



Ref: P4134/L01a/RDC (email attachment)

16 April 2021

To:	Andrew Blackburn	of:	Northern Hospitality Limited
Cc:		of:	

Dear Andrew

Hula Bar, 11 Stevenson Square – Noise Impact Assessment

1.0 Introduction

- 1.1 Acoustic and Engineering Consultants Limited (AEC) has been instructed by Northern Hospitality Limited to assess the potential impact of noise breaking out from Hula Bar, Manchester, due to proposed extended opening hours.
- 1.2 In order to assess the potential noise impact of extending the opening hours of the venue, this report presents an assessment of the proposals and considers the following elements:
 - Music and patron noise break-out from the bar;
 - Noise from building services plant.
- 1.3 It should be noted that AEC's noise measurements were undertaken during the Governments lockdown due to the Covid-19 pandemic. During the lockdown all entertainment venues were closed. Therefore, the amount of road traffic and pedestrians in the areas was reduced and all associated building services plant was not operating.
- 1.4 Acoustic terminology is used throughout this report and is discussed in brief in Appendix A at the back of this report.

2.0 Site Description and Development Layout

- 2.1 Hula is located within the basement of 11 Stevenson Square, Manchester, as identified on the attached Figure 1. Hula functions as a bar/nightclub and has operated under the same name for at least a decade. AEC understands that the Local Authority has never received complaints relating to noise breaking out from Hula Bar.
- 2.2 Stevenson Square is located within the Northern Quarter district of Manchester and is home to numerous late-night venues including bars and nightclubs. Directly above Hula Bar on the ground floor of 11 Stevenson Square is the Fitzgerald bar (open 1700 to 0200h, Friday and Saturday).
- 2.3 To the rear of the development are offices and a music studio. The neighbouring property to the east is understood to be an office block. The nearest residential property to the Hula bar entrance door is around 9m to the east, across Little Lever Street, above the Bike Shop. Little Level Street is a small side street connecting Faraday Street to the north and Stevenson Square to the south.
- 2.4 As previously stated, Hula bar is located in the basement and access is gained via a stairwell from the main entrance off Stevenson Square. At the bottom of the stairwell, there is a double doorset that is kept closed other than for entry to and exit from the establishment.

- 2.5 During the process of reviewing their planning, licensing and operating arrangements, Northern Hospitality Ltd has identified that Hula has been operating to the licensing hours, rather than those permitted by the planning consent. Currently, the consent allows the premises to be open until 0030h Sunday – Thursday, and 0230h Friday – Saturday.
- 2.6 However, from 2009 to March 2020 (until Covid-19 restrictions), Hula had been operating under the licensing hours stated below:

Licensing Hours:

- Monday – Thursday – 1100 to 0330h
- Friday & Saturday – 1100 to 0430h
- Sunday – 1100 to 0230h.

- 2.7 It should be noted that Hula had been operating successfully under these longer opening hours for over ten years, without any noise complaints or enforcement action.
- 2.8 Furthermore, Hula was issued with temporary events notices for several weeks during 2019 which allowed the premises to open until 0500h. Throughout these events, no noise complaints were received.
- 2.9 Following this new planning submission, Northern Hospitality Ltd would like to change the operating times to the following:

Proposed Operating Times:

- Monday – Thursday – 1100 to 0330h
- Friday & Saturday – 1100 to 0530h
- Sunday – 1100 to 0230h.

- 2.10 It is understood that no new external mechanical plant equipment will be installed at the development. The existing plant serving the bar is located within a row of other external plant serving neighbouring units. These other units were not operational during AEC's 2021 site visit.
- 2.11 The location of the external mechanical plant serving Hula is presented on the attached Figure 1 and an image of them is presented in Figure 2.
- 2.12 The existing external plant will run in line with the proposed opening times of Hula Bar. Based on this, they will not operate during typical daytime office hours (0900 – 1700h), and only during the night-time periods.
- 2.13 Therefore, as the immediate surrounding buildings are all understood to be offices (operate during the daytime), the nearest receptor to the plant is also the apartments above the Bike Shop.

