



LIQUOR & BURN

100-102, HIGH STREET, MANCHESTER

NOISE ASSESSMENT

14 July 2023

AEC REPORT: P4913/R01/WJK

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1.0 INTRODUCTION

- 1.1 Acoustic & Engineering Consultants Limited (AEC) has been appointed by Paul Astill & Associates on behalf of the proprietors of Liquor & Burn, to undertake a noise assessment as part of an application to extend the trading hours permitted under the existing planning consent to 0300h Monday to Sunday so that they consistent with the premises licence hours.
- 1.2 This report provides details of the noise survey undertaken in relation to noise breakout and egress of customers from the premises and an assessment of the potential noise impact as a result of the extended opening hours.
- 1.3 Acoustic terminology used throughout the report is described in brief in Appendix A.

2.0 SITE AND ITS ENVIRONS

- 2.1 Liquor & Burn is a 60 capacity Mexican themed bar and restaurant located on the High Street in central Manchester. The premises consists of a ground floor restaurant and bar.
- 2.2 The premises licence permits licensable activities between 1100h and 0300h, 7 days a week.
- 2.3 In addition, the premises licence contains the following conditions relating to noise:

Annex 2 – Conditions consistent with the operating schedule

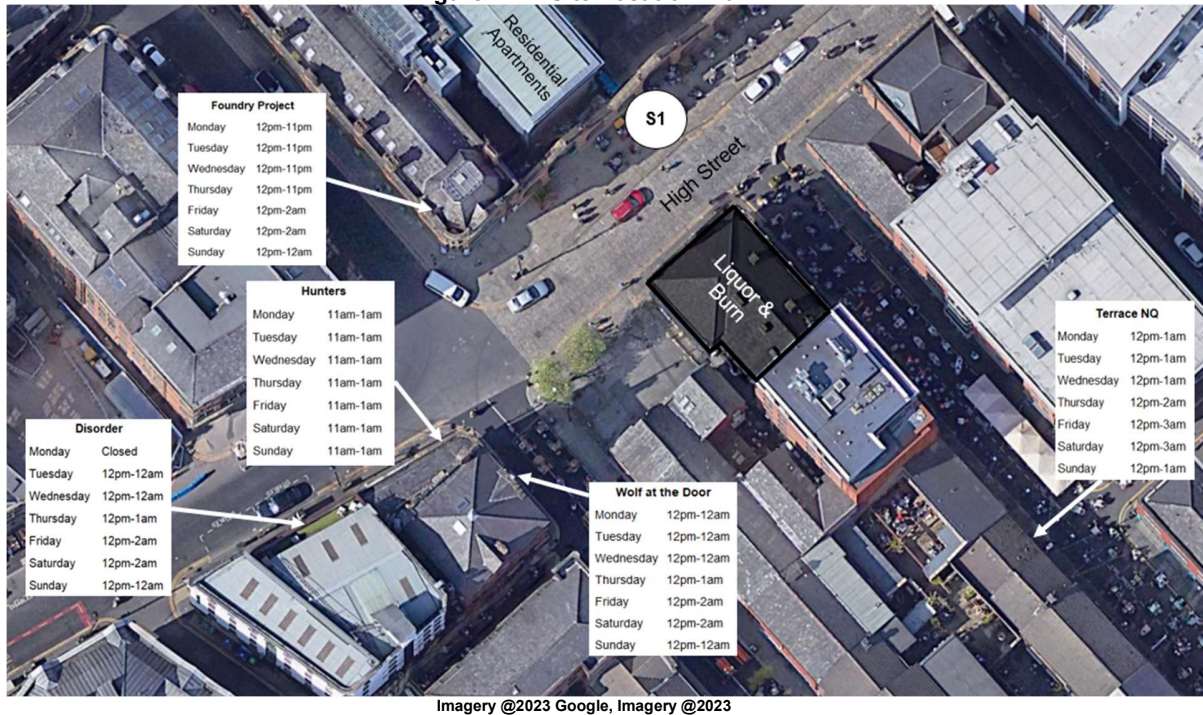
8. *On a Friday and Saturday, (and on any other day when the premises carried out licensable activities beyond 2.30am), SIA registered door staff shall be employed at the entrance of the bar at Luck, Lust, Liquor & Burn at a ratio of 1:100 from 2100 hours until 30 minutes after closing to assist with the safe and orderly dispersal of customers. At all other times, SIA door staff shall be employed at the premises in such numbers and in such locations as in accordance with a risk assessment to be carried out by the DPS.*
25. *Noise from amplified music or voices shall not be such as to cause nuisance to the occupants of nearby premises.*
26. *The Premises Licence Holder and Management shall ensure that consideration is given to residents when organising waste collection services.*
27. *A Dispersal Policy shall be formulated and adhered to.*
28. *Signage shall be displayed at the premises displaying a contact telephone number for the use of local residents in the event of any concerns.*
29. *Customers wishing to smoke outside shall be supervised.*
32. *Notices shall be displayed requesting our customers to leave quietly and in an orderly manner out of consideration to neighbours and their attention shall be drawn to these notices by members of staff.*
33. *All doors and windows shall remain closed after 2300 irrespective of whether regulated entertainment is taking place.*

