

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

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The Lawn Club, Spinningfields

Acoustic planning report

London, Manchester, Edinburgh, Birmingham, Leeds, Bristol

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A	31 Jan 25		TS	JA
B	17 Apr 25	Revised following comments from the case officer	TS	JA
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Summary

Sandy Brown has been commissioned by Spinningfields Estate Limited to provide acoustic advice in relation to The Lawn Club, Spinningfields, Manchester.

The Lawn Club is a bar/restaurant in Hardman Square which is been operating under a temporary license since 2015.

An environmental noise survey has been carried out to determine the existing background sound levels in the area and operational noise associated with The Lawn Club. The noise survey was carried out on 11 January 2025 and between 16 January 2025 and 17 January 2025. Data from the survey has been used to assess the existing operations against the Manchester City Council (MCC) and other applicable criteria. Assessments of noise egress associated with the following key sources have been carried out:

- Plant
- Patrons in external terrace areas
- Amplified sound.

Plant noise egress limits have been established. Any new plant items shall be selected to comply with the limits.

The results of the patron noise egress assessment show that the predicted noise levels at nearby noise sensitive premises meet the recommended criteria.

The results of the amplified sound assessment indicate that further measures will need to be implemented to control amplified sound egress to meet with the MCC requirements.

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1 Introduction

Sandy Brown has been commissioned by Spinningfields Estate Limited to provide acoustic advice in relation to The Lawn Club, Spinningfields, Manchester.

As part of this, an environmental noise survey is required, the purpose of which is to establish the existing sound levels on and around the site.

This report presents the survey method and results.

2 Site description

2.1 The site and its surroundings

The site location in relation to its surroundings is shown in Figure 1.



Figure 1 Aerial view of the site (Courtesy of Google Earth Pro).

2.2 Adjacent premises

The Lawn Club (outlined in red in Figure 1) is a restaurant and bar located in the centre of Manchester's Hardman Square in Spinningfields.

The site is surrounded mostly by offices with commercial units on the ground floor. The closest of these commercial office premises are highlighted in yellow. Following the issue of 025552-R01-A *Acoustic planning report*, dated 31 January 2025, and correspondence with the case officer, it has been established that commercial office premises are considered to be noise sensitive during the day. Discussion on this correspondence is provided in Section 3.5.3.

The nearest residential noise sensitive premises are apartments located in the Left Bank building, approximately 180 m north-west of the site (outlined in green in Figure 1). The Manchester Opera House (highlighted in blue in Figure 1) is located to the south-east of the site.

2.3 The Lawn Club operations

The current operations of The Lawn Club are summarised below.

2.3.1 Internal use

It is understood that the legal capacity of the internal space is 600, though this is capped to 500 persons in practice. The venue operates as per the operational hours set out in the Premises Licence. The operational hours are:

- Sunday-Thursday 11:00 – 00:30
- Friday & Saturday 11:00 – 01:30.

There is an amplified sound system serving the internal spaces, which is controlled via an electronic limiter.

2.3.2 External use

The Lawn Club has two external terrace areas, a larger terrace to the south of the site and a smaller terrace, which is used for private bookings for up to 40 people, to the north. Both are highlighted in Figure 2.



Figure 2 The Lawn Club external terraces

There is amplified music on the external terrace area, which finishes at 23:00 and the area is cleared by 00:00. There is no official capacity of the larger terrace, though in practice it is limited to 400 persons. The external amplified sound system is controlled by an electronic limiter.

During the summer months, there is an outdoor screen, shown in Figure 3, that is used to show the Summer of sports. Audio associated with screen is amplified through the venue's sound system (with an electronic limiter installed).

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Figure 3 An image showing the outdoor screen (used during summer months)

During the winter months, there was previously a yurt on the external terrace, shown in Figure 4. The yurt does not form part of the new application and will not be erected in the future.



Figure 4 An image showing the yurt on the external terrace (used during winter months)

3 Assessment criteria

3.1 NPPF and NPSE

The National Planning Policy Framework, December 2024 (NPPF) sets out the UK government's planning policies for England. It supersedes previous guidance notes such as PPG24. No specific noise criteria are set out in the NPPF, or in the Noise Policy Statement for England (NPSE) to which it refers.

The NPPF, clause 198 states:

'Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- *mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life.*
- *identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.'*

and clause 200 states:

'Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.'

The NPSE states that its aims are as follows:

'Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *Avoid significant adverse impacts on health and quality of life*
- *Mitigate and minimise adverse impacts on health and quality of life and*
- *Where possible, contribute to the improvement of health and quality of life.'*

As such, neither document sets out specific acoustic criteria for new residential developments, but they require consideration of the effect of existing noise on the new development and the effect of noise from the development on the surroundings.

3.2 NPPG 2014

The National Planning Practice Guidance (NPPG) is a web-based document which complements the NPPF and provides advice on how to deliver its policies. The document provides guidance on how to recognise when noise could be a concern and the factors that influence this, along with outline guidance on noise mitigation through engineering and design, etc.

3.3 BS 4142:2014+A1:2019

Guidance for noise emission from proposed new items of building services plant is given in BS 4142: 2014+A1:2019 'Methods for rating and assessing industrial and commercial sound'. BS 4142 provides a method for assessing noise from items such as building services plant against the existing background sound levels at the nearest noise sensitive.

