

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

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Grape Street, Manchester

Acoustic planning report

London, Manchester, Edinburgh, Birmingham, Leeds, Bristol

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A	13 Nov 25		SC	JA
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Summary

Sandy Brown has been commissioned by St John's Estate Ltd to provide acoustic advice in relation to the proposed development at Grape Street, Manchester.

An environmental noise survey has been carried out to determine the existing sound levels in the area. The noise survey was carried out between 15:20 on 17 October 2025 and 12:35 on 21 October 2025.

Limits have been set for atmospheric noise emissions from building services plant and an assessment of operational noise associated with patrons and entertainment noise is included.

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1 Introduction

Sandy Brown has been commissioned by St John's Estate Ltd to provide acoustic advice in relation to the proposed development at Grape Street, 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, results and an assessment of noise egress.

2 Proposed development

The proposed development is the construction of an outdoor venue which is to comprise:

- Cafe to the western side
- West canopy which is to host events, markets and social gatherings
- East canopy which is to host a bar and food traders.

The expected peak weekend capacity is 800 people. As confirmed with Allied London, the site is not proposed to operate during night-time hours (07:00-23:00).

3 Site description

The site location (highlighted in red) in relation to its surroundings is shown in Figure 1.



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

The site is close to the following premises:

- Union Tower (residential), shown in blue in Figure 1.
- Old Granada Studios (hotel), shown in green in Figure 1.
- Bonded Warehouse (office and commercial), shown in orange in Figure 1.
- Versa Studios, shown in Cyan in Figure 1.
- Goods Yard, (offices and commercial) shown in pink in Figure 1.
- The Stables, bar and outdoor venue shown in yellow in Figure 1.
- Aviva Studios, music and arts venue (internal and external spaces), shown in dark green in Figure 1.

4 Noise survey method

An environmental noise survey has been carried out which included unattended noise measurements at the site over 4 days. The measurements were taken over 15 minute periods between 15:20 on 17 October 2025 and 12:35 on 21 October 2025.

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

The microphone for the sound level meter was mounted to a pole extended approximately 1 m out of a partially open window on level 5 on the Grape Street facade. The measurement position is indicated in Figure 1, denoted by the letter 'L'. This location was chosen to be reasonably representative of noise levels at the site and outside the nearest noise sensitive premises.

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

Weather conditions during the survey are described in Appendix A.

5 Assessment criteria

5.1 NPPF and NPSE

The National Planning Policy Framework, December 2024 and updated in February 2025 (NPPF) sets out the UK government's planning requirements. 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) 2010 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.

5.2 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.

5.3 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 A.

5.4 Manchester City Council criteria

5.4.1 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.’

5.4.2 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.”

6 Noise survey results

6.1 Observations

The dominant noise sources observed at the site during the survey were from traffic on nearby roads including Grape Street and Goods Yard Street, including pedestrians.

Less significant noise sources included local wildlife and distant plant noise.

6.2 Measurement results

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

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)
Friday 17 October 2025	57 ^[1]	50
Saturday 18 October 2025	56	51
Sunday 19 October 2025	54	50
Monday 20 October 2025	62	50
Tuesday 21 October 2025	65 ^[1]	-
Average	57	50

^[1] Measurement not made over full period due to monitoring start and end time (the measurement on 17 October 25 was over 8 hours, and on 21 October 25 over 5 hours); not included in the average.

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 2.