34. *We shall actively discourage our customers from assembling outside the premises at the end of the evening.*
35. *We shall come to an arrangement with a private hire taxi firm whose telephone number shall be provided to customers to use on the basis that such company shall operate a ring back system and not sound horns when collecting their fare. Any patrons awaiting the arrival of a taxi shall be encouraged to wait inside the premises.*
36. *Consideration shall also be given to staff departures. Staff shall be instructed to leave the premises quietly and to request that any waiting taxis do not leave their engines running or sound their horns while waiting.*

Annex 3 – Conditions attached after hearing by the licensing authority

1. *A noise limiter shall be installed and noise levels shall be set by a qualified sound engineer at a level agreed by Manchester City Council. The noise limiter shall be made tamper proof by the sound engineer in the presence of MCC officers at the time it is set. Noise levels shall not at any time exceed the level agreed.*
 2. *The window(s) in the kitchen shall be blocked up.*
 3. *All air conditioning and extractor plant shall be situated on the roof of the building.*
 4. *Deliveries and waste collections shall not take place after 11pm or before 7am.*
 5. *The mobile number of the DPS shall be made available to any local residents and meetings shall be held at the request of either party.*
 6. *When doormen are employed at the premises, they will remain at the premises for 30 minutes after it has closed to assist with dispersal.*
- 2.4 There are a number of other licensed premises within the immediate area which have varying opening hours. The nearest noise sensitive properties are apartments approximately 18m to the north-west, on the other side of the High Street to the premises. A plan showing the other premises in the area and the nearest noise sensitive properties is shown in the following Figure 2.1.

Figure 2.1 – Site Location Plan



3.0 NOISE ASSESSMENT

- 3.1 Attended noise measurements were undertaken by AEC on the night of Thursday 30 June 2023 at a location representative of the nearest residential properties to include times when the premises is currently permitted to open, during egress and during the extended hours being applied for. The measurement location is shown as S1 on Figure 2.1 above.
- 3.2 All measurements were undertaken in general accordance with BS7445-1: 2003 '*Description and measurement of environmental noise. Guide to quantities and procedures*'.

Measured Noise Levels

- 3.3 A summary of the measured noise levels is shown in the following Table 3.1.