3.0 Noise Measurements

- 3.1 In order to assess the noise breaking out from Hula bar following the potential extension of its operating hours, AEC has conducted measurements to determine its current operating noise level and this is discussed below. Noise from the existing plant items were also measured and this is also discussed.
- 3.2 While these measurements were possible to conduct in light of the lockdown restrictions as a result of the Covid-19 pandemic, background noise level measurements were not. Due to the reduced vehicular movements, pedestrian footfall and commercial activity in busy city centre areas, it was considered that background noise level measurements would not be representative. Therefore, AEC has gathered information presented on Manchester City Council's (MCC) Planning Portal for other schemes in the area and these are discussed, below.

Noise Levels from Hula Bar

- 3.3 AEC attended site on Thursday 11 March 2021 to undertake measurements of the operating noise levels from Hula bar with the amplified music played at typical levels.
- 3.4 Ambient noise levels were measured in the venue, at the entrance to Hula on Stevenson Square, and external to the residential property above the Bike Shop. Noise levels were measured with and without amplified music being played in the Hula Bar, Noise levels were also measured with the basement doors open and closed, and a summary of these levels are presented in Table 3.1, below.
- 3.5 Please note that the noise levels measured external to the residential property were conducted under façade conditions and have, therefore, been corrected in accordance with BS7445-2: 1991 'Description and measurement of environmental noise'.

Table 3.1 – Free-field Hula Operating Noise levels

Location	Basement Doors	Noise Level, dBL _{Aeq,T}	
		Music Playing	Music Off
Inside Hula Bar	N/A	90	N/A
Entrance Door	Open	69	59
Entrance Door	Closed	64	

- 3.6 Due to the prevailing noise climate in the area, amplified music from Hula Bar was not audible at the nearest noise sensitive receptor.

External Plant Noise Levels

- 3.7 During AEC's site visit, with the plant operating at its typical speed, a noise level of 64dBL_{Aeq, T} was measured at a distance of 3m. In the absence of the plant, a noise level of 52dBL_{Aeq,T} was measured.

Existing Noise Climate

- 3.8 Based on noise assessments accessed off the MCC Planning Portal, two noise assessments have been carried out on Stevenson Square that provide a good indication of the existing noise climate surrounding Hula; one provided for planning application: 100866/FU/2012/C2 in 2012 , and one by provided for planning application Ref: 124723/FO/2019 in 2019.
- 3.9 The measurement locations for the 2012 and 2019 noise surveys are presented as A and B on Figure 1, respectively.
- 3.10 During the noise survey undertaken in 2012, night-time noise levels were measured between approximately 0125 and 0221h on a Wednesday night. The average free-field background noise level survey measured was 48dBL_{A90,T}.
- 3.11 Night-time noise levels measured in 2019 were between approximately 2105 and 2230h on a Wednesday night. The free-field ambient and background noise levels throughout the survey were around 61dBL_{Aeq,T} and 54dBL_{A90,T}, respectively.
- 3.12 During both periods, the noise climate was dominated by road traffic, pedestrians and noise associated with the cafés and bars in the area.
- 3.13 Based on the above, it is expected that the noise survey undertaken in 2019 is likely to be representative of the current noise climate.

4.0 BASIS OF ASSESSMENT

- 4.1 MCC has outlined their requirements for noise assessments to accompany planning applications in 'Planning & Noise – Technical Guidance' (2015) (PNTG).
- 4.2 Based on the proposed development, internal noise breakout and plant noise breakout to nearby receptors are the only areas for consideration.

Internal Noise Breakout

- 4.3 In relation to internal noise breakout from amplified music, PNTG states the following requirement:
1. *'Entertainment noise (LAeq) should be controlled to 10dB below the background noise level (LA90) without the entertainment noise present, in each octave band at the nearest noise sensitive location'.*
- 4.4 Therefore, based on the typical background noise level at the receptor (54dBL_{A90,T}), a 10dB reduction in each octave band is required to determine the noise level limit to be achieved at the receptor. This is presented in Table 4.1, below, where the overall noise level limit to not be exceeded as a result of amplified music noise within Hula, is 44dB(A).
- 4.5 It should be noted that the background noise level spectrum to determine this has been taken from the 2012 noise level survey (stated in the report) as it is the only one that provided octave band data for the background noise level.

