

4 May 2021

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Dear Craig

15 CREMORNE STREET

As requested, I have reviewed the noise effects of a change to the current movements and helicopter type to operate from 15 Cremorne Street.

The existing consent sets the relevant noise conditions at:

- 7. The consent holder shall ensure that the use of the landing area on the site to which this consent applies for helicopter operations shall not exceed a noise limit of L_{dn} 50dBA when measured at or within the boundary of any adjacent dwelling (excluding any dwelling where written approval has been provided);*
- 10. The number of flights per week shall not exceed two (four movements) with no more than one flight (two movements) on any one day;*

It was assumed Condition 10 was included to provide some guidance on flights with a good factor of safety to the noise limits for the helicopter then proposed, as it does not necessarily reflect the expectations of condition 7.

Based on field measurements of the proposed Air Bus H130T2 helicopter, the number of flights to give 50dBA L_{dn} at or within the boundary of any adjacent dwellings (excluding any dwelling where written approval has been provided) is 14 in any one week. This increase reflects the much shorter start up and shut down times of the modern helicopter than was adopted in the original assessment.

The Air Bus H130T2 is a relatively quiet machine. Advice from a pilot is that the motor on the Air Bus H130T2 can be closed down 30 seconds after landing and the helicopter can take off 30 seconds after start up. This is compared to the earlier models where the time is up to 4 minutes and hence this reduces the total noise received.

To comply with condition 7 the level of noise must not exceed 50dBA L_{dn} . For the Air Bus H130T2 this equates to 14 flights a week with an average of 2 flights on any day. In accordance with the requirements of clause 4.3 of NZS 6807:1994 *Noise management and land use planning for helicopter landing areas* the noise may be averaged over seven consecutive days providing that for any single day there is no more than double the weekly average (which is 2 flights in this case). That is, up to 4 flights on any one day may be flown providing the total of 14 flights per week is maintained.

To provide for a good factor of safety it is proposed to limit flights to four per week (29% of the flights to satisfy a 50dBA L_{dn} limit) with a maximum of 2 flights on any one day (50% the number of flights to reach the 50dBA L_{dn} limit).

The above equates to a similar noise exposure for the neighbours to what is currently experienced. However, this does not take into account the reduced start-up and shut down times for the Air Bus H130T2 which, as set out above, is significant. As a result, the noise exposure for residents will be reduced to below what is currently permitted by the existing consent and considered to be reasonable (50dBA L_{dn}).

It is proposed to move the current landing pad that is approximately 10m from the closest neighbour to the immediate east (who has given written approval) to approximately 14m. This is a relatively small movement although is a significant change to the total distance to this receiver (a 40% increase to the distance compared to the current landing pad). Consequentially, this change will reduce the current noise exposure for this resident. This new location for the helipad does bring the helipad nearer to the closest neighbour to the west (who has also given their written consent) although in this case the 4m reduction in the distance to the receiver is only a 10% difference (44m – 40m). The new location for the helipad will not have any noticeable effect to the noise received for the resident to the west.

From the above, the proposed changes by using a more modern helicopter and with the shorter start-up and shut down times this will result in the noise received by all residents in the area to be less than that permitted by the existing consent.

With respect to any concerns regarding the noise amenity effects on the beach, this will be less than currently experienced due to the reduced start-up and shut down times of the helicopter. Although the number of flights a day would increase (offset by the reduced number of days there would be any flying) there would be at least half a day between flights, and generally the whole day, and the same person would not be exposed to the second flight. This is based on it being very unlikely anyone would be on the beach for such an extended period and the change in the tide over that period may force them to leave the beach.

Should you have any questions regarding the above please do not hesitate to contact me.

Yours faithfully
Hegley Acoustic Consultants



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