BS 4142 suggests that if the noise level is 10 dB or higher than the existing background sound level, it is likely to be an indication of a significant adverse impact. If the level is 5 dB above the existing background sound level, it is likely to be an indication of an adverse impact. If the level does not exceed the background level, it is an indication of having a low impact. Guidance on corrections for attention catching features is provided in Appendix B.

3.4 BS 8233:2014

For external amenity areas, such as gardens and patios, the standard states:

'it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$ with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.'

3.5 Manchester City Council criteria

3.5.1 Plant noise egress

Manchester City Council (MCC) provides guidance in relation to plant noise emissions in their *Noise and Planning guidance* document dated October 2022. The following is stipulated:

'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 (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.'

3.5.2 Entertainment noise egress

MCC Noise and Planning Guidance dated October 2022 states the following:

“Entertainment noise ($L_{Aeq,5min}$) should be controlled to 5 dB below the typical background noise level (L_{A90}) in each octave-band at the nearest noise sensitive location.”

3.5.3 Correspondence with the case officer

Initial comments from the case officer on Sandy Brown report 025552-R01-A were provided via email on 18 March 2025. There has been discussion with the case officer regarding the application and the restrictions to be imposed on The Lawn Club.

Clarifications have been provided following email correspondence with the case officer regarding the sensitivity of commercial premises. The following statements have been provided by the case officer regarding amplified noise egress, which will form the basis of the revised assessment presented in this report.

‘Commercial receptors are still sensitive and noise from music or other noise sources such as plant etc can impact the amenity of the occupiers of these properties, especially when in such close proximity and lead to complaints and can also lead to a general increase in noise in the area. Commercial properties need to be considered and this is standard approach across the city as the applicant and consultant will be aware with other recent various applications in and around this site.’

‘However, without prejudice to any other applications and on this occasion under this application only, bearing in mind the previous use and the location with the immediate offices being sealed we can look to relax the criteria and agree music noise level criteria not to exceed / equal to background at the façade of these receptors during the typical office hours 08:00 to 18:00.’

The case officer also provided a statement regarding music on external terraces and speakers:

‘We do not allow speakers or music in external terraces/ seating areas and this is the consistent approach across the city with all current applications ...’

‘As a compromise, we can look to treat the large tv screen [shown in Figure 3] as a specific event space and can possibly look to allow the use of the large screen for specific events only. This would need to be under agreement of an event strategy which includes the no of events per year (such as maximum of 12 events with 1 day per event), type of events, hours, noise level associated with the large screen to be background music only but at a level to be agreed with MCC. But outside of these events we wouldn’t be able to allow music on the external terrace to maintain consistency throughout the City.’

If desirable, an event strategy would need to be provided by The Lawn Club in line with the comment from the case officer.

The following statement was provided regarding plant noise egress and commercial premises:

‘The closer nearby commercial units will need to be included under this condition and criteria as the intention of the condition is also to prevent a general increase in noise in the area and noise creep. This is the same approach throughout the City and notably, the same approach with all recent plant installations in this surrounding location and Spinningfield estates area and has been addressed accordingly.’

4 Noise survey method

The survey included unattended and attended noise measurements.

The measurements and information provided in this report are in accordance with requirements of BS 7445, as referenced in Appendix A.

4.1 Unattended measurements

Unattended noise monitoring was undertaken at the site over 1 day.

The measurements were taken over 15-minute periods between 14:15 on 16 January 2025 and 14:15 on 17 January 2025.

The microphone for the sound level meter was attached to an external area of The Lawn Club with a microphone extending above roof level. The measurement position is indicated in Figure 6, denoted by ‘Logger’, and a photograph showing the measurement position is provided in Figure 5. This location was chosen to be reasonably representative of noise levels at the site.



Figure 5 Image showing the unattended measurement position

Details of the equipment used and the noise indices measured are provided in Appendix A.

4.2 Attended measurements

Attended sample measurements were taken at 1 internal and 6 external positions around the site during the day on 16 January 2025, and during the evening and night of 11 January 2025.

The external measurement positions are indicated in Figure 6 as positions A to F.

All measurements were 5 minutes in duration.