Table 4.1 – Noise Level Limit for Entertainment Noise Breakout

Octave Band Centre Frequencies, Hz						
63	125	250	500	1k	2k	4k
51	43	40	39	41	37	32

Atmospheric Plant Noise Emissions

- 4.6 Based on guidance presented in MCC's document PNTG, the following is stated in relation to setting noise level limits for industrial sources, such as external services plant, at noise sensitive premises:
- "Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location."*
- 4.7 As previously stated, the external plant equipment will not operate during the daytime period and, therefore, only a night-time noise level limit is required.
- 4.8 Based on the above and the typical background noise level at the receptor (54dBL_{A90,T}), in order to ensure the requirements of the PNTG are achieved, the noise levels limit to be achieved at the nearest noise sensitive receptor is 49dBL_{A90,T}.

5.0 Assessment of Proposed Development

Internal Noise Breakout

- 5.1 Based on AEC's calculations, the noise level breaking out of Hula (as a result of the typical operating noise level) at the entrance on Stevenson Square is 77dBL_{Aeq,T}. As previously stated, the overall noise level limit to be achieved at the receptor is 44dB(A).
- 5.2 In order to determine whether this limit will be exceeded, AEC has calculated the noise level breaking out of Hula at the residential receptor. This value has then been compared against the frequency data of the overall noise level limit and the results are presented in Table 5.1, below.
- 5.3 As previously stated, it is understood that the basement to Hula doors is kept closed at all times, other than for patrons entering the establishment. In order to make reference to this in AEC's breakout calculations below, it has been assumed that during any 1-hour period, that they will be closed no more than half the time.

Table 5.3 – Allowable Internal Noise Level Limit

Element Noise Level	Overall, dB(A)	Noise Level, dB @Octave Band Centre Frequencies, Hz						
		63	125	250	500	1k	2k	4k
Noise Level @ Venue Entrance	77L _{Aeq,T}	78	82	81	73	69	65	62
Calculated @ Receptor	43	44	48	47	39	35	31	28
Noise Level Limit	44	51	43	40	39	41	37	32
Exceedances	-	-7	5	7	0	-6	-6	-4

- 5.4 Based on the above, there are exceedances only in the 125Hz and 250Hz octave band centre frequency bands.
- 5.5 However, it should be noted that noise breaking out of Hula is still 1dB below the overall noise level limit (11dB below the existing background noise level). Furthermore, it is around 18dB below the existing ambient noise level of 61dBL_{Aeq,T}.
- 5.6 Based on this, while the requirements of the PNTG have not strictly been achieved, as this application only involves an increase in operating hours (where it is anticipated that background and ambient noise levels will start to gradually increase), AEC do not anticipate that noise levels breaking out from Hula will result in an adverse impact on nearby receptors.
- 5.7 Based on this and that no noise complaints have been received by the Local Authority to date, it is not expected that an increase in operating hours will affect this.

Atmospheric Plant Noise Emissions

- 5.8 As previously stated, the nearest noise sensitive receptors to the external plant are also the apartments above the Bike Shop.
- 5.9 AEC has calculated the resultant noise level at the receptor as a result of the plant being operational. This has been based on -15dB of attenuation due to their being zero angle of view between the plant and the receptor, and a further -18dB for distance attenuation (23m away). Based on this, AEC has calculated the noise level at the receptor as a result of the plant operating would be 31dBL_{Aeq,T}.

- 5.10 Comparing this noise level with the noise level limit of 49dBL_{A90,T}, would indicate that there is no exceedance.
- 5.11 Based on the above, noise from the existing plant would be significantly below the requirements of the Local Authority,

Summary

- 5.12 Based on the above assessment, AEC do not believe that noise should be a limiting factor in granting planning permission for the extension of operating hours at Hula.