Table 3.1 – Measured Noise Levels

Date	Start Time	Duration	L _{Aeq,T} (dB)	L _{A90,T} (dB)	Comments
29/06/2023	23:45	00:15:00	62	52	Premises open. Music noise inaudible. People in street dominant noise source. Other sources included trams, buses and road traffic.
30/06/2023	00:01	00:15:00	57	53	Premises closed. Observed that people left in small groups quickly and quietly.
30/06/2023	00:17	00:15:00	59	54	People in street and outside Wolf at the Door premises dominant noise sources.
30/06/2023	01:22	00:15:00	53	49	Occasional taxis along High Street. People in street, music from Terrace NQ.
30/06/2023	01:45	00:15:00	57	50	People in street, music from Terrace NQ.
30/06/2023	02:10	00:15:00	53	49	People in street, music from Terrace NQ.
30/06/2023	02:30	00:15:00	57	50	People in street, refuse collection vans.
30/06/2023	02:54	00:15:00	52	47	Some people in street and road traffic. Mechanical plant noise dominant when no traffic.

- 3.4 The dominant noise sources throughout the noise survey were observed to be people in the street, road traffic on the surrounding roads and music from the Terrace NQ premises later on as other premises in the area closed and the surrounding area became less busy.
- 3.5 During times when the premises was open, noise was not audible at the measurement location. It was observed during the noise survey that when the premises closed, patrons left the premises in small groups quickly and quietly.
- 3.6 During the period when the premises closed, between 2345 and 0030h, the background noise levels remained relatively stable, indicating the noise from people leaving the premises did not affect the underlying background noise level in the area.

Predicted Noise Levels

- 3.7 In addition to the above, noise breakout calculations have been carried out to determine the noise levels at the nearest noise sensitive properties and to corroborate the measurements and observations made during the baseline noise survey. The calculations are based on the typical noise levels measured inside the premises and the construction of the north-west façade (which is assumed to be standard double glazing) facing the noise sensitive properties.
- 3.8 The following Table 3.2 shows the source noise levels, the sound reduction performance of the building envelope and the predicted noise level at the nearest noise sensitive properties.

Table 3.2 – Calculated Noise Levels at Noise Sensitive Properties

Description	Noise Level, dB L _{eq} at Octave Band Centre Frequency, Hz							dBL _{Aeq}
	63	125	250	500	1k	2k	4k	
Source (Internal Noise Level)	86	75	76	79	77	73	67	81
Sound Reduction Index (Front Facade)	12	18	14	22	32	34	28	--
Calculated Noise Level at Nearest Residential	53	36	41	36	24	19	18	37

- 3.9 The predicted noise levels are 10dB lower than the lowest background noise level, which equates to an inaudible condition and supports the observation the noise from the premises was not audible at the nearest noise sensitive receptors. The calculations account for doors and windows being closed in accordance with the premises licence conditions.

Premises Noise Management

- 3.10 The venue is already required to have a noise management strategy in place in accordance with the premises licence. It was observed that the premises were complying with the conditions of the premises licence and that the procedures in place were effective in minimising any noise associated with the premises. It is anticipated that noise would continue to be effectively managed as a result of the extended opening hours.

4.0 SUMMARY AND CONCLUSION

- 4.1 Acoustic & Engineering Consultants Limited (AEC) has undertaken an assessment of the potential noise impact as a result of as part of an application to extend the trading hours permitted under the existing planning consent to 0300h Monday to Sunday at the Liquor & Burn premises, High Street, Manchester so that they are consistent with the premises licence.
- 4.2 Attended noise measurements were carried out on the night of Thursday 30 June 2023 at a location representative of the nearest residential properties in order to assess the potential noise impact resulting from the extended opening hours.
- 4.3 An assessment of noise associated with the premises has been carried out based the measured noise levels and observations made onsite. These are supported by calculated noise levels breaking out of the premises at the nearest noise sensitive properties.
- 4.4 The observations made onsite and the noise breakout calculations demonstrate that noise from the premises was not audible at the closest residential properties.
- 4.5 There are a number of conditions relating to noise in accordance with the existing premises licence, with which the premises are complying.

