

21549-R10-C

24 April 2026

Postal Street, Manchester

Planning noise report – Supplementary report

**SANDY
BROWN**
ACOUSTICS

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Version	Date	Comments	Author	Reviewer
A	15 Apr 26	Draft issue for comment	JW	MR
B	22 Apr 26	Updates to summary and Sections 3-8	JW	MH
C	24 Apr 26	Updates to summary and Section 7 and Appendix D	JW	MH

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Summary

Sandy Brown has been commissioned by Atkins Realis to provide acoustic advice in relation to the proposed development at Postal Street, Manchester.

Sandy Brown previously carried out environmental noise surveys at the site in 2022 and 2024. Following discussion with Stage & Radio, further surveys have been carried out to capture noise from specific events at Stage & Radio.

Environmental noise surveys have been carried out during events to determine the existing sound levels in the area. The noise surveys were carried out during the following times in agreement with Stage & Radio:

- Greenskeepers jam measurements between 18:00 and 23:00 on 24 October 2025
- Student club night measurements between 23:00 on 6 November 2025 and 04:00 on 7 November 2025
- Multi-floor club night measurements between 23:00 on 7 November 2025 and 04:00 on 8 November 2025
- Live gig with full band measurements between 18:00 and 23:00 on 21 November 2025.

Attended vibration measurements were undertaken during the event on 21 November 2025.

The noise levels measured at the events listed above exceeded the noise levels previously measured and detailed in report 21549-R07-B dated 6 November 2025.

There are ongoing discussions with Stage & Radio regarding possible enhancement options to reduce the level of noise egress during events to reduce the external noise levels at the facade of the proposed development in line with previous measurements detailed in 21549-R07-A. This would then allow the proposed facade sound insulation strategy presented in 21549-R07-A to be installed for compliance with the internal noise level requirements from Manchester City Council.

The enhancement options to be explored are subject to feasibility studies and agreement with the relevant parties. Possible options include:

- Make good existing windows and brickwork
- Resiliently isolate sound system
- Secondary glazing/replacement of external glazing
- Lobbied entrance
- Plasterboard lining to external wall
- Acoustic attenuation to ventilation equipment and potential introduction of mechanical ventilation.

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1 Introduction

Sandy Brown has been commissioned by Atkins Realis to provide acoustic advice in relation to the proposed development at Postal Street, Manchester.

Sandy Brown previously carried out environmental noise surveys at the site in 2022 and 2024. Following discussion with Stage & Radio, further surveys have been carried out to capture noise from specific events at Stage & Radio.

The noise levels measured at the events presented in this report exceeded the noise levels previously measured and detailed in report 21549-R07-B dated 6 November 2025.

There are ongoing discussions with Stage & Radio regarding possible enhancement options to reduce the level of noise egress during events to reduce the external noise levels at the facade of the proposed development in line with previous measurements detailed in 21549-R07-A. This would then allow the proposed facade sound insulation strategy presented in 21549-R07-A to be installed for compliance with the internal noise level requirements from Manchester City Council. The enhancement options to be explored are subject to feasibility studies and agreement with the relevant parties.

This report presents the survey method and results for the additional noise survey work and outline guidance on possible enhancement options to be explored with the relevant parties.

2 Report details

Sandy Brown is an independent acoustic consultancy, a member of the Association of Noise Consultants and a sponsor member of the Institute of Acoustics.

All technical staff at Sandy Brown hold suitable qualifications in acoustics and the relevant level of membership in the Institute of Acoustics.

Specific qualifications of the author and reviewer can be requested directly.

3 Site description

3.1 The site and its surrounding

The site currently comprises unmade ground with a 2.4 metre hoarding around the perimeter of the site.

The site is located in central Manchester, bound to the north-west by Newton Street, to the north-east by Postal Street, to the south-east by Dean Street, and to the south-west by Faraday Street.

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

Unattended noise measurement positions are denoted as 'A' and 'B' and attended noise measurement positions are denoted as '2', '3', '5' and '6'. The attended vibration measurement position is denoted as 'V'.



Figure 1 Aerial view of site (courtesy of Google Earth Pro)

3.2 Adjacent premises

The site is adjacent to the following existing noise sensitive premises:

- The Wentwood apartments, highlighted in light green in Figure 1.
- The Sorting House on Newton Street (predominately residential use with commercial uses at ground floor level), highlighted in blue in Figure 1.
- The Hacienda Slp holiday home (residential) on Port Street highlighted in yellow in Figure 1.
- A flat above Stage & Radio highlighted in purple and outlined in blue in Figure 1.

The following nearby residential developments are also either planned or under construction at the time of this report:

- Residential development under construction (planning ref: 132489/FO/2021), highlighted in orange in Figure 1.
- Two residential apartment buildings under construction (planning ref: 135675/FO/2022), shown in dark green in Figure 1.

The following existing commercial uses are located near the site:

- Stage & Radio, which is a bar, night club and live music venue, the Port Street Beer House, and the Crown and Anchor public house highlighted in purple in Figure 1.
- Marlsbro House, an unoccupied Grade II listed commercial building, highlighted in white in Figure 1.
- Greater Manchester Police Museum & Archives, highlighted in brown in Figure 1.
- The Cow Hollow Hotel, highlighted in pink in Figure 1.
- Commercial premises on Port Street, highlighted in light blue in Figure 1.

4 Noise survey method

The survey included unattended and attended noise measurements.

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

4.1 Events

A summary of the surveyed events at Stage & Radio are set out in Table 1. The events chosen to be surveyed were suggested by and agreed with Stage & Radio.

Table 1 Summary of the measured events

Date	Event	Timings
Friday 24 October 2025	Greenskeepers jam on the ground floor	18:00–23:00 (Peak amplified noise – 21:30)
Thursday 6 November 2025	A student club night in the basement	23:00–04:00 (Peak amplified noise – 01:00)
Friday 7 November 2025	A multi-floor club night	23:00–04:00 (Peak amplified noise – 02:00)
Friday 21 November 2025	A live music gig with full band in the basement	18:00–23:00 (Peak amplified noise – 21:00)

4.2 Unattended measurements

Unattended noise monitoring was undertaken at the site over 5 days.

The measurements for the events in Table 1 were taken over 5-minute periods for position A. Measurements at position B were for assessing noise from Newton Street and were made over 15-minute periods, as for previous surveys.

The measurement positions are indicated in Figure 1, denoted by the letters 'A' and 'B', and photographs showing the measurement positions are provided in Figure 2 and Figure 3. These locations were chosen to be reasonably representative of noise levels at the site and outside the nearest noise sensitive premises. A weather station was also installed, which can be seen in Figure 2.

At each measurement position the microphone was installed just over the top of the site hoarding in the free-field at an approximate height of 3.4 m.

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



Figure 2 Photograph of measurement position A



Figure 3 Photograph of measurement position B

4.3 Attended measurements

4.3.1 Measurement locations

Attended sample measurements were taken at 4 external positions around Postal Street and 3 internal positions (either basement, ground floor or Level 1 depending on the event) at Stage & Radio. The external positions are indicated in Figure 1 as positions 2 to 6. All measurement durations are noted in the measurement results tables.

At external positions 2, 3 and 5, and each internal position the microphone was mounted on a tripod approximately 1.5 m above the ground level and approximately 1 m from any other reflecting surface. At position 6 the microphone was mounted on a tripod approximately 1.5 m above the ground level and at least 3.5 m away from any other reflective surface.

Dominant noise sources occurring during the measurements were noted.

4.3.2 Equipment

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

4.4 Weather conditions

Weather conditions during the survey are described in Appendix A.

5 Noise survey results

5.1 Noise measurement results – 24 October 2025

The noise measurements for the Greenskeepers jam on the ground floor are summarised in this section.

5.1.1 Unattended measurement results – Position A

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

The measurements were taken over 5-minute periods. A summary of the measured noise levels during the event is presented below.

- $L_{Aeq,5min}$ 58–70 dB
- Up to $L_{eq,63Hz}$ 73 dB and $L_{eq,125Hz}$ 77 dB
- $L_{A90,5min}$ 54– 62 dB
- Typical maximum noise level during event period up to $L_{AFmax,5min}$ 76 dB.

5.1.2 Unattended measurement results – Position B

The measurements were taken over 15-minute periods. A summary of the measured noise levels during the event is presented below.

- $L_{Aeq,15min}$ 60– 74 dB
- $L_{A90,15min}$ 52– 58 dB
- Typical maximum noise level during event period up to $L_{AFmax,15min}$ 89 dB.