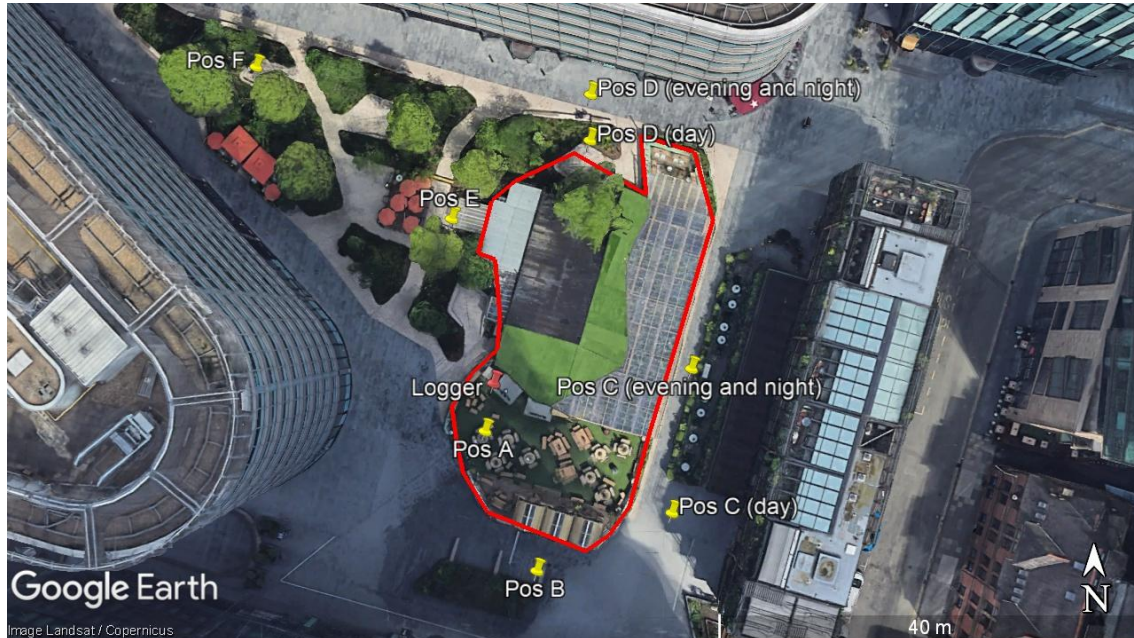


Figure 6 Image showing the site, and the external attended and unattended measurement locations (Courtesy of Google Earth pro)

At each position (with the exception of position C during the evening and night) the microphone was mounted on a tripod approximately 1.2 m above the ground level and at least 3 m from any other reflective surface.

Internal measurements were carried out in the main seating area, indicated in Figure 7. This measurement position was determined to be representative of the highest overall internal noise levels when the amplified sound system was in operation.

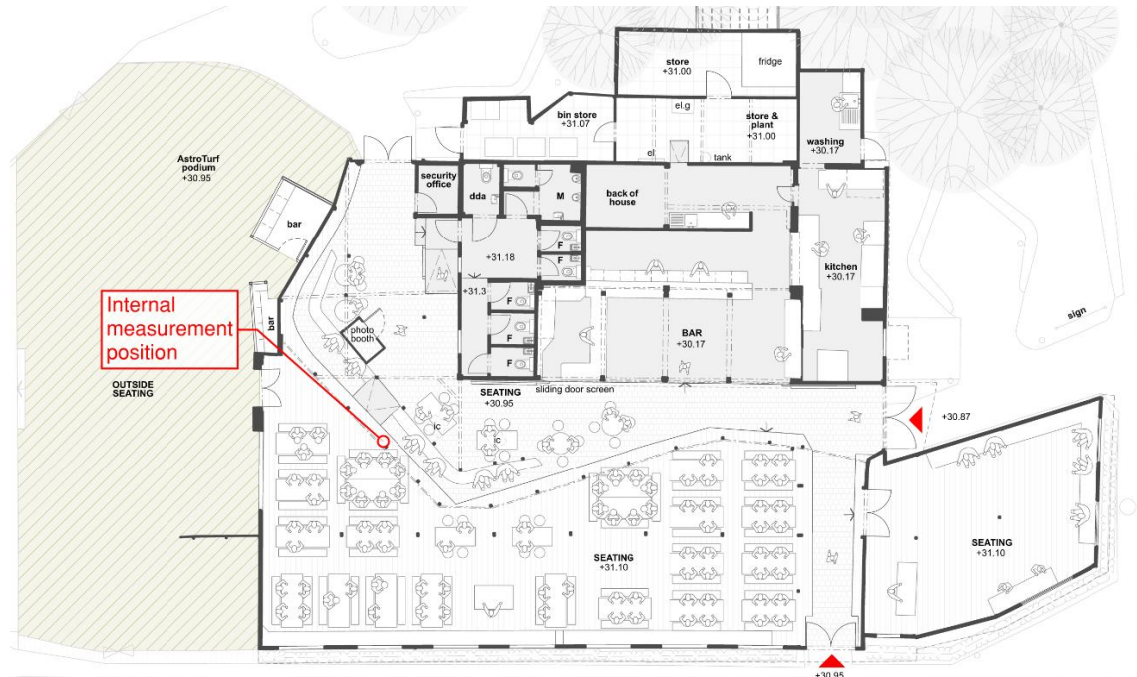


Figure 7 Internal attended measurement location

Details of the equipment used and the noise indices measured are provided in Appendix A. Dominant noise sources occurring during the measurements were noted.

4.3 Weather conditions

Weather conditions during the survey are described in Appendix A.

5 Noise survey results

5.1 Observations

The dominant noise sources observed at the site during the unattended measurements were from pedestrians in the area and the winter heaters used by The Lawn Club. The winter heaters do not form part of the new application. Less significant noise sources included road traffic noise, operational sound breakout from The Lawn Club, wind, and birdsong.

Observations during the attended measurements are presented in Table 2.

5.2 Noise measurement results

5.2.1 Unattended measurement results

A graph showing the results of the unattended measurements is provided in Appendix C.

Ambient noise levels measured during the unattended survey are presented in Table 1.

