. It is intended the plan would be approved if this expert was satisfied with the technical appropriateness and efficacy of the NCMAP methods and procedures.

This approach may be considered unusual; however such an approach is considered necessary because daytime ambient sound levels in the area are significant, far exceeding the noise limit recommended to ensure noise effects of the consented activity experienced at residential sites remain reasonable (even though sound from consented activities may, at times, be audible at these locations).

Given the above, I recommend the following additional conditions of consent be attached to the consent, if granted;

- (a) Noise arising from the operation of activities authorised by this consent (excluding construction activities) shall not exceed LAFMax 45 dB within any residentially zoned site when measured in accordance with NZS6801:2008 *Acoustics – Measurement of Environmental Sound*.
- (b) Not less than 30 working days following commencement of activities authorised by this consent (excluding construction activities) a draft "Noise Compliance Measurement & Assessment Plan" (NCMAP) prepared by a suitably qualified and experienced noise expert acceptable to Council, shall be submitted to Council's Consent Manager for certification. The NCMAP shall include;
- (i) Descriptions of methods and procedures for the measurement of LAFMax sound levels at known distances in close proximity to identified Flyride noise sources.
 - (ii) The minimum number of readings to be taken and residential locations where received LAFMax sound levels are to be assessed.
 - (iii) Methods for calculating adjustments to these measured LAFMax levels to predict LAFMax noise levels expected at the specified residentially zoned site(s), including reference to relevant acoustic Standards or guideline on which the calculations are based.
 - (iv) The date on which a report shall be furnished to Council's Consent Manager providing an assessment of compliance with the noise limit stipulated in (a) using LAFMax noise levels calculated for residential sites using the certified NCMAP. The time period for submission of the compliance assessment report shall be not less than 30 working days following the date of certification of the NCMAP.

Advice Note:

If the Council fails to certify the NCMAP within twenty working days of receiving the draft NCMAP, or within ten working days of receiving any requested amendments to the draft NCMAP, the NCMAP can be assumed to be certified.

Please do not hesitate to contact the writer should you require any further information.

Code of conduct

I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note. I complied with this code in preparing the above advice. The above matters are within my area of expertise, except where I state that I am relying on the evidence of another person. I have not omitted to consider material facts known to me that might detract from the opinions I express.



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