Figure 1 – Proposed Site Showing Monitoring Locations

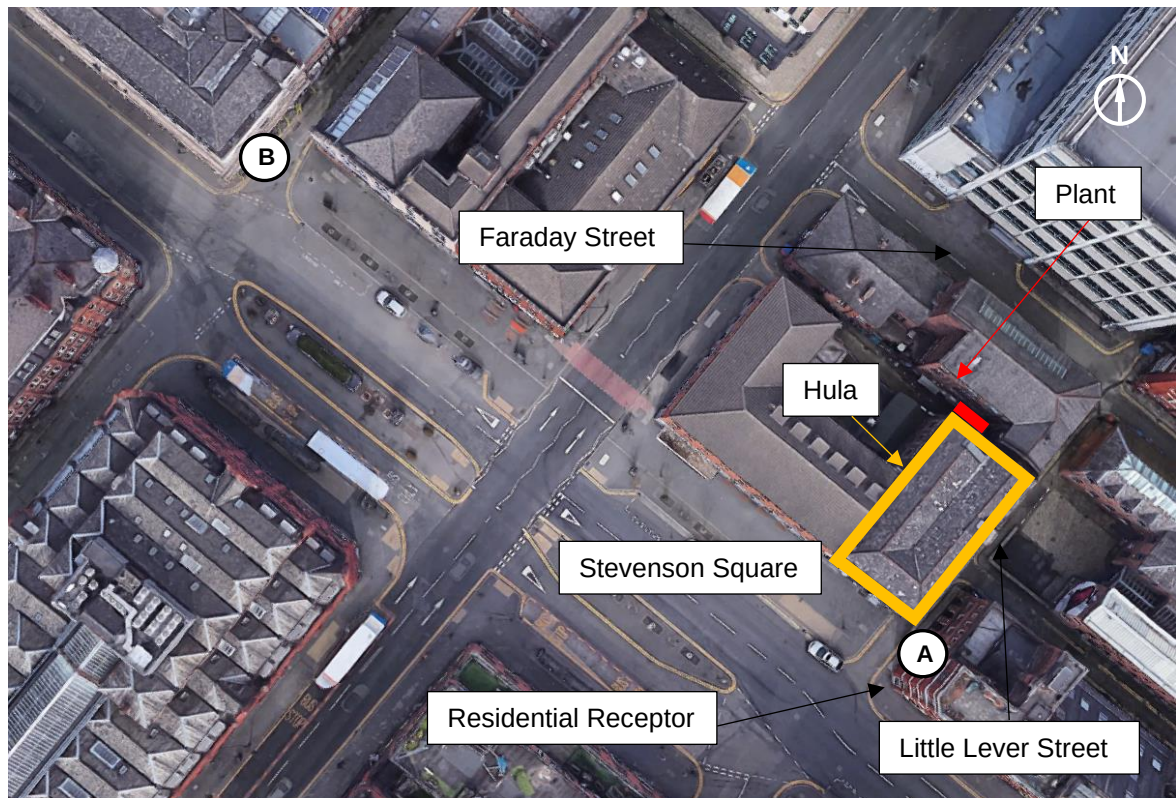


Figure 2 – Existing Plant



APPENDIX A – Acoustic Terminology in Brief

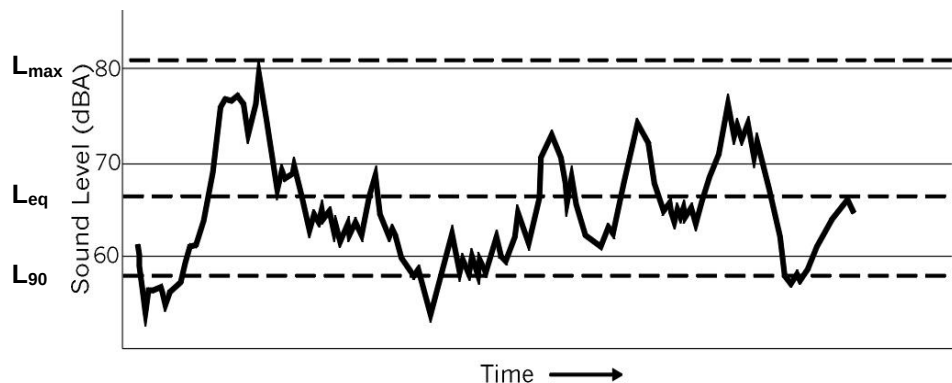
Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air. The rate at which the pressure fluctuations occur determines the pitch or *frequency* of the sound. The frequency is expressed in Hertz (*Hz*), that is, cycles per second. The human 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, <i>T</i> . 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.
$L_{A90,T}$	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.
Free-field Level	This refers to the sound level measured outside, away from reflecting surfaces.
Façade Level	This refers to the sound level measured outside, at 1m from a hard reflecting surface, typically 3dB greater than the free-field level.