5.1.3 Attended measurement results

Noise levels and key sources recorded during the attended measurements are provided in full in Appendix C and are summarised in Table 2. Measurements at positions 2, 3 and 5 are facade measurements. Measurements at position 6 are free-field measurements.

Table 2 Summary of measurements on the night of Friday 24 October 2025

Measurement position	Sound pressure levels (dB)		
	$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$
2	60–65	71–82	56–59
3	58–67	71–91	56–59
5	60–74	70–103	55–62
6	62–74	73–91	56–67
Internal (ground floor)	78–98	93–110	70–90

5.2 Noise measurement results – 6 November 2025

The noise measurements for the student club night are summarised in this section.

5.2.1 Unattended measurement results – Position A

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

The measurements were taken over 5-minute periods. A summary of the measured noise levels during the event is presented below. Typical maximum noise levels are presented for reference only. They will not be used as the basis for any future assessment as they have likely been impacted by fireworks and other celebrations associated with Bonfire Night.

- $L_{Aeq,5min}$ 50– 70 dB
- Up to $L_{eq,63Hz}$ 85 dB and $L_{eq,125Hz}$ 75 dB
- $L_{A90,5min}$ 49– 64 dB
- Typical maximum noise level during the event period up to $L_{AFmax,5min}$ 75 dB.

5.2.2 Unattended measurement results – Position B

The measurements were taken over 15-minute periods. A summary of the measured noise levels during the event is presented below. Typical maximum noise levels are presented for reference only. They will not be used as the basis for any future assessment as they have likely been impacted by fireworks and other celebrations associated with Bonfire Night.

- $L_{Aeq,15min}$ 52 – 62 dB
- $L_{A90,15min}$ 44 – 52 dB
- Typical maximum noise level up to $L_{AFmax,15min}$ 79 dB.

5.2.3 Attended measurement results

Noise levels and key sources recorded during the attended measurements are provided in full in Appendix C and are summarised in Table 3. Measurements at positions 2, 3 and 5 are facade measurements. Measurements at position 6 are free-field measurements.

Table 3 Summary of measurements on the night of Thursday 6 November 2025

Measurement position	Sound pressure levels (dB)		
	$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$
2 ^[1]	53–67 ^[1]	75–89 ^[1]	51–64 ^[1]
3	56–63	61–78	56–60
5 ^[1]	62–71 ^[1]	70–86 ^[1]	55–67 ^[1]
6	65–74	74–92	57–69
Internal (basement) ^[1]	102–105 ^[1]	108–115 ^[1]	96–100 ^[1]

^[1] Measurements at position 2, in the basement and some measurements at position 5 were carried out over 15-minute periods.

5.3 Noise measurement results – 7 November 2025

The noise measurements for a multi-floor club night within the basement, ground, and Level 1 are summarised in this section.

5.3.1 Unattended measurement results – Position A

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

Measurements were taken over 5-minute periods. A summary of the measured noise levels during the event is presented below. Typical maximum noise levels are presented for reference only. They will not be used as the basis for any future assessment as they have likely been impacted by fireworks and other celebrations associated with Bonfire Night.

- $L_{Aeq,5min}$ 57 – 74 dB
- Up to $L_{eq,63Hz}$ 85 dB and $L_{eq,125Hz}$ 79 dB
- $L_{A90,5min}$ 51 – 64 dB
- Typical maximum noise level during event period up to $L_{AFmax,5min}$ 77 dB.

5.3.2 Unattended measurement results – Position B

Measurements were taken over 15-minute periods. A summary of the measured noise levels during the event is presented below. Typical maximum noise levels are presented for reference only. They will not be used as the basis for any future assessment as they have likely been impacted by fireworks and other celebrations associated with Bonfire Night.

- $L_{Aeq,15min}$ 59 – 79 dB
- $L_{A90,5min}$ 51 – 57 dB
- Typical maximum noise level up to $L_{AFmax,15min}$ 83 dB.

5.3.3 Attended measurement results

Noise levels and key sources recorded during the attended measurements are provided in full in Appendix C and are summarised in Table 4. Measurements at positions 2, 3 and 5 are facade measurements. Measurements at position 6 are free-field measurements.

Table 4 Summary of measurements on the night of Friday 7 November 2025

Measurement position	Measured sound pressure levels (dB)		
	$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$
2	63–73	68–91	59–65
3	59–63	65–85	57–59
5	59–69	72–88	53–65
6	67–73	75–90	59–68
Internal (basement)	99–103	106–113	92–98
Internal (ground floor)	93–98	102–108	88–94
Internal (Level 1)	95–100	102–111	90–98

5.4 Noise measurement results – 21 November 2025

The noise measurements for a live gig with full band in the basement are summarised in this section.

5.4.1 Unattended measurement results – Position A

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

The measurements were taken over 5 minute periods. A summary of the measured noise levels during the event is presented below.

- $L_{Aeq,5min}$ 57 – 69 dB
- Up to $L_{eq,63Hz}$ 81 dB and up to $L_{eq,125Hz}$ 79 dB
- $L_{A90,5min}$ 52 – 61 dB
- Typical maximum noise level during the event up to $L_{AFmax,5min}$ 74 dB.

5.4.2 Unattended measurement results – Position B

The measurements were taken over 15-minute periods. A summary of the measured noise levels during the event is presented below.

- $L_{Aeq,15min}$ 60 – 66 dB
- $L_{A90,15min}$ 53 – 55 dB
- Typical maximum noise level during the event up to $L_{AFmax,15min}$ 81 dB.

5.4.3 Attended measurement results

Noise levels and key sources recorded during the attended measurements are provided in full in Appendix C and are summarised in Table 8. Measurements at positions 2, 3 and 5 are facade measurements. Measurements at position 6 are free-field measurements.

Table 5 Summary of measurements on the night of Friday 21 November 2025

Measurement position	Measured sound pressure levels (dB)		
	$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$
2	61-69	75-85	56-64
3	58-63	64-79	57-58
5	61-72	75-85	57-69
6	64-74	75-94	56-67
Internal (basement)	87-107	96-117	77-101

6 External vibration and re-radiated noise

Attended vibration measurements were carried out on 21 November 2025 between 18:00–18:30 and 21:30–22:00 at the location denoted as 'V' in Figure 1. The measurements were carried out due to tactile vibration being noted during the events on 6 and 7 November 2025 close to the corner of Faraday Street and Dean Street.

Based on measurements on 21 November 2025, the predicted re-radiated noise level at the worst affected location at Level 1 of the proposed development from live music in the basement of Stage & Radio is $L_{eq,5min,63Hz}$ 44 dB.

The predicted re-radiated noise from other events in the basement has been carried out based on a comparison of the measured internal noise levels during the different events in the basement.

The approximate predicted re-radiated noise at 63 Hz in the worst affected apartment on the corner of Faraday St and Dean St would be:

- 56–59 dB ($L_{eq,63Hz,5min}$) based on measurements from the student night (6–7 November 2025)
- 51–57 dB ($L_{eq,63Hz,5min}$) based on measurements from the multi-floor club night (7–8 November 2025).

Re-radiated noise would need to be controlled such that the cumulative noise level in residential spaces (ie, noise ingress via the facade plus re-radiated noise) is in line with the Manchester City Council low frequency noise ingress requirements of $L_{eq,5min}$ 47 dB at 63 Hz and $L_{eq,5min}$ 41 dB at 125 Hz.

The results above indicate that without any intervention, the approximate predicted re-radiated noise levels in the worst affected residential space are well above the MCC requirements. The facade sound insulation guidance presented within report 21549–R07–B is given on the basis that re-radiated noise will be controlled to at least 10 dB below the low frequency noise ingress requirements.

7 Guidance on enhancement options

7.1 Internal sound levels measured at Stage & Radio

A representative sound spectrum measured during an event at Stage & Radio is provided in Table 6 for each floor. Each spectrum has been selected based on significant low frequency content which is more difficult to acoustically attenuate than sound at higher frequencies.

The spectrum is presented from 63 Hz to 4 kHz at octave band centre frequencies. The important frequency bands are 63 Hz and 125 Hz octave bands at which the Manchester City Council noise planning entertainment noise ingress criteria apply.

Sound levels measured in other venues are provided in Appendix D. These indicate the sound levels measured at 63 Hz and 125 Hz in the basement of Stage and Radio are significantly higher than measured in other venues.