Table 1 Ambient noise levels measured during the unattended survey

Date	Day (07:00 – 23:00) $L_{Aeq,16h}$ (dB)	Night (23:00 – 07:00) $L_{Aeq,8h}$ (dB)
Thursday 16 January 2025	57 ^[1]	53
Friday 17 January 2025	57 ^[1]	-

^[1] Measurement not made over full period due to monitoring start and end time (the measurement on 16 Jan 25 was over 9 hours, and on 17 Jan 25 over 7 hours).

The unattended measurement results were impacted by noise associated with The Lawn Club during parts of the survey. To determine the representative background sound levels at the site (in the absence of The Lawn Club operations), these time periods have been excluded from the dataset and subsequent assessment.

In line with BS 4142:2014+A1:2019, representative background sound levels have been determined using statistical analysis of the continuous measurements.

Day and night statistical analysis of representative values for the site are given in Figure 8.

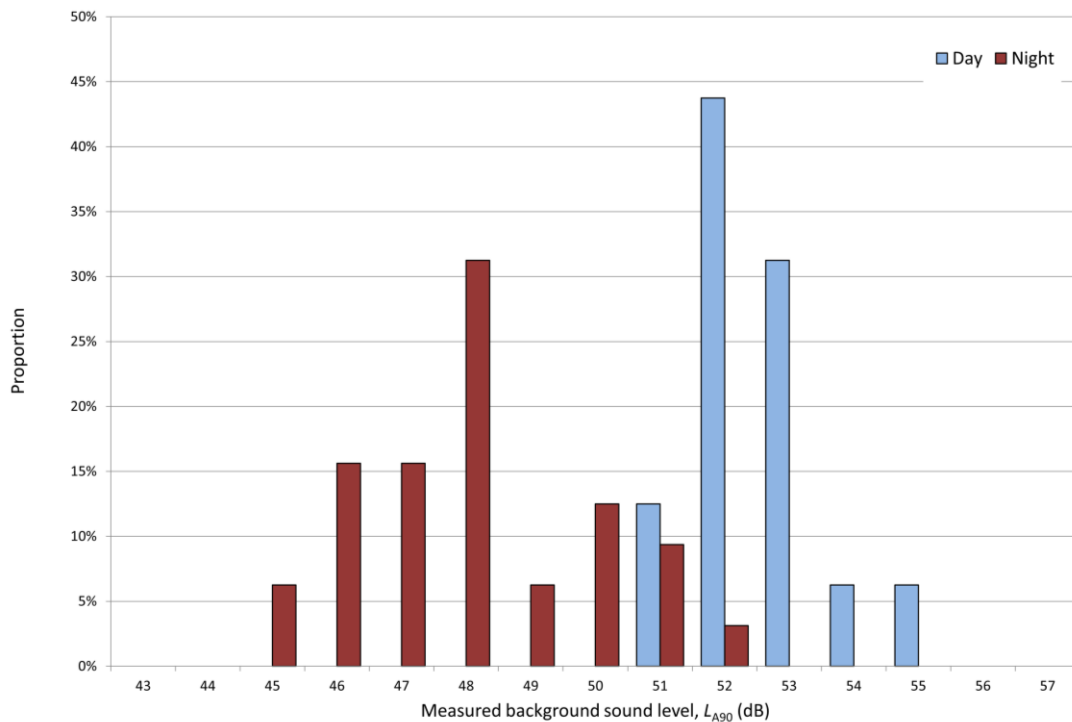


Figure 8 Statistical analysis of background sound level (noise associated with The Lawn Club operations removed)

From this analysis, the representative background noise levels, L_{90} (dB), over the measurement period were L_{90} 52 dB during the day and L_{90} 48 dB during the night.

5.2.2 Attended measurement results

Noise levels and key sources recorded during the attended measurements are summarised in Table 2. All attended measurements, with the exception of position C in the evening and at night, were undertaken in free field conditions.

The only doors used for access and egress during the survey were the main doors facing the Ivy. These doors were held open during the evening and night measurements on Saturday 11 January presented in Table 2. Therefore, the measurement results presented and subsequent assessment are representative of the worst-case scenario.

Table 2 Noise levels and key noise sources from attended measurements

Position	Start time	Sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
<i>Measurements during the day – Thursday 16 January 2025</i>					
A	12:32	57	63	56	Main noise sources include noise from the heater, pedestrian foot traffic, and music from The Lawn Club.
A	12:37	57	64	56	As above, with some construction noise.
B	12:44	58	68	56	Main noise sources include noise from the heater, pedestrian foot traffic, and some construction noise.
B	12:50	59	79	56	As above, with road traffic noise from Quay Steet.
C	12:56	61	78	59	Main noise sources include noise from the heater, pedestrian foot traffic, and road traffic noise from Quay Steet.
C	13:01	60	71	59	
D	13:09	57	68	55	Main noise sources include noise from the kitchen, pedestrian foot traffic, and noise from Black Sheep Coffee.
D	13:14	57	75	54	As above, with music from the Ivy’s entrance speakers.

Position	Start time	Sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
E	13:35	55	67	52	Main noise sources include pedestrian foot traffic, distant construction noise, and people talking in the smoking area. Kitchen extract fan operational but not audible at 5 m distance.
E	13:41	54	67	52	As above, with operational noise from The Lawn Club.
F	13:21	56	65	54	Main noise sources include pedestrian foot traffic, distant construction noise, and road traffic noise from Gartside Street.
F	13:30	57	74	52	
Measurements during the evening – Saturday 11 January 2025					
A	21:10	71	80	68	Amplified music breakout from The Lawn Club dominates. Pedestrian foot traffic was also noted.
A	21:16	72	79	69	
B	21:22	65	70	62	Amplified music from The Lawn Club dominates. The yurt provides some screening.
B	21:27	66	84	61	As above, max caused by glass bottles being dumped at another venue.

