

20210325.3/2103A/R1/PF

17/03/2022

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Attn: Lisa Perkins

**Building C, Ivanhoe Stage 2, Macquarie Park - Extending Trading Hour Assessment**

## **1 INTRODUCTION**

AL has conducted a potential noise impact assessment from the operation of the retail tenancies at building C3 of Stage 2 of Midtown to sensitive noise receivers during the proposed trading hours between 6am and 10pm. AL notes that the main potential source of noise will be patron noise and background music noise from the proposed ground floor retail area of building C3.

## **2 CRITERIA**

*Proposed Residential Development, Ivanhoe Stage 2, Macquarie Park, Development Application Environment Noise Impact Assessment (Ref: 20210325.1/1607A/R7/GW, dated 16/07/2021) prepared by this office has presented the following noise emission criteria.*

Receiver information are as follows:

- R1: Residential receiver to the northwest of the project site (C1 building)
- R2: Residential receiver to the northeast of the project site
- R5: Residential receiver to the southwest of the project site

**Table 12 – NPfl Intrusiveness Criteria**

Receiver	Time of day	Background Noise Level dB(A) <sub>L90(Period)</sub>	Intrusiveness Criteria (Background + 5dB(A) <sub>L<sub>eq</sub>(15minute)</sub> )
R1	Day (7:00am-6:00pm)	43	48
	Evening (6:00pm-10:00pm)	43	48
	Night (10:00pm-7:00am)	34	39
R2	Day (7:00am-6:00pm)	43	48
	Evening (6:00pm-10:00pm)	41	46
	Night (10:00pm-7:00am)	37	42
R5	Day (7:00am-6:00pm)	50	55
	Evening (6:00pm-10:00pm)	48	53
	Night (10:00pm-7:00am)	36	41

**Table 13 – NPfl Project Amenity Criteria**

Type of Receiver	Time of day	Recommended Project Acceptable Noise Level dB(A) <sub>L<sub>eq</sub>(15-minutes)</sub>
Residential (Urban)	Day (7:00am-6:00pm)	58
	Evening (6:00pm-10:00pm)	48
	Night (10:00pm-7:00am)	43
Commercial (R3/R4)	When in Use	63

### 3 PATRON AND MUSIC NOISE PREDICTION

#### 3.1 ASSUMPTIONS

The emission levels presented within this assessment were corrected for distance attenuation and barrier effects (building shielding) where applicable.

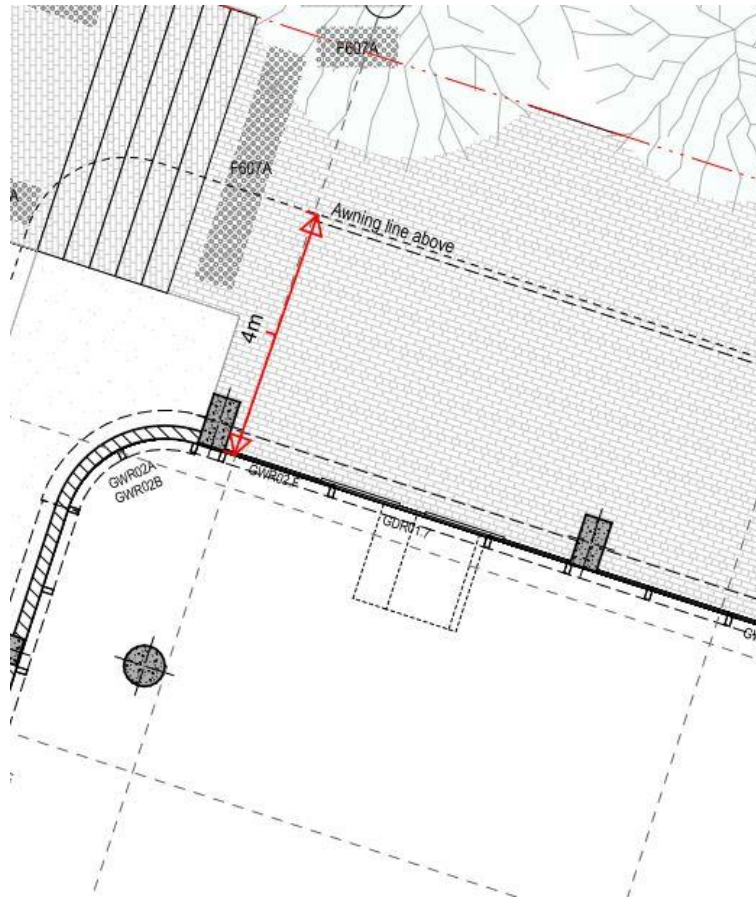
Predicted noise levels within the development between 6am and 10pm have been assessed using the following assumptions:

- The following number of patrons for each tenancy has been used for the noise emission prediction:

**Table 1 – Number of Patrons for Each Tenancy**

<b>Tenancy No</b>	<b>Number of Internal patrons</b>	<b>Number of external Seats</b>	<b>Total number of patrons</b>
T1	60	-	60
T2	40	-	40
T3	25	13	38
T4	25	13	38
T5	25	13	38
T6	25	13	38
T7	50	25	75
T8	50	25	75
T9	90	14	104

- Patron noise is subject to 1 in 2 patrons talking at a moderately loud level at any one time. A sound power level of 77dB(A)<sub>L10</sub> was used for patron voice levels for this assessment.
- Sound pressure levels of ambient background music is 70dB(A), background music only permitted inside.
- An awning with 4m width is installed at the northern façade on ground floor above the tenancies 1-9. Corresponding architectural drawing is reproduced below:



**Figure 1 – Awning details (as in architectural drawing)**

### 3.2 PREDICTED NOISE LEVELS

The cumulative predicted noise levels are calculated to the worst affected receivers. The nearest noise receiver is the future residential apartment within the Building C3 above the retail stores. Provided compliance is met at these locations, all other receivers will inherently comply due to the result of increased screening and distance attenuation from the proposed retail areas.

**Table 1 – Predicted Noise Levels at Nearest affected Receivers**

<b>Receiver</b>	<b>Predicted Noise Level dB(A)<math>L_{Aeq}(15min)</math></b>	<b>Noise Criteria dB(A)<math>L_{Aeq}(15min)</math></b>	<b>Compliance</b>
Residential units above Retail stores	47	48 (Day 7:00am-6:00pm) (Evening 6:00pm-10:00pm)	Yes
Midtown Building C2 (Community Centre)	57	63 When in use	Yes

## 4 RECOMMENDATIONS

The predicted levels presented within Section 3 are a result of the following building and management controls.

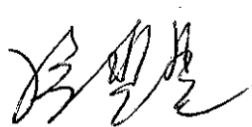
- Outdoor seating is to be allocated within 3 meters from the façade and not to exceed the number of seats presented in Table 1. Tenancy 1 and 2 will not have outdoor seats to prevent noise impact to residential receiver above.
- Background music will only be played within the tenancies and should not exceed an average spatial internal noise level of 70dB(A).
- All entry doors are to remain closed after 7:00 pm unless for patron ingress or egress. Signs are to be displayed at the entry/exit of the venue reminding patrons to minimise noise when departing the premises, especially after 7:00 pm.
- Premises to cease operation by 10pm.
- Management controls should be utilised to manage patron departure particularly at night and at closing times to ensure that patrons leaving the premises in a prompt and orderly manner.
- Prominent notices shall be placed to remind patrons that a minimum amount of noise is to be generated when leaving the premises.
- All garbage shall be retained within the premises after 6pm and removed after 7am on the following day.

## 5 CONCLUSION

AL has conducted a noise emission assessment for the potential noise impact from the operation of the retail tenancies at building C3 of Stage 2 of Midtown. AL notes that noise levels at sensitive noise receivers comply with the criteria presented in Section 2 during the proposed trading hours between 6am and 10pm.

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,



Acoustic Logic Pty Ltd  
PeiPei Feng