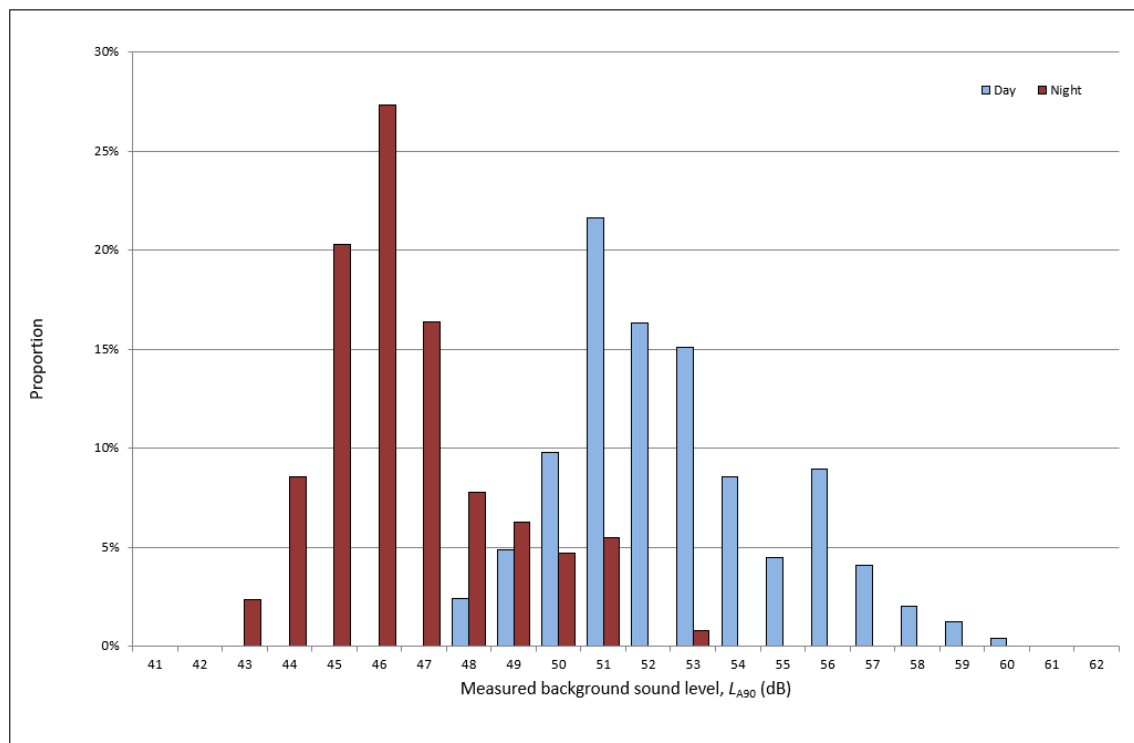


Figure 2 Statistical analysis of representative measured sound pressure levels

From this analysis, the representative background sound levels measured during the survey were $L_{A90,15min}$ 51 dB during the day and $L_{A90,15min}$ 45 dB at night.

Octave-band representative background sound levels are provided in Table 2.

Table 2 Octave-band representative background sound levels

Time period	L_{90} (dB) at each octave-band centre frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Day (07:00–23:00)	54	52	47	47	46	41	34	46
Night (23:00–07:00)	49	49	43	40	40	35	27	42

7 Plant noise egress

7.1 Limits

Based on the MCC criteria given in Section 5.4, and the measurement results, the cumulative noise level resulting from the operation of all new plant at 1 from the worst affected windows of the nearest noise sensitive premises should not exceed the limits presented in Table 3.

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 all locations identified in Section 3 during the day, and at Union Co-living Apartments during the night.

Table 3 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, $L_{Aeq,15min}$ (dB)
Day (07:00-19:00)	46
Night (23:00-07:00)	40

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.

7.2 Assessment

All building services plant will be designed to achieve the noise limits set out above, including any corrections for attention catching features. At this stage, no information is available in relation to the proposed plant selections.

A plant room is proposed to the east of the site. Noise egress associated with this will need to be assessed as the design progresses.

Typical mitigation measures would include low noise plant selections, localised attenuation/enclosures, and minimum sound insulation performance requirements to the plant room envelope.

8 Patron noise egress

8.1 Noise egress from occupants of external amenity areas

MCC does not specifically stipulate 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 which have been agreed with MCC and successfully adopted for similar previous assessments.

The guideline values provided in the WHO guidelines for the impact of community noise on residential premises are given in Table 4.

Table 4 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

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 day (07:00 to 23:00). The existing ambient noise levels also generally exceed those provided in the WHO guidelines. As such, any health effects are likely to be less severe than those stated. On this basis, it is considered that an external noise level of $L_{Aeq,1hr}$ 55 dB between 07:00 – 23:00 hrs would be appropriate.

8.2 Assessment

Assessment of noise egress from patrons at the proposed development has been carried out. The assessment is based on a typical maximum occupancy of 800 patrons, evenly distributed across the site.

The assessment is based on the patrons being evenly distributed across the locations shown in blue in Figure 3.