Position	Start time	Sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
C	21:33	75	88	71	Amplified music breakout from The Lawn Club dominates. Pedestrian foot traffic was also noted. There was no noise from The Ivy.
C	21:38	72	78	69	
D	21:46	67	76	64	Amplified music breakout from The Lawn Club dominates. Pedestrian foot traffic was also noted.
D	21:51	66	75	63	
E	21:57	63	82	60	Amplified music breakout from The Lawn Club drives the background noise level. Road traffic on Gartside Street was just audible.
E	22:02	62	71	60	
F	22:08	61	72	59	Amplified music breakout from The Lawn Club drives the background noise level. Road traffic on Gartside Street was more clearly audible than at position E.
F	22:13	62	76	58	
Measurements during the night – Saturday 11 January/Sunday 12 January 2025					
A	23:08	70	79	66	Amplified music breakout from The Lawn Club dominates. Max at 23:08 likely caused by a siren on Quay Street.
A	23:13	67	74	63	

Position	Start time	Sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
B	23:19	60	67	57	Amplified music from The Lawn Club is not as significant at this position as during the evening. Road traffic noise on Byrom Street is more clearly audible. Max at 23:24 caused by glass bottles being dumped at The Ivy.
B	23:24	62	78	58	
C	23:30	70	85	66	Amplified music breakout from The Lawn Club dominates.
C	23:35	68	75	65	
D	23:52	63	73	58	Amplified music breakout from The Lawn Club dominates. Amplified music stopped at midnight.
D	23:57	63	80	56	
E	00:03	58	75	54	No noise from The Lawn Club was audible. Amplified music breakout from Louis (a nearby restaurant and bar) could be heard, particularly when the door to the venue was open. Road traffic was infrequent and barely audible.
E	00:08	57	72	53	
F	00:14	55	64	51	Road traffic noise from Gartside Street drove the background noise level. Amplified music breakout from Louis was barely audible. Max at 00:19 caused by siren on Quay Street.
F	00:19	60	77	54	

5.2.3 Internal attended measurement results

Noise levels and key sources recorded during the attended measurements are summarised in Table 3.

Table 3 Attended measurements inside The Lawn Club during operational hours

Position	Start time	Sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Measurements during the day – Thursday 16 January 2025					
Internal	12:06	65	72	58	Main noise sources included background amplified music from the Lawn Club’s internal sound system, some external construction noise was audible, patron noise also contributed.
Internal	12:11	66	75	59	
Measurements during the evening – Saturday 11 January 2025					
Internal	22:26	93	101	90	The venue was at approximately 40% capacity inside. Amplified music was the dominant noise source. People talking with raised voices could also be heard during lulls in the music.
Internal	22:31	94	101	91	
Measurements during the night – Saturday 11 January 2025					
Internal	23:41	89	96	84	There were approximately 10 patrons in the venue at this time. Amplified music was the dominant noise source.
Internal	23:46	91	99	88	

5.2.4 Measurements at the Opera House

Additional measurements were carried out on 28 January 2025 at 11:41 to determine the representative background noise level outside the facade of the Opera House on Byrom Street as this is the nearest noise sensitive premises. The background noise level ($L_{90,15\text{min}}$) measured at this location is presented in Table 4 in octave bands. The measurement result is presented as a facade level.

Table 4 Measured background noise level at the facade of the Opera House

	Measured background noise level, $L_{90,15\text{min}}$ (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Opera House – Byrom Street facade	59	59	58	56	53	48	41

6 Plant noise egress

6.1 Limits

Based on the MCC criteria given in Section 3.5.1, correspondence with the case officer presented in Section 3.5.3, and the measurement results, the cumulative noise level resulting from the operation of all plant associated with The Lawn Club at 1 m from the worst affected windows of the nearest noise sensitive premises should not exceed the limits presented in Table 5.

The limits apply at 1 m from the worst affected windows of the nearest noise sensitive premises and are presented as facade levels. In this case, these limits would apply at nearby commercial office premises and the residential premises in the Left Bank building during the day and night. A 3 dB correction has been applied to the existing background noise levels when determining these limits to account for facade reflections at the receptor where appropriate.

Table 5 Plant noise limits at 1 m from the nearest noise sensitive premises

Time of day	Maximum sound pressure level at 1 m from noise sensitive premises, $L_{Aeq,15\text{min}}$ (dB)
Day (07:00-23:00)	50
Night (23:00-07:00)	46

The limits set out do not include any attention catching features. Penalty corrections for attention catching features may be significant and will need to be considered as the building services design progresses. This is discussed in Appendix B.

As per the BS8233 guidance set out in Section 3.4, it is recommended that the external noise level does not exceed the upper guideline value of L_{Aeq} 55 dB in external amenity areas such as Hardman Square.