Table 6 Typical internal sound pressure levels measured at Stage & Radio

Location (type of music)	Measured sound pressure level (L_{eq}) Octave-band centre frequency (Hz)						
	63	125	250	500	1000	2000	4000
Basement ^[1]	126	112	107	97	99	93	88
Ground floor ^[2]	110	99	94	94	92	88	83
Level 1 ^[2]	107	109	94	93	90	87	82

^[1] Based on 15-minute time period. Continuous music was noted throughout the measurements.

^[2] Based on 5-minute time period

7.2 External noise levels

7.2.1 Noise survey detailed in 21549-R07-B

The sound insulation performance of the facade to Faraday Street and Dean Street for the proposed development is driven by low frequency noise ingress to meet the MCC planning requirements for amplified music noise. The acoustic planning report (21549-R07-B) facade assessment is based on predicted low frequency amplified sound levels at 1 m from the facade of up to L_{eq} 84 dB in the 63 Hz octave band and L_{eq} 76 dB in the 125 Hz octave band.

7.2.2 Additional noise survey

The predicted noise level at 1 m from the facade of the proposed development close to Stage & Radio is up to L_{eq} 88 dB in the 63 Hz octave band and L_{eq} 82 dB in the 125 Hz octave band based on the additional noise surveys presented in Sections 4 and 5. These levels are higher than those previously assessed, by 4 dB and 6 dB, respectively.

7.2.3 Target reduction in external noise level

To align with the facade assessment presented in the acoustic planning report (21549-R07-B), the targeted reduction in external noise level and therefore the recommended minimum increase in apparent overall sound insulation of the facade of Stage & Radio inclusive of any terminations is 4 dB in the 63 Hz octave band and 6 dB in the 125 Hz octave band.

7.3 Enhancement options

7.3.1 Refining enhancement options

To provide more certainty on the enhancement options, additional survey work will be required. All enhancement options are subject to review and agreement with the relevant parties. The below are outline guidance options only, to be developed.

7.3.2 Sound system isolation

Based on observations on site, the main source of vibration was likely the loudspeakers within the basement of Stage & Radio.

It is recommended that the sound system is resiliently isolated, particularly at basement level, either providing discrete isolation mounts, or resiliently mounted inertia bases. The type of isolation would need to be developed. Photographs of examples isolated speakers are shown in Figure 4.



Figure 4 Example images of sound system on inertia base with steel spring mounts (left) and resilient mount (right)

7.3.3 Make good existing windows and brickwork

All existing windows and brickwork to be retained should be made good before works. This is to ensure that there are no gaps that could degrade the sound insulation performance of the facade.

7.3.4 Secondary glazing

There are windows installed to the following areas:

- Ground floor Port Street elevation
 - External door and 3 x large balcony type doors with overhead glazing and solid infill panels with internal metal shutters
- Ground floor Faraday Street elevation
 - 3 x large windows with internal metal shutters
- Level 1 Port Street elevation
 - 4 x large windows
- Level 1 Faraday Street elevation
 - 3 x bricked up windows with louvres.

It is recommended that secondary glazing is provided to each window with a large air cavity to improve the sound insulation performance of the facade. Consideration could also be given to replacing the existing windows with a secondary glazed unit arrangement.

7.3.5 Lobbied entrance to ground floor

A lobbied entrance is recommended to the ground floor. This would limit increases in noise egress when patrons enter/leave the venue.

7.3.6 Plasterboard lining to external wall

An independent plasterboard lining to external walls could be considered in conjunction with secondary glazing.

7.3.7 Acoustic attenuation to ventilation equipment

The location of ventilation equipment would need to be reviewed along with the feasibility of installing acoustic attenuation to any external terminations. Types of attenuation to consider are:

- In-duct attenuators close to the facade line
- Acoustic lagging (mineral fibre insulation with a mass layer) to any exposed ductwork within event spaces.

If natural ventilation is currently used to any noisy area, attenuated mechanical ventilation could be considered.

7.3.8 Low level air bricks

There are a number of air bricks at low level that may serve the basement area. It is unclear if these are needed to ventilate the external wall, or form part of the ventilation strategy to the basement. This will need to be reviewed.

8 Conclusion

Sandy Brown has been commissioned by Atkins Realis to provide acoustic advice in relation to the proposed development at Postal Street, Manchester.

Sandy Brown previously carried out environmental noise surveys at the site in 2022 and 2024. Following discussion with Stage & Radio, further surveys have been carried out to capture noise from specific events at Stage & Radio.

Environmental noise surveys previously been carried out at the site in 2022 and 2024. Following discussion with Stage & Radio, further surveys have been carried out during events at Stage & Radio to determine the resultant sound levels in the area. The noise surveys were carried out during the following times in agreement with Stage & Radio:

- Greenskeepers jam measurements between 18:00 and 23:00 on 24 October 2025
- Student club night measurements between 23:00 on 6 November 2025 and 04:00 on 7 November 2025
- Multi-floor club night measurements between 23:00 on 7 November 2025 and 04:00 on 8 November 2025
- Live gig with full band measurements between 18:00 and 23:00 on 21 November 2025.

Attended vibration measurements were undertaken during the event on 21 November 2025.

The highest external noise levels measured at the events listed above exceeded the noise levels previously measured and detailed in report 21549-R07-B dated 6 November 2025.

There are ongoing discussions with Stage & Radio regarding possible enhancement options to reduce the level of noise egress during events to reduce the external noise levels at the facade of the proposed development in line with previous measurements detailed in 21549-R07-A. This would then allow the proposed facade sound insulation strategy presented in 21549-R07-A to be installed for compliance with the planning requirements from Manchester City Council.

The enhancement options to be explored are subject to feasibility studies and agreement with the relevant parties.

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 noise survey measurements were taken using a Rion NL-52 sound level meter and a 01dB Cube sound level meter. The attended noise measurements were taken using a Rion NL-52 sound level meter, a B&K 2250 sound level meter and an NTi XL3 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-52/00932326	Rion	24 Apr 26	TCRT23/1806
Microphone	UC-59/09251	Rion	24 Apr 26	TCRT23/1806
Pre-amp	NH-25/32354	Rion	24 Apr 26	TCRT23/1806
Calibrator	NC-74/34536129	Rion	24 Apr 26	TCRT23/1576
Sound level meter	CUBE/11128	01dB	12 Mar 27	TCRT25/1226
Microphone	40CD/260775	GRAS	12 Mar 27	TCRT25/1226
Pre-amp	PRE22/1610371	01dB	12 Mar 27	TCRT25/1226
Calibrator	Cal 21/34375239	01dB	12 Mar 27	TCRT25/1193
Sound level meter	NL-52/01143564	Rion	12 Dec 26	TCRT24/1898
Microphone	UC-59/10153	Rion	12 Dec 26	TCRT24/1898
Pre-amp	NH-25/43581	Rion	12 Dec 26	TCRT24/1898
Calibrator	NC-74/34257023	Rion	12 Dec 26	TCRT24/1895

Equipment description	Type/serial number	Manufacturer	Calibration expiry	Calibration certification number
Sound level meter	2250/3011964	Brüel & Kjær	14 April 27	UCRT25/1609 UCRT25/1610
Microphone	4189/3100176	Brüel & Kjær	14 April 27	UCRT25/1609 UCRT25/1610
Pre-amp	ZC0032/2637 6	Brüel & Kjær	14 April 27	UCRT25/1609 UCRT25/1610
Calibrator	4231/3019123	Brüel & Kjær	14 April 27	UCRT25/1603
Sound level meter	XL3/ A3A- O1221-FO	NTi	2 Dec 26	UCRT24/2613ATR UCRT24/2615
Microphone	MC230A/A28 O47	NTi	2 Dec 26	UCRT24/2613ATR
Pre-amp	MA220- 230/14610	NTi	2 Dec 26	UCRT24/2613ATR
Calibrator	SV30A/10567	Svantek	20 Sep 26	UCRT24/2251

^[1] Calibration of the meters used for the measurements is traceable to national standards. Calibration certificates for the sound level meters 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

Details of the weather conditions during the events are presented in Table 7.