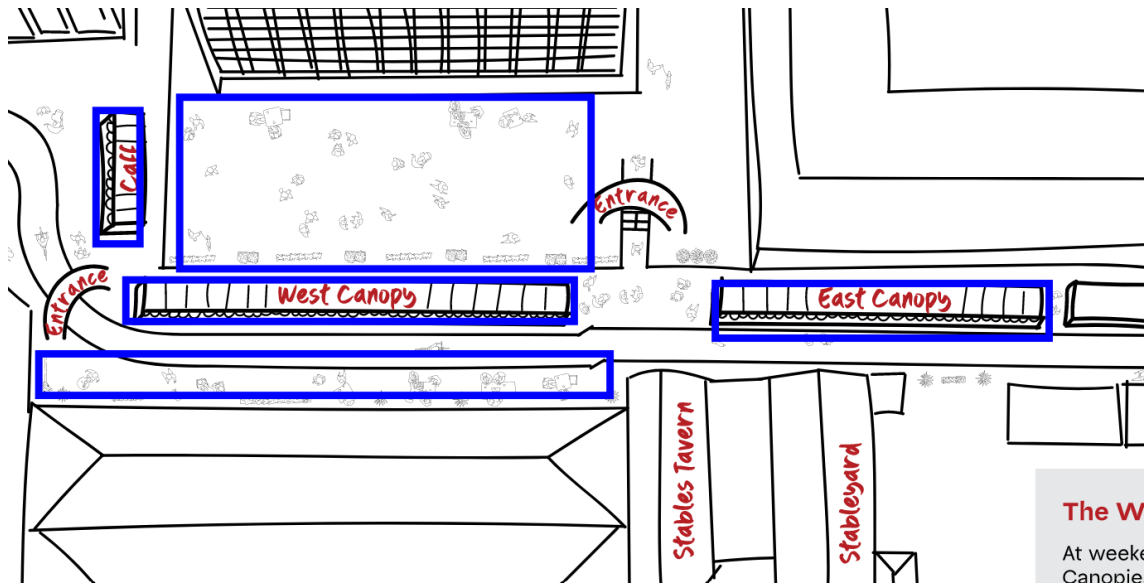


Figure 3 Assumed distribution of the occupants to the proposed external amenity areas and canopies

Noise egress predictions are based up to 25% of the patrons speaking simultaneously which is considered worst-case.

A sound pressure level of L_{Aeq} 60 dB at 1 m per person speaking (based on normal vocal effort) has been used as the basis of this assessment as defined in ISO9921.

The predicted noise levels at the nearby noise sensitive receptors due to patron noise within the external amenity areas are presented in Table 5.

Table 5 Predicted patron noise egress levels

Receptor	Predicted patron sound pressure level due to patron activity, L_{Aeq} (dB)
Union Tower	46
Versa studios	53
Goods Yard	52
Bonded Warehouse	51

The assessment results are in line with the recommended criterion of L_{Aeq} 55 dB applicable during the day and evening, and are lower than the existing ambient noise levels measured

during the survey. On this basis it is considered unlikely that patron noise would cause significant disturbance at the surrounding receptors.

9 Amplified sound egress

9.1 Limits

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

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 all noise sensitive locations identified during the day, and at Union Co-living Apartments during the night.

Table 6 Amplified sound egress limits at 1 m from the nearest noise sensitive premises

Time of day	Amplified sound egress limits at 1 m from noise sensitive premises, $L_{eq,5min}$ (dB) at each octave-band centre frequency (Hz)							dBA
	63	125	250	500	1000	2000	4000	
Day (07:00-23:00)	49	47	42	42	41	36	29	46
Night (23:00-07:00)	44	44	38	35	35	30	22	40

9.2 Guidance on limits inside cafe

It is understood that the cafe may wish to utilise background music. Given the size of the unit, it is unlikely that a lobbied door arrangement will be feasible. As such, calculations have been undertaken to assess the maximum recommended internal amplified sound levels on the basis that the door to the cafe is open as a worst case.

These limits are provided below and should be treated as indicative only at this stage and would be subject to verification testing.

Table 7 Maximum amplified sound limits inside the cafe

Time of day	Maximum amplified sound pressure level within cafe L_{eq} (dB) Octave-band centre frequency (Hz)								L_{Aeq}
	63	125	250	500	1000	2000	4000	8000	
Day (07:00-23:00)	72	70	65	65	64	59	52	72	73

These limits during the day would be suitable for light background music, but would not be appropriate for any kind of live music or loud amplified sound.

Use of electronic limiters will be required on any amplified sound systems to ensure that the entertainment noise criteria is not exceeded.

10 Conclusion

A noise survey has been carried out at the site. Key noise sources at the site were noted as traffic on nearby roads (eg Grape Street and Goods Yard Street), including pedestrians. Measured ambient noise levels were in the range $L_{Aeq,15min}$ 56 to 65 dB during the day, and $L_{Aeq,15min}$ 50 to 51 during the night. The representative background sound levels measured during the survey were $L_{A90,15min}$ 51 dB during the day and $L_{A90,15min}$ 45 dB at night.

The data collected has been used to determine appropriate plant noise egress limits and amplified sound egress limits.

An assessment of patron noise has been undertaken, which assumes 800 occupants shall use the space at peak times. The predicted patron noise egress levels are lower or in line with the recommended criterion of L_{Aeq} 55 dB applicable during the day and evening, and lower than the existing ambient noise levels.

Guidance on amplified sound limitations within the cafe has also been provided.

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 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	24 Sep 27	TRAC25/09422
Microphone	UC-59/20416	Rion	24 Sep 27	TRAC25/09422
Pre-amp	NH-25/11436	Rion	24 Sep 27	TRAC25/09422
Calibrator	SV30A/10559	Svante	24 Sep 27	TRAC25/09422

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 16°C at night and 11°C during the day, and the wind speed was less than 5 m/s.

These weather conditions are considered suitable for obtaining representative measurements.

Appendix B

Results of unattended measurements at Position L

Grape Street, Manchester
Results of noise logging survey at position 'L'
17 October 2025 to 21 October 2025

