

Attention: John McKee

Company: Metro Planning

From: Fu Siong Hie

Date: 04/11/2022

Subject: 39 Sydenham Road, Brookvale - Acoustic Assessment

Document Reference: SYD2021-1132-R001C

John,

On behalf of Metro Planning, Acouras Consultancy Pty Ltd has been commissioned to assess the operational noise from the existing distillery located at 39 Sydenham Road, Brookvale. The facility currently operates Monday to Saturday from 7am to 4pm. The proposed extended hours of operation opening are:

- Distillery: 6am-4pm Monday to Friday.
- Hospitality/Bar venue: 5pm-12am Weekdays, 12pm -12am Saturday & 12pm- 10pm Sunday.

Based on our knowledge of the site, the distillery location is in a light-industrial zone and commercial vehicles activity and the other industrial noise sources dominates the surrounding ambient noise levels. All the adjacent sites are commercial facilities and the nearest residential areas are located opposite Wattle Road (to the south) more than 400m from the site. The site location is shown in Figure 1.

At this stage, we have not conducted a full environmental noise survey of the area. It is our professional opinion that in the case of this application, by applying the typical background noise levels given in the NSW EPA 'Noise Policy for Industry' (NPfI) would provide a conservative approach.

The NSW EPA NPfI does provide the recommended amenity noise level and typical background noise levels in an urban environment which can be used as a guide for this assessment. Table 1 presents the amenity levels and typical existing background noise levels in an urban environment. It is highly unlikely that background noise levels in this area would be less than $L_{90(\text{period})}$ 35dBA during the evening or night.

Provided the noise emissions comply with the EPA NPfI noise limits, the NSW Governments Liquor & Gaming (L&GNSW) noise limits would also be achieved.

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Figure 1 – Site Location

Provided the noise levels comply with the minimum intrusiveness limit as given in Table 1 below we not expect any impact to nearby residential receivers. The recommended amenity noise level for a commercial receiver should not exceed 65dBA when in use.

Table 1—Amenity Noise Levels and Background Noise Levels, dBA

Period	Recommended Amenity Noise Level	Typical Existing Background Noise Levels	Intrusiveness Noise Limit
Day (07:00-18:00)	60	< 45	< 50
Evening (18:00-22:00)	50	< 40	< 45
Night (22:00-07:00)	45	< 35	< 40

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As part of our assessment we have taken the following activities into consideration:

- Accommodate up to approximately one-hundred (100) patrons internally seated and in the outdoor covered seating area.
- The sound level of adult (male) speech noise levels is presented in Table 2 below. The sound power levels given in the Table 2 below are based on the Harris "Handbook of Acoustical Measurements and Noise Control" and have been extrapolated for the proposed number of patrons.
- Pre-recorded background music noise inside and outdoor covered seating area (Table 2).

Table 2 — Typical Source Noise Levels

Description	Octave Band, Hz Lin									Overall dBA, Leq
	31.5	63	125	250	500	1k	2k	4k	8k	
Typical Raised Speech at 1m ¹	29	39	49	59	63	65	59	53	47	67
Background Music (Internal SPL)	57	65	63	64	65	59	59	53	45	68

- Activities from truck delivery to the site, it is expected that:
 - 3-5 deliveries per week, using 3t. to 4t. trucks.
 - One (1) small truck per every week to pick up organic matter (spent grain).
 - Delivery times are expected to be 8am- 4pm.
 - Table 3 provides sound pressure levels of typical vehicle noise that have been used for the calculations.
- All new equipment to be installed are internally located. Details of equipment have not been finalised, but these may include:
 - 1250Lt. still, boiler, chiller and air cooler, water tanks, fermentation tanks, lauter/mesh tun.
 - Fridges, freezers and other kitchen and bar equipment.

¹ Raised single male voice. Harris "Handbook of Acoustical Measurements and Noise Control".

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Table 3 – Typical Noise Level of Vehicles, L_{\max} dBA

Type	Sound Pressure Level Range @ 0.5m, L_{\max} dBA ²
3 to 6 tonne Truck (rigid)	84-90

Based on the operation and apply the sound pressure levels for the various activities and vehicle movement, the noise level at the nearest residential receiver (more than 400m) are predicted to inaudible and comply with the NSW EPA NPfI and L&GNSW noise limits when applying the typical background noise levels. Also, as the predicted noise levels would be inaudible, any activity noise would also comply with sleep disturbance criteria.

We trust that this information is satisfactory.

Regards,



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² Based on ADR83/00 external noise test.