

47.5289.L3:MSC



30<sup>th</sup> October 2017

Ku-ring-gai Council  
818 Pacific Highway  
**GORDON NSW 2072**

**Attention:** Mr J. Goodwill

Dear Sirs,

**REVIEW OF ARUP RESPONSE  
PROPOSED AGED CARE FACILITY 25, 25A & 27 BUSHLANDS AVENUE, GORDON**

An application for a proposed aged care facility at 25, 25A and 27 Bushlands Avenue, Gordon, has been submitted to Ku-ring-gai Council and included acoustic reports from Rodney Stevens Acoustics.

Our review of the various acoustic assessments prepared by Rodney Stevens Acoustics ("RSA") in relation to the subject application formed the view that the Rodney Stevens Acoustics *Revision 3 North Shore RCF 25, 25A and 27 Bushlands Avenue, Gordon, Mechanical Services Noise Assessment*, dated 4 July 2017 is inadequate in addressing the relevant acoustic issues for the subject application.

The development application has been the subject of objections, of which a report from Acoustic Logic *25 – 27 Bushlands Avenue, Gordon – Proposed aged care facility – review of amended RSA report (revision 3)*, dated 1 August 2007, reference 20170826.1/0801A/R0/TT raises concerns in relation to the revision 3 report from Rodney Stevens Acoustics and identifies inconsistencies in the RSA report and the conclusions (of the RSA report).

Our review of the application was presented in our report 47.5289.R1 *Review of acoustic assessments, Proposed aged care facility 25, 25A & 27 Bushlands Avenue, Gordon* dated 21st September 2017.

The RSA report, the Acoustic Logic review and The Acoustic Group review have been examined by ARUP *Acoustic review for Development Application* (reference AC02(v1) dated 11 October 2017).

With respect to the ambient noise levels and the resultant noise targets, the ARUP report agrees with our findings that the targets provided by RSA were incorrect. We accept the noise targets set out in Table 3 of the ARUP report.

On our view of the ARUP report we found an issue with respect to noise generated by vehicles using the driveway to the basement carpark.

Our letter of 25<sup>th</sup> October 2017 identified non-compliance with the Council/EPA criteria of background + 15 dB(A).

ARUP have provided a letter of 27 October 2017 *ANHF Gordon – Response to The Acoustic Group Report* that fails to address the primary issue of concern in relation to the driveway and disregards The Acoustic Group's position in relation to sleep disturbance that has the potential to disturb residents every night for an unspecified number of event a night.

Under EPA procedures the generation of noise occurring on the site is assessed differently to noise from traffic movements on the road.

Vehicles ascending and descending a driveway, and entering or leaving a driveway are a different noise to vehicle passbys on a public road.

The EPA limit of background + 15 dB(A) for the Killara Tennis Court matters was imposed by the Council to address peak noise events on the site of the tennis court AND noise from vehicles arriving and departing the tennis courts.

The "Upper level" sleep disturbance criteria of 60 dB(A) set out in Tables 1 & 2 of the ARUP Response are not accepted.

The arrival of the bus (down the ramp) is under the nominated background + 15 dB(A) for the relevant time bus operating periods, whilst the bus proceeding up the ramp for the two nominated periods significantly exceeds the criteria.

The ARUP response has failed to place in context the extent to which the predicted levels will exceed the background level. For the 10pm – 11pm period, from Table 1 the bus level is 22 – 23 dB(A) above the background, whilst for the 6am to 7am period the bus is 20 – 21 dB(A) above the background level.

Such exceedances are significant and there has been no attempt by ARUP to provide additional noise controls.

In relation to vehicle movements (identified as cars) the vehicle movements up the ramp between 11pm and 6am are 19 – 21 dB(A) above the background level.



The claim of minimal movements in the period of 11pm – 6am has not been quantified in the traffic engineers report or the Plan of Management.

ARUP consider the (unspecified) frequency of events and the level of exceedance are “appropriate”.

Such levels of disturbance are unlikely to be “appropriate” for the two affected residential dwellings that have been assessed, bearing in mind the development is a commercial operation in a residential area and the unspecified “minimal” occurrences are occurrences that can occur every night.

