



Memo

To: Matt Clifton
From: Reymar Victoria, Marina Apfel (WSP)
Subject: **Market Lane Live – Acoustic Impact Assessment**
Our ref: PS131027-A
Date: 27 April 2022

1. Project description

WSP Australia Pty Ltd (WSP) has been engaged to undertake an acoustic impact assessment of the proposed “Market Lane Live” venue, a temporary pop-up outdoor wine bar located in Market Lane, Manly (the Project).

The proposed outdoor wine garden is located west of the Manly Library building, bounded to the north by Market Place, and to the southeast by Market Lane. The garden features a mobile bar, a small stage venue for a pop-up music, dining tables and seating. The venue is proposed to operate from 12:00pm to 10:00pm Sunday to Thursday and from 12:00pm to 10:30pm on Friday and Saturday. The noise emissions associated with the venue are music from the small stage and speech from patrons talking.

This noise assessment report addresses *Section ii Environmental Health (Noise)* of the Northern Beaches Council response to the initial development application (*Re: DA2021/2065 - Use of premises as a Food and Drink Premises (Small Bar) - Market Lane MANLY*, dated 23/02/2022).

1.1 Existing noise environment

The prevailing background noise levels surrounding the site were determined from an unattended noise survey conducted in general accordance with the Australian Standard 1055:2018 *Acoustics – Description and Measurement of Environmental Noise* and the NSW *Noise Policy for Industry 2017* (NPfI).

The noise survey was conducted from 29 March 2022 to 08 April 2022. The monitoring location was located within the proposed Project site shown in Figure 1.1.

The existing background noise levels have been used to establish the acoustic criteria when assessing the noise impacts of the Project at the affected receiver locations.

The nearest most potentially affected receivers are the residential receivers R1 and R2 located to the north and east of the Project, respectively. The locations of these receivers are shown in Figure 1.1.

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WSP acknowledges that every project we work on takes place on First Peoples lands. We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

Receiver R1 (51 The Corso, Manly) is located approximately 10m to the east, with direct line of sight to the Project site. Receiver R2 (7 Whistler Street, Manly) is facing Sydney Road and the building façade facing Market Place provides shielding to this receiver R2.



Figure 1.1 Site location and nearby noise sensitive receivers

The results of the noise survey were summarised and the representative background noise levels for the time periods relevant to the proposed hours of operation are shown in Table 1.1 below.

Table 1.1 Representative background noise levels

Period	Background noise level L ₉₀ (dB)									Overall L ₉₀ (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
12:00pm to 6:00pm ¹	55	58	60	56	54	50	46	42	34	56
6:00pm to 10:00pm ²	52	55	58	55	53	49	45	39	30	55
10:00pm to 10:30pm ³	52	55	58	55	53	49	45	39	30	55

Period	Background noise level L ₉₀ (dB)									Overall L ₉₀ (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
1.	Operating time during NPfI daytime period. The NPfI daytime period is defined as 7:00 am to 6:00 pm Monday to Saturday, 8:00 am to 6:00 pm Sundays and public holidays.									
2.	Operating time during the NPfI evening time period. The NPfI evening time period is defined as 6:00 pm to 10:00 pm all days.									
3.	Operating time during NPfI night time period. The NPfI night time period is defined as all times outside the day and evening time period.									

2. Project criteria

2.1 Northern Beaches Council

We understand the Northern Beaches Council requires the following noise assessment for the Project as noted under *Section ii Environmental Health (Noise)* as outlined in *Re: DA2021/2065 - Use of premises as a Food and Drink Premises (Small Bar) - Market Lane MANLY*, dated 23/02/2022:

The application requires an acoustic assessment prepared by an experienced and qualified consultant to address noise issues. The acoustic assessment should include, but not be limited to an assessment of noise from patrons and music. The assessment and report is to be in accordance with the NSW Environment Protection Authority (EPA) Noise Policy for Industry and other relevant guidelines. Recommendations should be incorporated into the proposed Plan of Management.