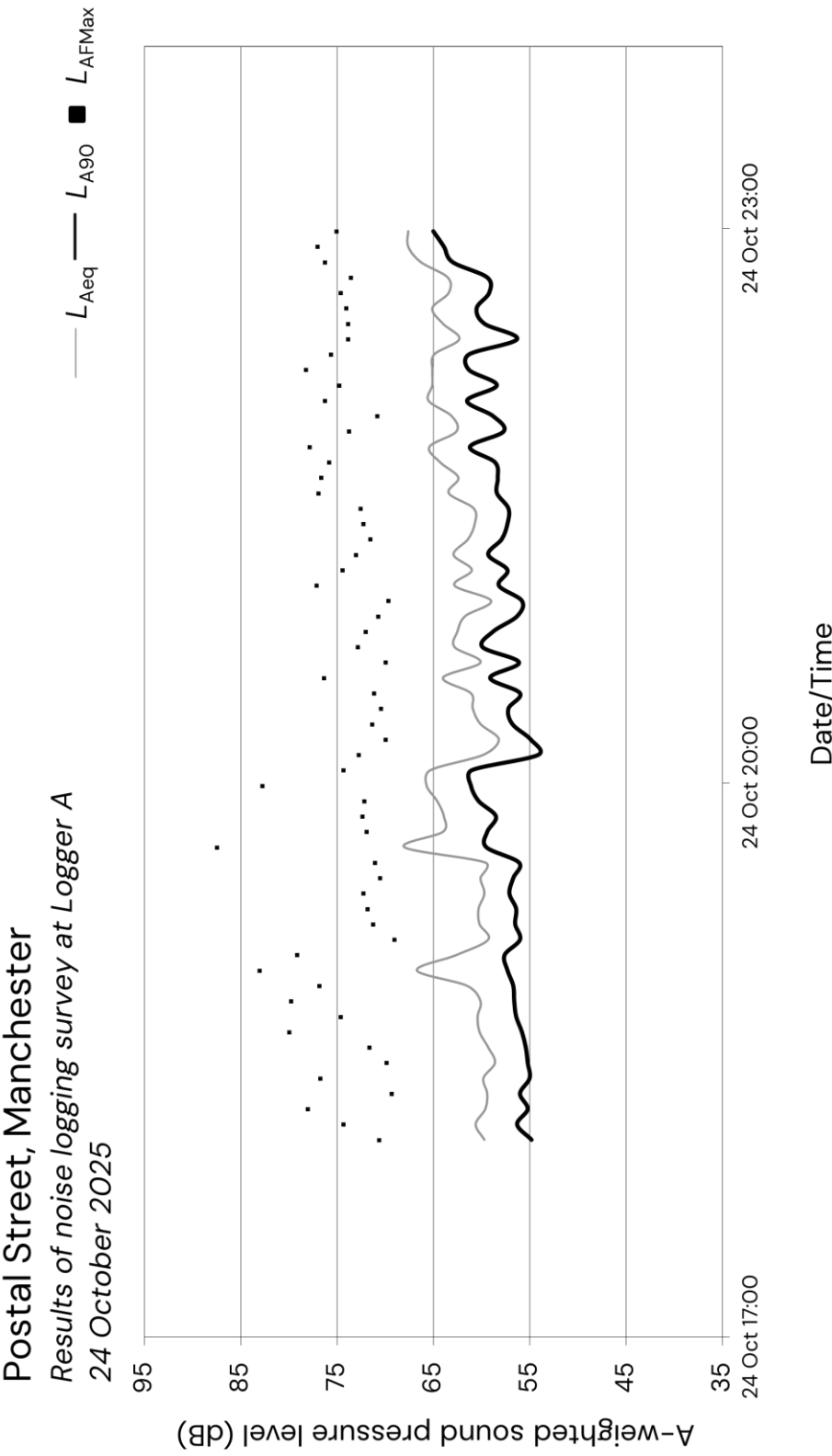
Table 7 Weather conditions per event

Date	Event	Windspeed	Temperature	Precipitation
24 October 2025	Greenskeepers jam event on the ground floor	No more than 4 m/s	8°C – 9°C	Light precipitation during the measurements from approximately 21:20 to 22:50 with heavier rain showers between 22:00 to 22:30
6 November 2025	A student club night	No more than 1 m/s	14°C – 15°C	0 mm/h
7 November 2025	A multi-floor club night	No more than 0 m/s	6°C – 8°C	Light precipitation during the measurements from approximately 23:15 to 23:25 with heavier rain showers between 02:20 to 02:40
21 November 2025	A live gig with full band in the basement	No more than 1 m/s	4°C	0 mm/h

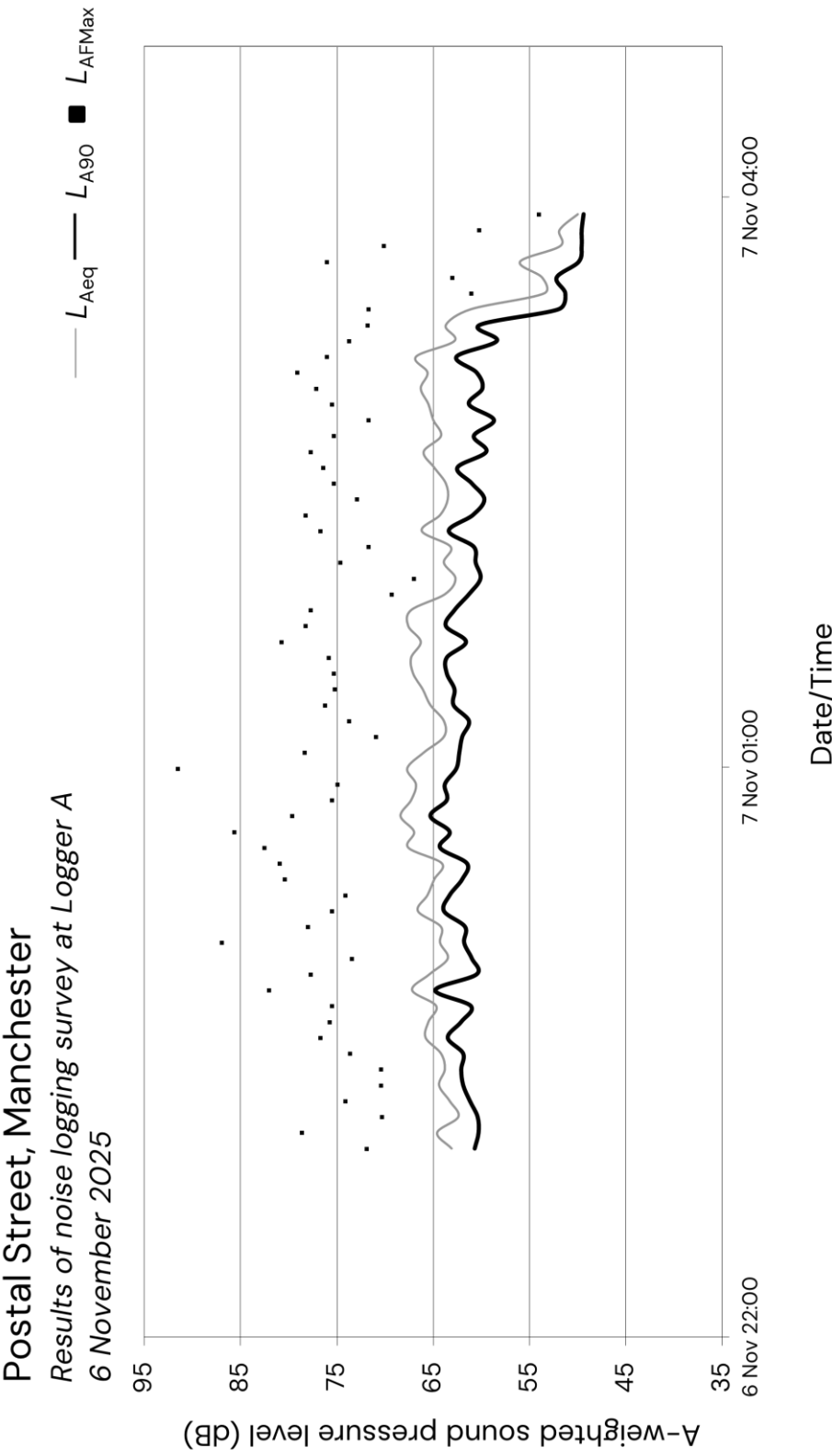
These weather conditions are considered suitable for obtaining representative measurements.