For such a commercial operation the development must be amended to satisfy the sleep arousal criterion of background + 15 dB(A).

### **Alternative Controls**

The ARUP response has failed to consider any additional physical controls that could be implemented to address the issue on non-compliance with the sleep arousal criterion.

Under the current proposal of no additional noise controls on site, there is the possibility of providing double glazing and mechanical ventilation to the bedrooms of 29 Bushlands Avenue and 32 Bushlands Avenue.

In the decision of Commissioner Brown of Design 23 v Woollahra Municipal Council [2009] NSW 1114 there was an acknowledgement of noise levels from the proposed child care centre significantly above the noise targets and alternative remediation measures in the form of a barrier and the upgrading of rooms to a proposed dwelling (with mechanical ventilation) was not acceptable to the residents and was considered to be unnecessary and unwanted constraints on the residents to enjoy their property. On that basis the application was refused.

On the above basis the development is required to satisfy the EPA’s standard noise criteria of background + 5 dB(A) when assessed as an  $L_{eq}$  over 15 minutes at any affected point on or within a residential property AND background + 15 dB(A) when assessed as an  $L_{1,1min}$  outside any bedroom window.

Compliance with the EPA criteria requires modification of the application with respect to the use of the driveway.

The matter of additional barriers has not been explored in the ARUP response.



The ARUP response identifies that for the period in which the bus is proposed to be operated that the critical issue of concern is the noise from the bus travelling up the ramp.

The ARUP response does not indicate if the predicted levels for the operation of the bus related to being exclusively on the site and whether for the dwelling opposite the driveway there would be an even higher noise level as a result of the bus exiting the driveway and onto the public road.

If the time period for the use of the bus is to not continue after 11 pm and there is a claim that the staff changes occur at 10 pm and 7am, there could be a possibility of modifying the use of the ramp for the bus for 15 minutes after the nominal night time period commences and 15 minutes before the nominal night time period ceases (i.e. to 10:15 pm and from 6:45 am).

The use of vehicles, identified as calm movements, travelling down the ramp during a period of 11 pm to 6am is identified as having a noise level below the Council sleep arousal criterion but that cars ascending the ramp between 11 pm and 6am exceed the sleep arousal limit by a significant margin.

If the shift changeovers are at 7 am and 10 pm then a prohibition of the use of vehicles exiting the car park between 11pm and 6am would ensure that the sleep arousal criterion from such vehicles is not breached.

Technically the EPA night time period extends to 8 am on Sundays and public holidays and therefore would present an issue in terms of the morning staff change over on those days. Neither the ARUP response document or the Plan of Management has sought to address that issue.

The requirement for an ambulance to attend the facility during the night time period would be counted as an emergency and therefore should not be prohibited from such activities at night noting that on observations of ambulance movements at similar facilities those events have occurred at a slow rate and would not be considered a significantly noisy event provided a siren is not in use.



## Conclusion

The provision of a large commercial development in a residential area that involves traffic movements during the EPA nominated period of 10 pm to 7 am Monday to Saturday or to 8 am on Sundays, will from the assessments undertaken on behalf of the applicant result in maximum noise levels from an unspecified number of calm movements and operation of the bus ascending the ramp give rise to a maximum noise level significantly above the ambient background level and well above the sleep arousal criterion adopted by the EPA.

Under EPA policies there is a potential for a significant degree of sleep disturbance for residents during the night-time period that does not occur because of the absence of such a commercial development.

There are no restrictions provided on vehicle movements during the night-time period and with two residential assessment locations identifying a significant breach of the sleep arousal criterion that under the plan of management would occur every single night of the year then the degree of that noise disturbance cannot simply be dismissed by ARUP as considered to be appropriate.

If the application is to be approved then the application needs to be modified to ensure compliance with the background + 5 dB(A) criterion when assessed as an  $L_{eq}$  over 15 minutes at any affected point on or within a residential property AND background + 15 dB(A) when assessed as an  $L_{1, 1 \text{ min}}$  outside any bedroom window.

Without an assessment demonstrating compliance with both criteria then the application should be refused.

Yours faithfully,

**THE ACOUSTIC GROUP PTY LTD**

  
**STEVEN E. COOPER**