APPENDIX A – Acoustic Terminology in Brief

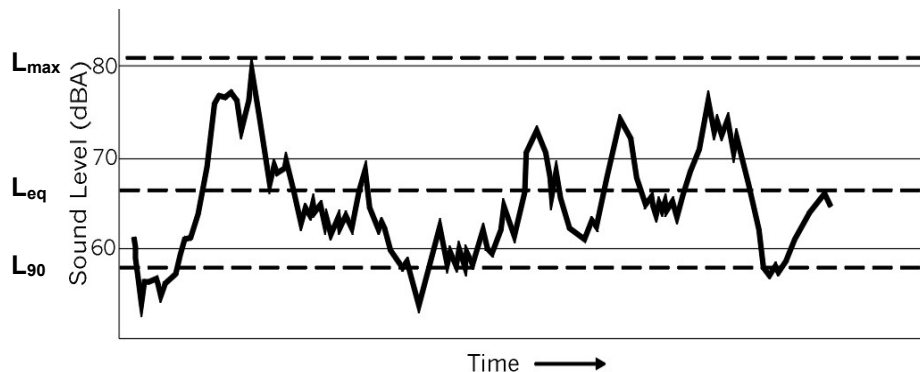
Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air. The rate at which the pressure fluctuations occur determines the pitch or *frequency* of the sound. The frequency is expressed in Hertz (*Hz*), that is, cycles per second. The human ear is sensitive to sounds from about 20 Hertz to 20,000 Hertz. Although sound can be of one discrete frequency - a 'pure tone' - most sound is made up of many different frequencies.

The human ear is more sensitive to some frequencies than others, and modern instruments can measure sound in the same subjective way. This is the basis of the A-weighted sound pressure level *dBA*, normally used to assess the effect of noise on people. The dBA weighting emphasises or reduces the importance of certain frequencies within the audible range.

Sound Units

In order to assess environmental noise, measurements are carried out by sampling over specific periods of time, such as fifteen minutes or one hour, the statistically determined results being used to quantify various aspects of the sound.

The figure below shows an example of sound level varying with time. Because of this time variation the same period of sound can be described by several different levels. The most common of these are described below. It should be noted that in many instances in the main body of text, the unit will be preceded by a dB descriptor in the report e.g. $L_{Aeq,T}$ could be written $dB L_{Aeq,T}$.



Example of Sound Level Varying With Time

$L_{Aeq,T}$	The equivalent continuous (A-weighted) sound level. It may be thought of as the "average" sound level over a given time, T. It is used for assessing noise from various sources: industrial and commercial premises, construction sites, railways and other intermittent noises and can be considered as the "ambient" noise level.
$L_{A10,T}$	The (A-weighted) sound level exceeded for 10% of a measurement period. It is the value often used to describe traffic noise.
$L_{A90,T}$	The (A-weighted) sound level exceeded for 90% of a measurement period. It is the value often used to describe background noise.

L_{Amax}	The maximum (A-weighted) sound level measured during a given time. 'Fast' or 'Slow' meter response should be cited.
L_{AE}	The sound exposure level is a notional noise level and describes the average L _{Aeq} noise level of an event over a given time period as if it occurred during a one second period. This allows the L _{Aeq} to be determined over a time period with a number of distinct events.
Free-field Level	This refers to the sound level measured outside, away from reflecting surfaces.

Other Acoustics Units

R_w	Single number rating used to describe the <u>laboratory</u> airborne sound insulation properties of a material or building element over a range of frequencies, typically 100-3150Hz.
R_w + C_{tr}	Single number rating used to describe the <u>laboratory</u> airborne sound insulation properties of a material or building element (normally windows) over a range of frequencies, typically 100-3150Hz, adjusted to adjusted by a spectrum adaptation to provide the reduction of traffic noise.
D_{nT,w}	Single number rating used to describe the on-site airborne sound insulation performance properties of a material or building element over a range of frequencies, typically 100-3150Hz, which is calculated in terms of a standardized reverberation time of 0.5 seconds.