Appendix B

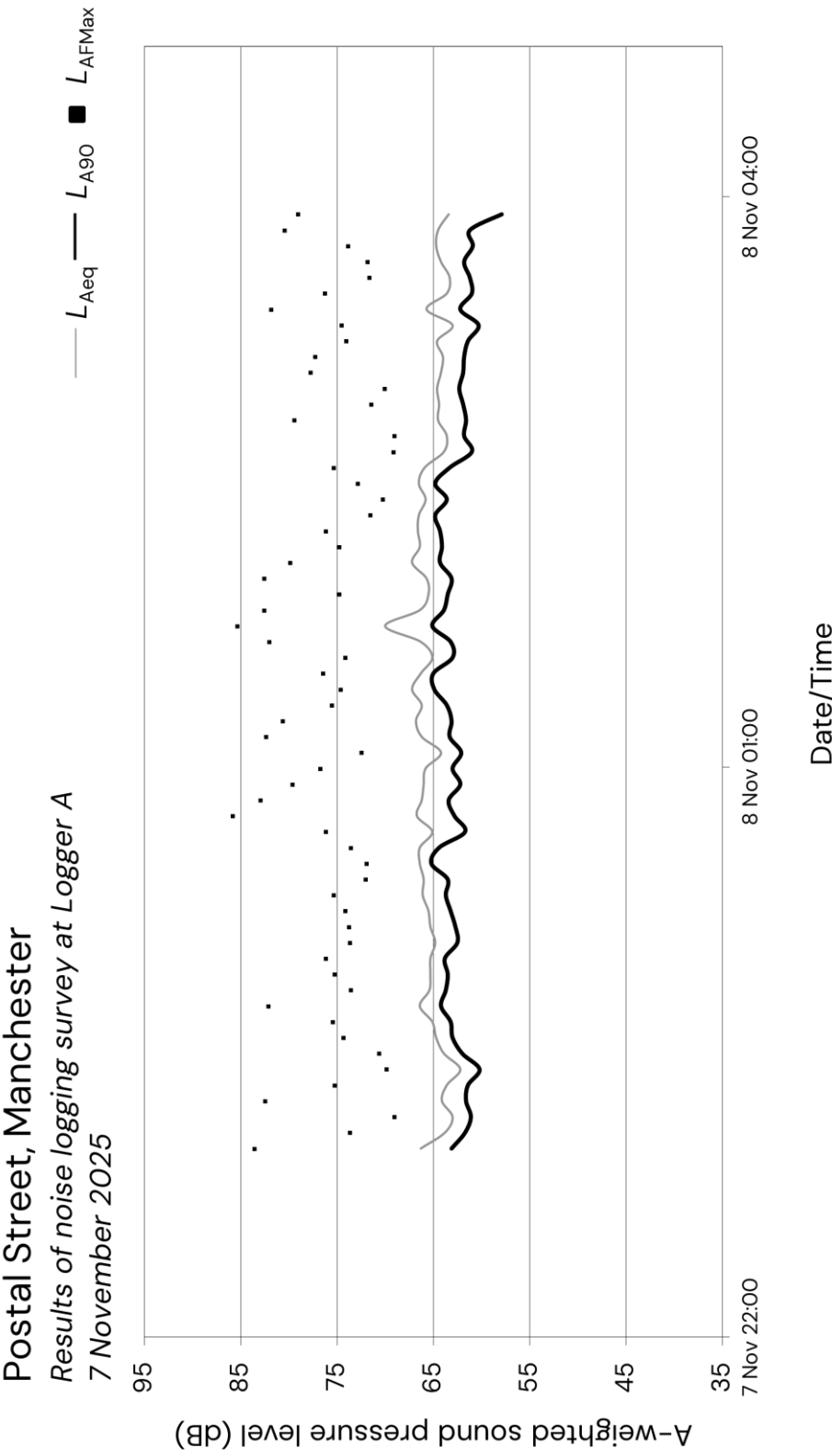
Results of unattended measurements at Position A on 24 October 2025



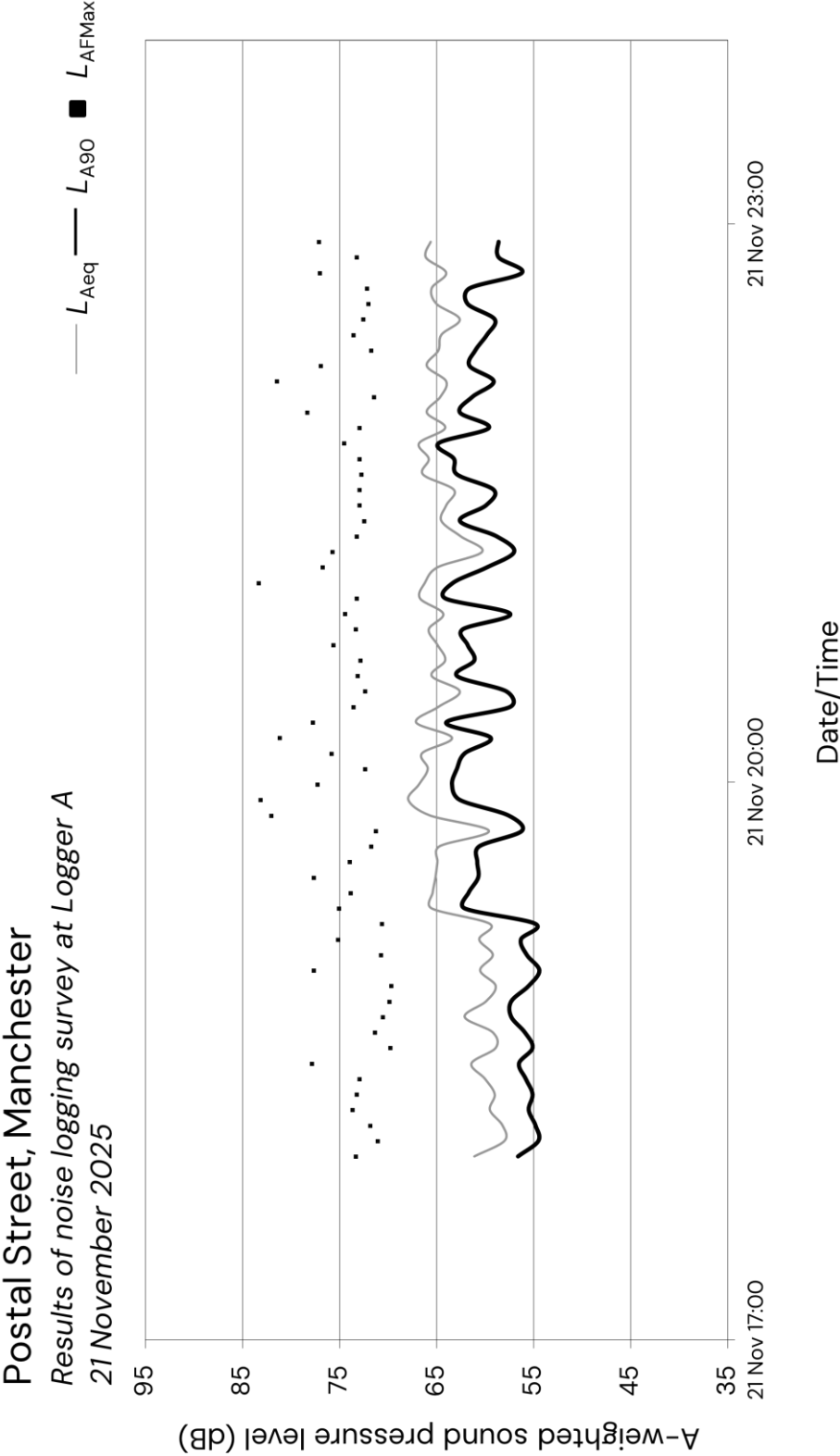
Results of unattended measurements at Position A on 6 November 2025



Results of unattended measurements at Position A on 7 November 2025



Results of unattended measurements at Position A on 21 November 2025



Appendix C

Attended measurement results on the night of Friday 24 October 2025

Table 8 Noise levels and key noise sources from attended measurements on the night of Friday 24 October 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
2	18:15	62	75	57	Dominated by road traffic noise and passing cars, with additional contributions from pedestrians talking and wheeled luggage, audible patrons in beer garden at rear of Port Street Beer House
2	18:20	63	82	56	As above
2	18:25	61	76	57	As above
2	19:00	64	77	59	Dominated by passing cars, with additional contributions from pedestrians talking and audible patrons in beer garden at rear of Port Street Beer House
2	19:05	62	78	57	As above
2	19:10	63	76	58	As above
2	19:15	62	74	57	As above
2	19:20	63	74	59	As above
2	19:25	61	73	57	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
2	20:00	65	78	59	Dominated by band playing in Stage & Radio with contributions from road traffic noise and with additional contributions from pedestrians talking and audible patrons in beer garden at rear of Port Street Beer House
2	20:05	60	71	56	Dominated by road traffic noise and with additional contributions from pedestrians talking and audible patrons in beer garden at rear of Port Street Beer House
2	20:10	61	73	56	As above
3	18:15	60	73	56	Dominated by generator noise. Contributions from pedestrians, patrons and light road traffic noise
3	18:20	61	79	56	As above
3	18:25	60	82	56	As above
3	19:00	63	80	56	As above
3	19:05	62	75	56	As above
3	19:10	61	74	56	As above
3	19:15	67	91	56	As above. Max caused by a passing car