The Noise Policy for Industry applies to industrial noise sources. We are not aware of any industrial noise sources, such as fans, associated with the Project. The assessment of the noise emissions due to patron and music noise has been based on the Manly Development Control Plan and the EPA Noise Guide for Local Governments as outlined in the following sections.

2.2 Manly Development Control Plan

The Northern Beaches Council through the Manly Development Control Plan 2013 (DCP) requires noise emissions from licensed premises to be assessed in accordance with the Office of Liquor, Gaming and Racing regulations (OLGR) as follows for the assessment period from 12:00pm to 10:30pm:

The L_{A10} noise level emitted from the licensed premises must not exceed the background of noise level in any Octave Band Centre Frequency (31.5Hz to 8kHz inclusive) by more than 5dB between 7am and 12 midnight at the boundary of any affected residence.*

Based on the DCP requirement stated above and the background noise levels outlined in Table 1.1, the project specific noise criteria for residential receiver locations are shown in Table 2.1 below.

Table 2.1 Project specific noise criteria at residential receivers

Period	Sound pressure level L _{10,15min} (dB)									Overall L _{10,15min} (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
12:00pm to 6:00pm ¹	60	63	65	61	59	55	51	47	39	61
6:00pm to 10:00pm ²	57	60	63	60	58	54	50	44	35	60

Period	Sound pressure level L _{10,15min} (dB)									Overall L _{10,15min} (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
10:00pm to 10:30pm ³	57	60	63	60	58	54	50	44	35	60
<ol style="list-style-type: none"> 1. Operating time during NPfI daytime period. The NPfI daytime period is defined as 7:00 am to 6:00 pm Monday to Saturday, 8:00 am to 6:00 pm Sundays and public holidays. 2. Operating time during the NPfI evening time period. The NPfI evening time period is defined as 6:00 pm to 10:00 pm all days. 3. Operating time during NPfI night time period. The NPfI night time period is defined as all times outside the day and evening time period. 										

2.3 Sleep disturbance

The EPA Noise Guide for Local Governments 2013 provides the following guidelines on assessing sleep disturbance for residential receivers during the night time period:

"Where likely disturbance to sleep is being assessed, a screening test can be applied that indicates the potential for this to occur. For example, this could be where the subject noise exceeds the background noise level by more than 15 dBA. The most appropriate descriptors for a source relating to sleep disturbance would be a L_{A1} (1 minute) (the level exceeded for 1% of the specified time period of 1 minute) or L_{Amax} (the maximum level during the specified time period) with measurement outside the bedroom window."

It is noted that the Project will only operate during the night time period on Fridays and Saturdays from 10pm to 10:30pm. The background noise levels measured from 10pm to 10:30pm were analysed and the criteria has been established based on the lowest overall background noise level measured during this period. This has been assumed to be a conservative approach.

Table 2.2 Sleep disturbance L_{max} criteria at residential receivers

Period	Lowest measured L _{90,15min} (dBA)	Sleep disturbance criteria L _{max} (dBA)
10:00pm to 10:30pm ³	50	65
<ol style="list-style-type: none"> 1. Operating time during NPfI night time period. The NPfI night time period is defined as all times outside the day and evening time period. 		

3. Noise impact assessment

3.1 Modelling assumptions

The noise impact assessment has been conducted to the residential receiver R1 which has been identified as the nearest most potentially affected residential receiver, approximately 10m to the east, with direct line of sight to the Project site. For the assessment we have assumed that compliance at the closest most potentially affected receiver R1 also demonstrates compliance with receiver R2 and all other receivers.