6.2 Plant noise assessment

6.2.1 Equipment

The existing plant items at The Lawn Club at the time of the environmental noise survey included the following:

- Two Biemmedue Phoen 110 space heaters, which previously heated the main internal space and the yurt during colder months. A photograph of one of the heaters is presented in Figure 9. As outlined in above, the yurt and space heaters do not form part of this application.
- Kitchen extract fan, which terminates in the location highlighted in Figure 10.



Figure 9 Biemmedue Phoen 110 space heater



Figure 10 Kitchen extract fan termination location

6.2.2 Plant noise egress level at noise sensitive receptors

Measurements of the space heaters were carried out as part of the environmental noise survey. Each of the heaters was measured to have a sound pressure level of L_{Aeq} 82 dB at 1 m.

Noise from the kitchen extract fan was not audible during the environmental noise survey at measurement position E, which is approximately 5 m away. A sound pressure level of L_{Aeq} 54 dB was measured at position E during the day with the kitchen extract fan in operation. Given that noise from the fan was not audible at this position, the specific noise level would be in the region of 10 dB below the measured sound pressure level.

The predicted noise level at 1 m from the facade of nearby noise sensitive premises due to the existing plant items is:

- L_{Aeq} 64 dB at the worst affected commercial office premises – No.1 Spinningfields
- L_{Aeq} 48 dB at Opera House
- L_{Aeq} 37 dB at Left Bank.

The calculated noise egress levels (based on the measurements) comply with the limits set out in Table 5 at the Opera House during the day and at Left Bank in the day and at night.

However, the limits are not achieved at the worst affected nearby commercial premises during the day due to the space heaters. Whilst the heaters have been removed from the premises and do not form part of the application, in order to comply with the limits at nearby

commercial premises during the day if the space heaters or a different system in the same location are to be reinstated at a later date, it is recommended that the new units have a cumulative sound pressure level no higher than L_{Aeq} 61 dB at 1 m. This would need to reduce further to L_{Aeq} 57 dB at 1 m if the units are to be used at night (23:00-07:00).

The predicted noise level in Hardman Square due to plant noise egress does not exceed L_{Aeq} 50 dB, which complies with the BS 8233 guidance set out in Section 3.4.

7 Patron noise egress

7.1 Noise egress from occupants of external seating areas

MCC does not stipulate any specific criteria in relation to noise egress associated with operational noise from the occupants of external amenity spaces. The *Noise and Planning Guidance* document dated October 2022 refers to the WHO *Guidelines for Community Noise* 1999.

The guideline values provided in the WHO guidelines for the impact of community noise on residential premises are given in Table 6.

Table 6 WHO guidelines for the impact of community noise

Specific environment	Health effect	Noise level
Outdoor living areas	Serious annoyance, daytime and evening	$L_{Aeq,16hr}$ 55 dB
	Moderate annoyance, daytime and evening	$L_{Aeq,16hr}$ 50 dB
Outside bedrooms	Sleep disturbance, window open	$L_{Aeq,8hr}$ 45 dB

Given that speech noise associated with the outdoor seating areas is only likely to occur during peak periods and not for the whole 16-hour time base given during the daytime (07:00 to 23:00), and that the existing ambient noise levels exceed those provided in the WHO guidelines, the health effects are likely to be less severe than those stated.

7.2 Assessment

Assessment of noise egress from patrons within the external terrace areas at the development has been carried out. Typical numbers of patrons are based on the capacity of external seating areas, which have been confirmed by the management company as follows:

- Up to 400 people on the large terrace
- Up to 40 people on the small terrace.

The model is based on 50% of the patrons talking simultaneously (200 patrons talking on the large terrace and 20 on the small terrace) of which 20% are talking with raised voices.

Normal levels for speech of L_{Aeq} 60 dB at 1 m and raised voices of L_{Aeq} 66 dB at 1 m have been used in the assessment, as defined in ISO 9921.

This approach has been used recently on several other projects in the area and has been accepted by MCC.

The predicted noise levels at 1 m from the facade of nearby noise sensitive receptors due to patron noise within the external amenity areas are presented below. It should be noted that the WHO guidance only applies to residential premises. The predicted noise levels at the Opera House and the worst-affected commercial office premises have been provided for reference:

- L_{Aeq} 45 dB at Left Bank
- L_{Aeq} 55 dB at the Opera House
- L_{Aeq} 64 dB at the worst affected commercial office premises, No.1 Spinningfields.

At the nearest residential premises, the noise levels are lower or in line with the recommended criterion of L_{Aeq} 55 dB applicable during the day and L_{Aeq} 50 dB during the evening and are lower than the average ambient noise levels measured at the site during the day/evening periods. The level predicted outside No. 1 Spinningfields is not expected to cause disturbance as this building has a fully sealed glazed facade.

8 Amplified sound egress

8.1 Limits

Based on the above criteria and the measurement results, the cumulative noise level from amplified sound should not exceed the limits set out below.

The typical background noise level measured at the unattended measurement position is deemed to not be representative of the octave band noise level at the Opera House. As such, the limits presented in Table 7 are applicable to the residential premises at Left Bank only. The limits apply at 1 m from the worst affected windows of Left Bank and are presented as facade levels.