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
3	19:20	62	72	57	Dominated by generator noise. Contributions from pedestrians, patrons and light road traffic noise
3	19:25	59	75	56	As above
3	20:00	59	72	56	Dominated by music breakout. Contributions from road traffic noise, generator noise and patrons.
3	20:05	58	72	56	As above
3	20:10	61	77	56	As above
3	20:15	59	71	57	As above.
3	20:20	60	71	56	As above
3	23:15	64	79	59	Dominated by road traffic noise and with additional contributions from pedestrians talking and audible patrons in beer garden at rear of Port Street Beer House
3	23:20	63	77	58	As above
3	23:25	65	87	57	As above
5	18:30	60	78	55	Dominated by road traffic noise, patrons from Port Street Beer House and a sound check at Stage & Radio. Contributions from patrons
5	18:35	61	73	55	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
5	18:40	61	75	56	As above
5	18:45	60	73	55	Dominated by amplified music breakout. Contributions from road traffic noise and patrons at Stage & Radio and Port Street Beer House.
5	18:50	62	76	56	As above
5	18:55	67	85	57	As above
5	19:30	63	78	56	As above
5	19:35	63	77	57	As above
5	19:40	63	72	58	Dominated by patrons at Stage & Radio. Contributions from road traffic noise, patrons at Port Street Beer House and amplified music
5	19:45	64	75	57	As above
5	19:50	65	75	60	Dominated by live music with contributions from road traffic noise
5	19:55	65	73	60	As above
5	21:30	66	83	59	Dominated by low frequency music breakout with contributions from patrons and road traffic noise.
5	21:35	64	79	58	As above
5	21:40	64	80	58	As above
5	21:45	65	77	59	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
5	21:50	61	75	55	As above
5	22:30	65	75	60	Dominated by music with contributions from road traffic noise and patrons.
5	22:35	64	77	57	As above
5	22:40	62	70	57	As above
5	22:45	65	83	61	As above
5	22:50	74	103	62	As above. Max caused by a passing pedestrian
5	23:00	64	81	57	Dominated by patrons. Contributions from low frequency amplified music
5	23:05	65	77	60	As above
5	23:10	66	77	61	As above
6	18:30	62	73	56	Dominated by low frequency amplified music and patrons at Stage & Radio and Port Street Beer House. Contributions from pedestrians and road traffic noise.
6	18:35	64	77	57	Dominated by patrons and pedestrians. Contributions from road traffic noise.
6	18:40	63	77	59	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	18:45	64	78	58	Dominated by patrons and pedestrians. Contributions from road traffic noise and amplified music breakout from Stage & Radio.
6	18:50	65	74	58	As above
6	18:55	66	81	59	As above. Max caused by a distant emergency siren.
6	19:30	66	80	57	Dominated by live music with contributions from road traffic noise and a sound check
6	19:35	67	81	59	As above. Max caused by a distant emergency siren
6	19:40	66	74	59	As above
6	19:45	66	77	59	As above
6	19:50	69	83	63	As above. Max caused by a passing pedestrian
6	19:55	68	79	63	As above
6	21:00	67	82	62	Dominated by live music with contributions from road traffic noise and patrons
6	21:05	69	84	62	As above
6	21:10	72	86	67	As above. Max caused by a passing car

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	21:15	71	84	65	Dominated by live music with contributions from road traffic noise, patrons and distant occasional fireworks
6	21:20	69	81	63	As above
6	23:00	68	82	61	Dominated by patrons. Contributions from low frequency amplified music
6	23:05	71	85	65	As above
6	23:10	74	91	66	As above. Max caused by passing car
6	23:15	71	85	65	As above
6	23:20	69	85	64	As above

Table 9 Noise levels and key noise sources from attended measurements on the night of Friday 24 October 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Ground Floor	20:30	98	110	85	Dominated by live music. Contributions from patrons
Ground Floor	20:35	89	107	72	As above
Ground Floor	20:40	94	104	88	As above
Ground Floor	20:45	93	103	85	As above
Ground Floor	20:50	93	105	70	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Ground Floor	20:55	88	110	71	As above. Max caused by a dropped glass
Ground Floor	21:00	95	107	86	As above
Ground Floor	21:05	91	109	79	As above
Ground Floor	21:10	81	93	73	As above
Ground Floor	21:15	78	96	70	As above
Ground Floor	21:20	81	95	76	As above
Ground Floor	21:25	81	95	76	Dominated by basement amplified DJ music. Contributions from patrons
Ground Floor	21:30	84	94	77	As above
Ground Floor	21:35	85	102	80	Dominated by patrons
Ground Floor	21:40	93	107	77	Dominated by basement amplified DJ music and customers with raised voice
Ground Floor	21:45	97	106	85	Dominated by live music. Contributions from patrons
Ground Floor	21:50	94	109	70	As above
Ground Floor	21:55	91	106	76	As above
Ground Floor	22:00	96	106	86	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Ground Floor	22:05	97	108	77	As above
Ground Floor	22:10	97	108	90	As above
Ground Floor	22:15	96	108	87	As above
Ground Floor	22:20	92	108	78	As above
Ground Floor	22:25	97	108	89	As above

Attended measurement results on the night of Thursday 6 November 2025

Table 10 Noise levels and key noise sources from attended measurements on the night of Thursday 6 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
3	23:00	58	66	57	Dominated by generator noise. Contributions from road traffic noise and patrons
3	23:05	59	71	57	Dominated by generator noise. Contributions from patrons and music breakout from Stage & Radio
3	23:10	58	70	56	As above
3	23:15	58	75	56	Dominated by generator noise. Contributions from patrons and music breakout from Stage & Radio
3	23:20	59	73	57	As above
3	23:25	60	69	57	Dominated by generator noise. Contributions from patrons, music breakout from Stage & Radio and light road traffic
3	00:00	61	75	57	As above
3	00:05	61	72	58	As above
3	00:10	61	70	58	Dominated by patrons. Contributions from generator noise

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
3	00:15	63	69	60	Dominated by patrons. Contributions from generator noise and low frequency music breakout from Stage & Radio. Max caused by emergency siren
3	00:20	62	70	59	As above
3	00:25	62	78	59	Dominated by generator noise. Contributions from patrons and music breakout from Stage & Radio
3	03:30	56	64	56	Dominated by generator noise. Contributions from patrons and light road traffic
3	03:35	57	62	56	As above
3	03:40	57	67	56	As above
3	03:45	57	61	56	Dominated by generator noise. Contributions from shutters and door closing at Stage & Radio
3	03:50	57	73	56	As above
3	03:55	57	65	56	As above
5	00:30	64	84	61	Dominated by generator noise. Contributions from patrons and music breakout from Stage & Radio

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
5	00:35	66	82	61	As above
5	00:40	68	86	62	As above
5	00:45	71	81	67	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio and light road traffic
5	00:50	70	79	67	As above
5	00:55	70	78	66	As above
5	01:30	70	77	67	As above
5	01:35	70	80	66	Dominated by low frequency music breakout from Stage & Radio. Contributions from patrons
5	01:40	70	85	66	As above
5	01:45	71	84	65	As above
5	01:50	71	81	65	As above
5	01:55	70	75	64	As above
5	02:30	65	82	61	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio
5	02:35	66	86	60	As above
5	02:40	65	75	60	As above
5	02:45	65	77	61	As above
5	02:50	64	70	59	As above
5	02:55	64	83	59	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	23:30	67	79	63	As above. Max caused by emergency siren
6	23:35	67	80	63	Dominated by patrons and pedestrians near the measurement position
6	23:40	68	84	63	Dominated by patrons. Contributions from music breakout from Stage & Radio and light road traffic
6	23:45	70	80	66	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio
6	23:50	71	92	66	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio and light road traffic
6	23:55	73	86	66	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio
6	01:00	74	90	68	As above
6	01:05	73	83	67	As above
6	01:10	73	84	67	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio and light road traffic
6	01:15	71	86	67	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	01:20	72	90	68	As above
6	01:25	73	84	68	As above
6	02:00	66	76	62	As above
6	02:15	73	86	69	Dominated by low frequency music breakout from Stage & Radio. Contributions from patrons
6	02:20	74	87	69	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio. Max caused by emergency sirens
6	02:25	73	87	67	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio
6	03:00	69	83	62	As above
6	03:05	67	80	60	Dominated by patrons, low frequency music breakout from Stage & Radio and pedestrians near the measurement position
6	03:10	67	82	60	Dominated by patrons. Contributions from low frequency music breakout from Stage & Radio
6	03:15	65	80	57	Dominated by music breakout from Stage & Radio. Contributions from patrons
6	03:20	65	74	58	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	03:25	65	76	58	As above