Environmental acoustic modelling was conducted to predict the noise impacts to receiver R1, with the following parameters and assumptions:

- 100% occupancy of 120 patrons in the outdoor wine garden with 1 in 3 people talking with a raised voice of 68 dBA L₁₀ measured at 1 metre. The assumed patron voice levels

Figure 3.1 Location of proposed mobile airstream bar and music venue

Table 3.1 Patron and music noise source sound pressure levels

Noise source	Sound pressure level L _{10,15min} (dB)									Overall L _{10,15min} (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
Raised speech for 1 person, at 1 metre	45	51	57	63	66	63	59	54	49	68
Outdoor amplified music based on 1 speaker, at 1 metre ¹ (12:00pm to 10:00pm)	80	85	90	85	84	80	75	69	57	85
Outdoor amplified music based on 1 speaker, at 1 metre ¹ (10:00pm to 10:30pm)	70	75	80	75	74	70	65	59	47	75

2. This is to be taken as a noise limit for one speaker source, measured as an L₁₀ at 1 metre and will need to be adjusted if several speakers are used.

3.2 Manly Development Control Plan Assessment

Based on the assumptions outlined above and the source noise levels presented, the predicted sound pressure levels at receiver R1 are shown in Table 3.2. The predicted levels are assessed against the noise criteria of the DCP established in Table 2.1.

Table 3.2 Patron and music noise assessment at receiver R1

Description	Sound pressure level L _{10,15min} (dB)									Overall L _{10,15min} (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
12:00pm to 6:00pm (Daytime operation)										
Criteria	60	63	65	61	59	55	51	47	39	61
Predicted noise level	57	60	64	60	59	55	51	44	35	60
Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6:00pm to 10:00pm (Evening time operation)										
Criteria	57	60	63	60	58	54	50	44	35	60
Predicted noise level	57	60	63	60	58	54	50	44	35	60
Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10:00pm to 10:30pm (Night time operation)										
Criteria	57	60	63	60	58	54	50	44	35	60
Predicted noise level	47	50	54	52	54	51	47	41	34	55
Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The predicted noise emissions at receiver R1 comply with the DCP noise requirements for licensed premises established for the Project during the proposed hours of operation. As compliance has been demonstrated at the nearest most-affected residential receiver R1, compliance can be inferred at other sensitive receivers at greater offset to the venue, and other non-residential receivers.

3.3 Sleep disturbance assessment

The predicted maximum noise level at the receiver R1 is presented in Table 3.3. The predicted levels are assessed against the noise criteria for sleep disturbance established for the Project based on the EPA Noise Guide for Local Governments as per Table 2.2.

Table 3.3 Sleep disturbance assessment at receiver R1

Description	Overall L _{max} (dBA)
Criteria	65
Predicted noise level	≤ 65
Compliance	Yes

The predicted maximum noise level at the receiver R1 complies with the maximum noise level criteria for sleep disturbance established for the Project during the proposed hours of operation within the night time period. As compliance has been demonstrated at the nearest most-affected residential receiver R1, compliance can be inferred at other sensitive receivers at greater offset to the venue, and other non-residential receivers.

4. Recommendations

The noise emissions from the proposed premises are predicted to comply with the DCP noise criteria and the sleep disturbance criteria based on the EPA Noise Guide for Local Governments for the proposed hours of operation, with the assumptions presented Section 2.3:

- Capacity must be limited to 120 patrons with the mobile airstream bar or solid barrier screen (minimum 4.4m wide, 2.5m deep and 2m high) to be located along the northern side of the venue as shown in Figure 3.1 .
- Noise from the music venue must be limited to the noise spectrum presented in Table 3.1 for operation during the day and evening time period with a further reduction during the night-time period operation from 10:00pm to 10:30pm on Friday and Saturday.
- It is also recommended that signage is displayed throughout the venue and staff are informed to ask patrons to keep noise levels to a minimum when patrons are leaving the premises.

These assumptions must be implemented in the Plan of Management as part of the controls to comply with the noise requirements.

5. Conclusion

WSP has undertaken an assessment of the noise impacts from patron and music noise for the proposed outdoor wine garden to be located in Market Lane, Manly. The proposed project is predicted to comply with the relevant noise requirements for the proposed hours of operation with the recommendations presented in Section 4.



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Acoustic Engineer

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