Table 7 Amplified sound egress limits at 1 m from the facade of Left Bank (nearest residential premises)

Time of day	Amplified sound egress limits at 1 m from noise sensitive premises, $L_{eq,5min}$ (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Day (07:00-23:00)	53	52	50	48	46	41	32
Night (23:00-07:00)	49	48	47	44	40	34	25

Based on the measurements obtained at the facade of the Opera House presented in Table 4, the amplified sound egress limits, which are applicable to the Opera House during the day, are presented in Table 8. The limits apply at 1 m from the worst affected windows of the Opera House and are presented as facade levels.

Table 8 Amplified sound egress limits at 1 m from the facade of the Opera House (nearest sensitive premises)

Time of day	Amplified sound egress limits at 1 m from noise sensitive premises, $L_{eq,5min}$ (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Day (07:00-23:00)	54	54	53	51	48	43	36

Following correspondence with the case officer, it was confirmed that amplified noise egress shall not exceed the existing background noise level at the facade of commercial receptors during typical office hours (08:00-18:00). On this basis, the limits presented in Table 9 are recommended for nearby commercial premises during typical office hours.

Table 9 Amplified sound egress limits at 1 m from the facade of commercial offices during typical office hours

Time of day	Amplified sound egress limits at 1 m from noise sensitive premises, $L_{eq,5min}$ (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Typical office hours (08:00-18:00)	58	57	55	53	51	46	37

8.2 Assessment

An assessment of amplified sound egress has been carried out based on the current operating conditions and the restrictions defined within the Premises Licence.

8.2.1 Amplified sound breakout from internal spaces during the day (07:00-23:00)

The assessment of amplified sound breakout from the main internal spaces has been carried out based on the measurements and observations made during the noise survey.

The predicted noise levels at the worst affected position at the noise sensitive premises due to amplified sound egress breakout during the day are shown in Table 10.

Table 10 Predicted amplified sound egress levels at 1 m from the facade worst affected position at noise sensitive premises during the day

Receptor	Predicted amplified sound levels at 1 m from noise sensitive premises, $L_{eq,5min}$ (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Left Bank	58	57	48	46	44	37	26
Opera House	66	63	54	51	50	44	36
Worst affected commercial premises	79	77	66	64	63	57	50
<i>Comparison against the criteria</i>							
Left Bank	+5	+5	-2	-2	-2	-4	-6
Opera House	+12	+9	+1	-	+2	+1	-
Worst affected commercial premises	+21	+20	+11	+11	+12	+11	+13

From the results presented in Table 10, it can be seen that the predicted external noise level due to amplified sound breakout during the day exceeds the limits required by MCC. Possible measures to mitigate amplified sound breakout are presented below:

- Limit amplified sound within the internal spaces. Guidance on maximum internal limits based on corrections to the levels measured are provided in Table 11.
- Increase the sound insulation of the building fabric. This could include enhancing the roof or providing a suspended ceiling, closing off and sealing gaps to the perimeter walls and doors and selecting alternative materials for the building fabric.

Table 11 Guideline maximum internal amplified sound limits during the day

Operation	Guideline maximum noise limits, L_{eq} (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
<i>During typical office hours (08:00-18:00)</i>							
Internal amplified music only	74	71	76	78	78	74	70
<i>Outside office hours (18:00-23:00)</i>							
Internal amplified music only	83	82	86	89	88	84	83

^[1] The period of 07:00-08:00 is not covered in Table 11 as this is outside the operational hours of The Lawn Club.

These limits represent a reduction in the internal amplified sound levels compared to the current operations. The limits outside of typical office hours would be expected to be suitable for a lively city centre bar environment. During office hours, the limits are expected to allow for background music only.

It is recommended that the electronic limits be adjusted to ensure these limits are adhered to. The case officer has requested that details of the electronic limiter system and confirmation of how the limits can be set and controlled without user intervention will need to be provided.

8.2.2 Amplified sound breakout from internal spaces at night (23:00-07:00)

The assessment of amplified sound breakout from the main internal spaces has been carried out based on the measurements and observations made during the noise survey.

The predicted noise levels at the worst affected position at the noise sensitive premises due to amplified sound egress breakout during at night are shown in Table 12.

Table 12 Predicted amplified sound egress levels at 1 m from the facade worst affected position at noise sensitive premises at night

Receptor	Predicted amplified sound levels at 1 m from noise sensitive premises, $L_{eq,5min}$ (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Left Bank	58	52	45	40	41	35	23
<i>Comparison against the criteria</i>							
Left Bank	+9	+4	-2	-4	+1	+1	-2

Based on the results presented in Table 12, it can be seen that the predicted external noise level due to amplified sound breakout during the night exceeds the limits by MCC. Possible measures to mitigate amplified sound breakout are presented below:

- Limit amplified sound within the internal spaces. Guidance on maximum internal limits based on corrections to the levels measured are provided in Table 13.
- Increase the sound insulation of the building fabric as discussed in Section 8.2.1.

Table 13 Guideline maximum internal amplified sound limits during at night

Operation	Guideline maximum noise limits, L_{eq} (dB)						
	Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Internal amplified music	86	89	85	83	85	80	81

These limits represent a reduction in the internal amplified sound levels compared to the current operations but would be expected to be suitable for a lively city centre bar environment.

It is recommended that the electronic limits be adjusted to ensure these limits are adhered to. The case officer has requested that details of the electronic limiter system and confirmation of how the limits can be set and controlled without user intervention will need to be provided.