Table 11 Noise levels and key noise sources from attended measurements on the night of Thursday 6 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,15min}$	$L_{AFmax,15min}$	$L_{A90,15min}$	
2	23:00	66	89	62	Dominated by amplified music breakout from Stage & Radio. Contributions from audible patrons in beer garden at rear of Port Street Beer House and road traffic noise. Max caused by passing pedestrian
2	23:15	66	76	64	As above
2	00:00	67	87	63	As above. Max caused by passing vehicle
2	03:30	58	84	52	Dominated by amplified music breakout from Stage & Radio. Contributions from road traffic noise
2	03:45	53	75	51	As above with contributions shutters closing at Stage & Radio
5	23:30	65	82	61	Dominated by amplified music breakout from Stage & Radio. Contributions from patrons, road traffic noise and generator. Max caused by patrons

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,15min}$	$L_{AFmax,15min}$	$L_{A90,15min}$	
5	23:45	68	83	62	As above
5	03:00	65	80	60	Dominated by amplified music breakout from Stage & Radio. Contributions from patrons and generator noise
5	03:15	62	79	55	Dominated by amplified music breakout from Stage & Radio. Contributions from patrons, road traffic noise and generator noise

Table 12 Noise levels and key noise sources from attended measurements on the night of Thursday 6 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,15min}$	$L_{AFmax,15min}$	$L_{A90,15min}$	
Basement	00:30	103	108	98	Dominated by amplified music with contributions from patrons
Basement	00:45	105	115	100	As above
Basement	01:00	103	110	99	As above
Basement	01:15	102	113	96	As above
Basement	01:30	102	110	98	As above
Basement	01:45	103	110	99	As above
Basement	02:00	102	111	99	Dominated by amplified music
Basement	02:45	103	109	99	As above
Basement	02:30	104	115	99	As above

Attended measurement results on the night of Friday 7 November 2025

Table 13 Noise levels and key noise sources from attended measurements on the night of Friday 7 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
2	23:00	67	83	64	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from patrons and light road traffic noise
2	23:05	65	73	62	As above
2	23:10	64	70	62	As above
2	23:15	67	91	62	As above
2	23:20	64	80	63	As above
2	23:25	63	71	62	As above
2	00:00	66	78	64	Measurement not representative due to interference from members of the public
2	00:05	66	81	63	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from patrons
2	00:10	65	70	63	As above
2	03:00	73	68	65	Measurement not representative due to interference from members of the public
2	03:15	68	73	65	Dominated by low frequency music from basement. Contributions from road traffic and patrons. Max caused by motorbike on Newton Street.

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
2	03:20	68	80	64	Dominated by low frequency music from basement. Contributions from road traffic and patrons. Max caused by a back door slamming
2	03:25	66	80	62	Dominated by low frequency music from basement. Contributions from patrons. Max caused by a passing car
2	03:45	65	73	61	Measurement not representative due to interference from members of the public
2	03:50	65	83	61	Dominated from mid frequency music breakout from the ground floor. Contributions from patrons
2	03:55	67	86	59	Dominated from mid frequency music breakout from the ground floor. Contributions from patrons and shutter closing at Stage & Radio
3	23:00	60	77	57	Dominated by generator noise. Contributions from music breakout from Stage & Radio, patrons and light road traffic.
3	23:05	59	72	57	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
3	23:10	59	72	57	As above Max caused by passing pedestrian on Dean Street.
3	23:15	60	72	58	As above. Max caused by an opening lock on the adjacent building.
3	23:20	59	71	58	Dominated by patrons. Contributions from music breakout at Stage & Radio, light road traffic noise. Max caused by distant firework.
3	23:25	63	80	58	Dominated by generator noise. Contributions from patrons, pedestrians and distant fireworks. Max caused by passing pedestrian.
3	00:00	60	75	59	As above Max caused by pedestrian speaking close to microphone.
3	00:05	59	68	58	Dominated by generator noise. Contributions from patrons and light road traffic.
3	00:10	61	67	59	As above
3	00:15	62	76	59	As above. Max caused by passing pedestrian
3	03:30	60	77	57	Dominated by generator noise. Contributions from patrons, music breakout and light road traffic.

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
3	03:35	60	75	57	Dominated by generator noise. Contributions from patrons, low frequency music breakout and light road traffic.
3	03:40	59	72	57	As above
3	03:45	60	85	57	As above
3	03:50	59	65	57	As above
5	23:30	64	72	61	Measurement not representative due to interference from members of the public
5	23:35	65	74	63	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from patrons and light road traffic noise
5	23:40	66	79	63	As above
5	23:45	67	82	64	As above. Max caused by an emergency siren
5	23:50	67	78	64	As above
5	23:55	67	83	63	As above. Max caused by emergency siren
5	00:30	67	76	64	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from generator noise, patrons and light road traffic noise. Max caused by patrons

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
5	00:35	67	78	65	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from generator noise, patrons and light road traffic noise. Max caused by patrons
5	00:40	66	76	62	As above. Max caused by patrons
5	00:45	68	83	64	As above
5	00:50	68	88	64	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from generator noise and patrons.
5	01:30	67	85	62	Dominated by low and mid frequency noise breakout from Stage & Radio. Contributions from generator noise and patrons.
5	01:35	67	80	64	As above
5	01:40	65	76	63	As above
5	01:45	67	78	64	Dominated by noise breakout from Stage & Radio and patrons. Contributions from generator noise. Max caused by patrons
5	01:50	83	108	64	Measurement not representative due to interference from members of the public
5	02:30	66	79	62	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
5	02:35	66	77	63	As above
5	02:50	67	77	64	As above. Max caused by passing car
5	02:55	66	77	63	As above
5	04:00	66	79	55	Measurement not representative due to interference from members of the public
5	04:05	69	82	60	Dominated by patrons. Contributions from light road traffic noise. Max caused by emergency sirens
5	04:10	68	86	59	Dominated by patrons. Contributions from road traffic noise and shutters closing at Stage & Radio
5	04:15	62	76	54	As above
5	04:20	60	76	53	As above
5	04:25	59	74	53	As above. Max caused by emergency siren
6	23:30	67	78	64	Dominated by music breakout from Stage & Radio and patrons. Contributions from light road traffic noise. Max caused by patrons
6	23:35	68	75	65	As above
6	23:40	69	81	66	As above
6	23:45	71	87	67	Measurement not representative due to interference from members of the public

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	23:50	69	79	66	Dominated by music breakout from Stage & Radio. Contributions from patrons.
6	23:55	69	81	65	As above
6	01:00	69	82	65	As above
6	01:05	70	83	66	As above
6	01:10	73	89	68	As above. Max caused by patrons
6	01:15	71	83	67	Measurement not representative due to interference from members of the public
6	01:20	72	84	67	As above
6	01:25	73	90	68	As above. Max caused by patrons
6	02:00	68	79	65	As above
6	02:05	70	82	66	As above. Max caused by passing car
6	02:10	70	80	66	Dominated by music breakout from Stage & Radio. Contributions from patrons and light road traffic.
6	02:15	70	82	67	Dominated by music breakout from Stage & Radio. Contributions from patrons. Max caused by patrons
6	02:20	72	81	68	As above
6	02:25	71	80	68	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	04:00	71	87	59	Measurement not representative due to interference from members of the public
6	04:05	72	89	65	Dominated by patrons. Contributions from light road traffic and distant sirens. Max caused by patrons
6	04:10	84	70	63	Measurement not representative due to interference from members of the public
6	04:15	85	71	60	Measurement not representative due to interference from members of the public
6	04:20	115	92	55	Measurement not representative due to interference from members of the public
6	04:25	63	81	54	Measurement not representative due to interference from members of the public

