

Date 23 February, 2021

Reference PKA11395 R05v1

Project Galston Road (392), Galston

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File PKA11395 R05v1 Addendum to PKA11395 R01v2 DA Acoustic Report dated 01Oct2020



Dear Pei Long,

Re: Addendum to Acoustic Report PKA11395 R01v2 dated 1st Oct 2020

Introduction

PKA prepared an acoustic report titled “DA Acoustic Report” [Ref. PKA11395 R01v2 dated 1st October 2020] for the proposed community centre which is part of the approved retirement village at 392 Galston Road, Galston. The report detailed the calculated noise impact of the use of the community centre and compared to the established noise goals based on the NSW EPA Noise Policy for Industry acoustic requirements. Following the approval of the documentation by the Hornsby Shire Council, the consent conditions pertaining to the use of the community centre severely limited the use of the premises especially when considering that all windows and doors must be remained closed throughout its use resulting in the implementation of continuous mechanical ventilation which is always not practical for use in a premise of this nature. Furthermore, PKA has been advised by the client that maintenance of such an operation is not economically or practically feasible.

This report has been prepared to reassess some changes to the application of the acoustic criteria and design changes to bring about acoustic compliance.

Discussion

Application of Acoustic Criteria

At the time of preparation of the first report, the assessment was prepared to address the Community Centre separately and therefore, the assessment was conducted in accordance with the NSW EPA Noise Policy for Industry (NPfI) requirements. The NPfI requires assessment of the operation of a premise to the most sensitive external residential boundary. The community centre is within the single lot of the entire seniors living premises and is to be used by the residents within the same lot boundary. The premises will not be used or leased out to any other residents outside the seniors living area and will be managed by strata serving in the interest of the residents. In cases such as this, strictly speaking, if the NPfI were to be applied, the noise impact would have to be addressed to external residential boundaries and not the residential premises within the development itself. For this reason, it is PKA’s opinion that the above requirements must be enforced strictly, and a potential reduced acoustic criterion must be considered allowing for general use of the premises while still implementing appropriate acoustic mitigation measures.

PKA ACOUSTIC CONSULTING

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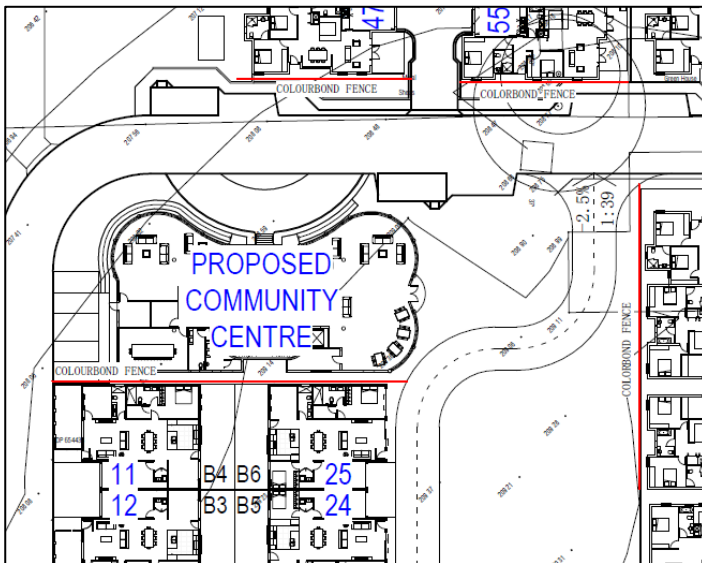
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Mitigation Measures & Design Changes

The following changes are proposed in the internal areas in the upgraded design to ensure reduced acoustic impact to residential receivers.

1. The dance floor area in the ground floor level has been changed to a sitting and dining area to ensure reduced source noise levels from the premises.
2. The site plan has been amended to have Colorbond fences shown in the updated site plans (as per figure below marked in red) in the eastern boundary of the community centre and rear residential boundaries at the western and northern residential receivers.