8.2.3 Amplified sound on the external terraces

It has been confirmed by the case officer that amplified noise in external areas is not permitted and that the any external areas will need to be closed, and all external seating made unusable/inaccessible by 23:00.

As noted in Section 3.5.3, the external terrace and large tv screen (shown in Figure 3) could be considered as a specific event space with use of the large screen for specific events only. This would need to be under agreement of an event strategy which includes the no. of events per year (such as maximum of 12 events with 1 day per event), type of events, hours, noise level associated with the large screen to be background music only but at a level to be agreed with MCC. Any future event space would need to comply with the limits set out in Section 8.1.

9 Conclusion

A noise survey has been carried out at the site. The dominant noise sources observed at the site during the survey when The Lawn Club was not in operation were from pedestrians in the area and road traffic noise. When The Lawn Club was in operation, the dominant noise sources included amplified sound breakout from the venue and noise from the space heaters located on the external terrace.

Assessments of plant noise egress, patron noise and amplified sound egress have been carried out. The findings of the assessments indicate that mitigation measures will need to be implemented to meet the amplified sound criteria and to meet the plant noise egress criteria at nearby commercial premises.

Appendix A

Survey details

Reference standards

- BS 7445 Part 1: 2003 *Description and measurement of environmental noise, Part 1. Guide to quantities and procedures*
- BS 7445: Part 2: 1991 *Description and measurement of environmental noise, Part 2. Guide to the acquisition of data pertinent to land use.*

Equipment

The unattended and attended noise measurements were taken using a Rion NL-52 sound level meter.

Calibration details for the equipment used during the survey are provided in Table A1.

Table A1 Equipment calibration data

Equipment description	Type/serial number	Manufacturer	Calibration expiry	Calibration certification number
Sound level meter	NL-52/01010788	Rion	20 Sep 25	TCRT23/1666
Microphone	UC-59/20416	Rion	20 Sep 25	TCRT23/1666
Pre-amp	NH-25/11436	Rion	20 Sep 25	TCRT23/1666
Calibrator	SV30A/10559	Svantek	20 Sep 25	TCRT23/1665

Calibration of the meters used for the measurements is traceable to national standards. Calibration certificates for the sound level meter used in this survey are available upon request.

Calibration checks were carried out on the meters and their measurement chains at the beginning and end of the survey. No significant calibration deviation occurred.

Noise indices

Noise indices recorded included the following:

- $L_{Aeq,T}$ The A-weighted equivalent continuous sound pressure level over a period of time, T.
- $L_{AFmax,T}$ The A-weighted maximum sound pressure level that occurred during a given period, T, with a fast time weighting.
- $L_{A90,T}$ The A-weighted sound pressure level exceeded for 90% of the measurement period. Indicative of the background sound level.

Sound pressure level measurements are normally taken with an A-weighting (denoted by a subscript 'A', eg, L_{A90}) to approximate the frequency response of the human ear.

A more detailed explanation of these quantities can be found in BS 7445: Part 1: 2003 *Description and measurement of environmental noise, Part 1. Guide to quantities and procedures*.

Weather conditions

During the unattended noise measurements, weather reports for the area indicated that temperatures varied between 4°C at night and 10°C during the day, and the wind speed was typically less than 4 m/s.

During the attended noise measurements, the weather was generally clear and dry and no rain occurred. Wind speeds were approximately 3 m/s.

These weather conditions are considered suitable for obtaining representative measurements.

Appendix B

BS 4142 corrections for attention catching features

The following applies where plant noise is assessed in accordance with BS 4142:2014+A1:2019.

If the proposed plant noise contains attention catching features (such as tonal elements, whines, whistles, bangs etc), penalty corrections should be applied based on the type and impact of the features.

If appropriate, a subjective assessment of the plant features can be adopted. Where the plant noise contains tonal elements, the following corrections can be made depending on how perceptible the tone is at the noise receptor:

- 0 dB where the tone is not perceptible
- 2 dB where the tone is just perceptible
- 4 dB where the tone is clearly perceptible
- 6 dB where the tone is highly perceptible.

Where the plant noise is impulsive, the following corrections can be made depending on how perceptible the impulsivity is at the noise receptor:

- 0 dB where the impulse is not perceptible
- 3 dB where the impulse is just perceptible
- 6 dB where the impulse is clearly perceptible
- 9 dB where the impulse is highly perceptible.

For noise which is equally both impulsive and tonal, then both features can be accounted for by linearly summing the corrections for both characteristics.

If the plant has other distinctive characteristics, such as intermittency, then a 3 dB correction can be made.

If a subjective assessment of tonality is not appropriate, an objective assessment can be made by analysis of time-averaged, third-octave band sound pressure levels. A noise source is deemed to be tonal if the level in a third-octave band exceeds the level in adjacent third-octave bands by the level differences given below:

- 15 dB in the low frequency third-octave bands (25 Hz to 125 Hz)
- 8 dB in the mid frequency third-octave bands (160 Hz to 400 Hz)
- 5 dB in the high frequency third-octave bands (500 Hz to 10000 Hz).

If an objective assessment identifies the plant noise to be tonal then a 6 dB correction must be made.

Appendix C

Results of unattended measurements

The Lawn Club, Spinningfield, Manchester
Results of noise logging survey at The Lawn Club
16 January 2025 to 17 January 2025