Table 14 Noise levels and key noise sources from attended measurements on the night of Friday 7 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Basement	02:30	102	108	97	Measurement not representative due to interference from members of the public

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Basement	02:35	102	108	98	Dominated by music in the basement. Contributions from patrons
Basement	02:40	102	106	98	As above
Basement	02:45	101	108	97	As above
Basement	02:50	103	109	98	As above
Basement	02:55	102	109	96	As above
Basement	03:00	102	113	98	As above
Basement	03:05	100	108	96	As above
Basement	03:10	101	110	98	As above
Basement	03:15	102	107	97	As above
Basement	03:20	99	109	92	As above
Basement	03:25	101	106	96	As above
Ground Floor	01:35	98	107	94	Dominated by music in the bar area. Contributions from patrons and low frequency music breakout from the basement
Ground Floor	01:40	98	108	92	As above
Ground Floor	01:45	95	106	91	As above
Ground Floor	01:50	96	105	88	As above
Ground Floor	01:55	95	105	91	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Ground Floor	02:00	93	102	88	Dominated by music in the bar area. Contributions from patrons
Ground Floor	02:05	95	102	92	As above
Ground Floor	02:10	96	102	92	As above
Ground Floor	02:15	96	106	92	As above
Ground Floor	02:20	97	107	92	As above. Max caused by patron
Ground Floor	02:25	97	107	91	As above
Level 1	00:35	97	106	90	As above
Level 1	00:40	97	102	95	As above
Level 1	00:45	97	110	94	As above
Level 1	00:50	96	106	93	As above
Level 1	00:55	96	106	93	As above
Level 1	01:00	95	103	92	As above
Level 1	01:05	96	103	94	As above
Level 1	01:10	97	104	94	As above
Level 1	01:15	97	103	93	As above
Level 1	01:20	99	104	96	As above
Level 1	01:25	100	111	98	As above

Attended measurement results on the night of Friday 21 November 2025

Table 15 Noise levels and key noise sources from attended measurements on the night of Friday 21 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
2	18:30	63	83	58	Dominated by patrons. Contributions from music breakout from Stage & Radio and light road traffic noise
2	18:35	62	76	56	As above
2	18:40	62	76	57	As above
2	18:45	65	79	58	As above
2	18:50	63	76	59	As above
2	18:55	61	75	57	As above
2	19:00	64	85	56	As above. Max caused by an emergency siren
2	19:05	62	77	57	As above
2	19:10	63	79	57	As above
2	19:15	62	76	57	As above
2	19:20	69	83	64	As above
2	19:25	69	78	64	As above
3	18:30	63	76	58	Dominated by generator noise. Contributions from patrons and road traffic noise
3	18:35	61	76	58	As above
3	18:40	62	79	57	As above
3	18:45	60	72	57	As above
3	18:50	61	77	58	As above
3	18:55	59	65	57	As above
3	19:00	61	79	57	As above
3	19:05	60	75	57	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
3	19:10	60	77	57	As above
3	19:15	58	64	57	As above
3	19:20	62	78	58	As above
3	19:25	60	74	58	As above
5	18:00	66	77	59	Dominated by low frequency music breakout and heavy road traffic noise. Contributions from patrons
5	18:05	61	76	57	As above
5	18:10	61	78	57	As above
5	18:15	63	76	57	Dominated by patrons. Contributions from music breakout from Stage & Radio
5	18:20	62	79	57	As above
5	18:25	62	77	58	As above
5	19:30	71	82	63	Dominated by music breakout from Stage & Radio. Contributions from patrons and light road traffic noise.
5	19:35	71	84	65	As above
5	19:40	70	81	66	As above
5	20:00	72	83	67	Dominated by music breakout from Stage & Radio. Contributions from patrons
5	20:05	71	78	67	As above
5	20:10	71	78	66	As above
5	20:15	68	84	63	As above
5	20:20	72	80	68	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
5	20:25	69	77	60	As above
5	21:15	63	80	60	As above
5	21:20	66	75	61	As above
5	21:25	69	76	66	As above
5	21:30	68	78	63	As above
5	21:35	68	83	62	As above
5	21:40	71	78	67	As above
5	21:45	71	79	67	As above
5	21:50	72	79	69	As above
5	21:55	69	77	62	As above
5	22:00	71	79	67	Dominated by patrons. Contributions from music breakout from Stage & Radio.
5	22:05	69	78	65	As above
5	22:10	69	82	62	As above
5	22:15	70	83	65	As above
5	22:20	69	79	63	As above
5	22:25	68	79	63	As above
5	22:30	66	79	61	As above
5	22:35	68	75	64	As above
5	22:40	68	75	63	As above
5	22:45	70	85	59	As above
5	22:50	69	76	62	As above
5	23:00	69	82	62	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	18:00	69	91	61	Dominated by low frequency music breakout from Stage & Radio. Contributions from patrons and road traffic noise
6	18:05	69	91	61	As above
6	18:10	65	81	57	As above
6	18:15	64	79	56	As above
6	18:20	66	83	58	As above
6	18:25	69	86	58	As above
6	19:30	66	77	60	Dominated by music breakout from Stage & Radio. Contributions from patrons
6	19:35	66	81	61	As above
6	19:40	66	84	61	As above
6	19:45	66	82	61	As above
6	19:50	65	77	59	As above
6	19:55	71	88	60	As above
6	20:30	73	94	65	As above
6	20:35	70	89	63	As above
6	20:40	71	80	66	As above
6	20:45	70	88	63	As above
6	20:50	69	85	65	As above
6	20:55	70	77	66	As above
6	21:00	68	80	61	As above
6	21:05	71	82	67	As above
6	21:10	70	82	65	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
6	22:10	72	89	64	Dominated by low frequency live music. Contributions from patrons
6	22:15	74	86	67	As above
6	22:20	72	87	65	As above
6	22:25	71	85	66	Dominated by low frequency live music. Contributions from patrons
6	22:30	68	82	62	As above
6	22:35	68	79	64	As above
6	22:40	68	78	64	As above
6	22:45	67	75	60	As above
6	22:50	70	87	61	As above
6	22:55	69	84	62	As above

Table 16 Noise levels and key noise sources from attended measurements on the night of Friday 21 November 2025

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Basement	20:00	107	117	98	Dominated by live music. Contributions from patrons
Basement	20:05	104	113	95	As above
Basement	20:10	103	114	91	As above
Basement	20:15	100	111	84	As above
Basement	20:20	104	112	96	As above
Basement	20:25	97	112	80	As above
Basement	20:30	87	100	83	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Basement	20:35	88	107	84	Dominated by background music. Contributions from patrons and sound check for the band
Basement	20:40	92	104	82	Dominated by background music. Contributions from patrons
Basement	20:45	99	108	90	Dominated by live music. Contributions from patrons
Basement	20:50	99	107	87	As above
Basement	20:55	100	107	87	As above
Basement	21:00	100	108	79	As above
Basement	21:05	99	108	87	As above
Basement	21:10	97	107	86	Dominated by live and background music. Contributions from patrons
Basement	21:15	88	96	84	Dominated by low frequency background music. Contributions from patrons
Basement	21:20	96	107	79	Dominated by low frequency background music. Contributions from patrons and sound check for the band
Basement	21:25	104	110	101	As above
Basement	21:30	102	112	82	Dominated by live music. Contributions from patrons
Basement	21:35	102	113	80	As above

Position	Start time	Measured sound pressure levels (dB)			Noise sources
		$L_{Aeq,5min}$	$L_{AFmax,5min}$	$L_{A90,5min}$	
Basement	21:40	102	112	88	As above
Basement	21:45	100	112	78	As above
Basement	21:50	101	113	79	As above
Basement	21:55	100	112	77	As above

Appendix D

Sound levels measured in other venues

Table 17 Sound pressure levels in other venues

Type of music	Time period	Sound pressure level (L_{eq})						
		Octave-band centre frequency (Hz)						
		63	125	250	500	1000	2000	4000
Night club	1 min 30 secs	94	94	82	84	79	78	70
Night club	5 mins	93	91	85	83	81	81	81
Electronic music	1 min	117	105	102	102	100	96	95
Electronic music	1 min	118	111	105	102	99	93	93
Electronic music	5 mins	108	99	96	97	92	93	89
Live music	5 mins	94	92	91	96	93	93	89
Live music	1 min	111	108	100	96	99	94	94
Live music	1 min	115	104	101	97	90	89	82

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