Updated Calculation Results

The table below presents the results of the noise calculations to estimate the noise impact at the identified sensitive residential receivers. The acoustic criteria and residential receiver references from the original DA acoustic report were used (as per figure below).

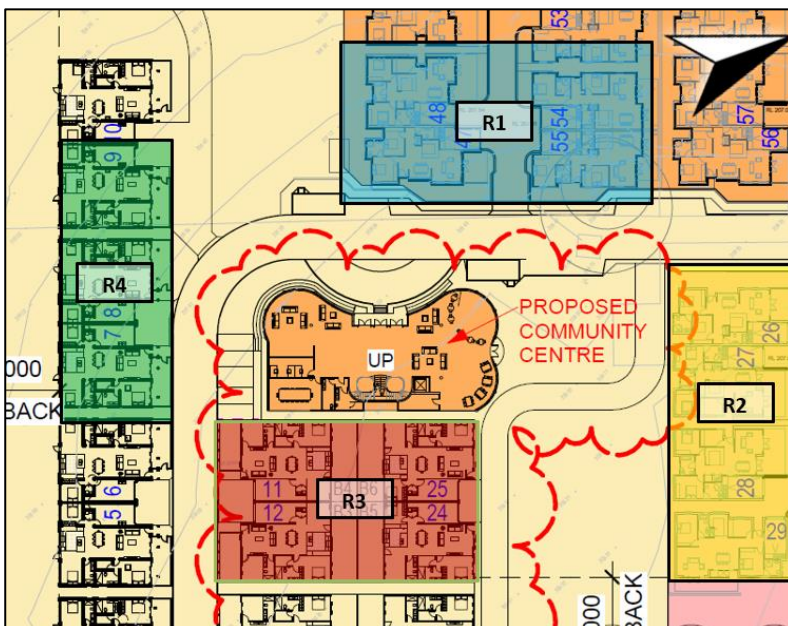


Table 1 Patron Noise Impact from Internal Areas

Residential Receiver	Time of Day & Acoustic Criteria ($L_{Aeq-15min}$)	Calculated Sound Pressure Level from patron activity at the sensitive residential boundaries ($L_{Aeq-15min}$)	
		With windows opened	Acoustic Criteria, Compiles?
R1	Day 53 dB(A)	42 dB(A)	Yes
	Evening 43 dB(A)		Yes
	Night 38 dB(A)		No
R2	Day 53 dB(A)	43 dB(A)	Yes
	Evening 43 dB(A)		Yes
	Night 38 dB(A)		No
R3	Day 53 dB(A)	42 dB(A)	Yes
	Evening 43 dB(A)		Yes
	Night 38 dB(A)		No
R4	Day 53 dB(A)	44 dB(A)	Yes
	Evening 43 dB(A)		Yes*
	Night 38 dB(A)		No

*Exceedance of 1dB(A) is extremely marginal and could be a result of tolerance. Marginal exceedances are allowable and are not perceivable and therefore has been marked as compliant.

Although the calculations should technically be performed to estimate the noise impact at the entire site boundary, the above table presents the results at most affected residential premises within the seniors living development with the amenity acoustic criteria of the NPfI strictly applied.

With the implementation of the changes, acoustic compliance is achieved readily for use during the day and evening periods with notable exceedances for activity after 10pm with windows open.

Recommendations

The following recommendations need to be implemented to ensure that acoustic compliance is achieved and maintained during operation. The recommendations have been based on data provided to PKA for the preparation of this report and assumptions made in calculations.

Note: The recommendations below are made to achieve strict compliance with the NPfI. However, based on the discussion above (application of acoustic criteria), the following measures are to be more of a guideline, as the premises will be used and operated by the same residents potentially affected by its operation.

Patron Activity

1. No live performances can be used within the community centre.
2. None of the outdoor areas can be used for ongoing patron activity between 6 pm and 7 am.

3. The community centre must remain closed with no activity between 10pm and 7am to prevent any potential sleep disturbance to the surrounding receivers.

Do not hesitate to contact this office if you require any further information.

Yours faithfully,



Sri Harsha Eati

PKA Acoustic Consulting