Zambrero
59 Cross Street
Manchester
M2 4JW

Plant Noise Impact and Glazing Sound Insulation Assessments

On behalf of

Zambrero

Project Reference: 92468| Revision: 01 | Date: 1st October 2024
Revision 6th August 2026

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For and on behalf of Noise Solutions Ltd				

Revision	Date	Description	Prepared	Reviewed/ Approved
01	6th August 2026	Additional receptor on Bow Lane	AJ	JS

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1.0 Introduction

1.1. Noise Solutions Ltd (NSL) has been commissioned to provide acoustic guidance to Zambrero for the proposed 59 Cross Street, Manchester, restaurant. The scope of work includes a noise impact assessment for the kitchen extract and an assessment of noise breakout from the restaurant frontage.

1.2. An environmental sound survey has been undertaken to establish the prevailing background sound pressure levels at a location representative of the sound levels outside the nearest noise sensitive receptors to the site.

1.3. Internal sound levels within the restaurant have been predicted, based on measurements within similar premises.

1.4. The sound insulation of the windows has been estimated, based on data for similar glazing panels, and the resultant breakout sound pressure levels calculated.

1.5. This report contains recommendations based on project information available at the time of the assessment and the results of a baseline noise survey. NSL can provide further guidance on receipt of the selected plant details.

1.6. To assist with the understanding of this report a glossary of acoustic terms can be found in **Appendix A**. An in-depth glossary of acoustic terms can be viewed online at www.acoustic-glossary.co.uk.

2.0 Details of development proposals

2.1. The proposed restaurant will be located at 59 Cross Street, Manchester M2 4JW.

2.2. The extract vent will be located in Bow Lane.

2.3. The primary frontage of the restaurant is on Cross Street which faces a first-floor residence.

2.4. The building is grade II listed which mandate the use of single glazed windows. It is assumed that the single-glazed windows will be 6mm thick.

2.5. The proposed ground floor layout and window details are shown in **Appendix C**.

3.0 Nearest noise sensitive receptors

3.1. The area surrounding the site is predominantly retail and commercial in nature, with properties surrounding the site.

3.2. The nearest residential receptor has been identified as the flat facing the store on Cross Street, postcode M2 4LA.

3.3. The first-floor office windows approximately 5m from the kitchen extract across Bow Lane are the nearest commercial noise sensitive receptors (Receptor R2).

3.4. Both receptors are shown in **Appendix B.**

4.0 Existing noise climate

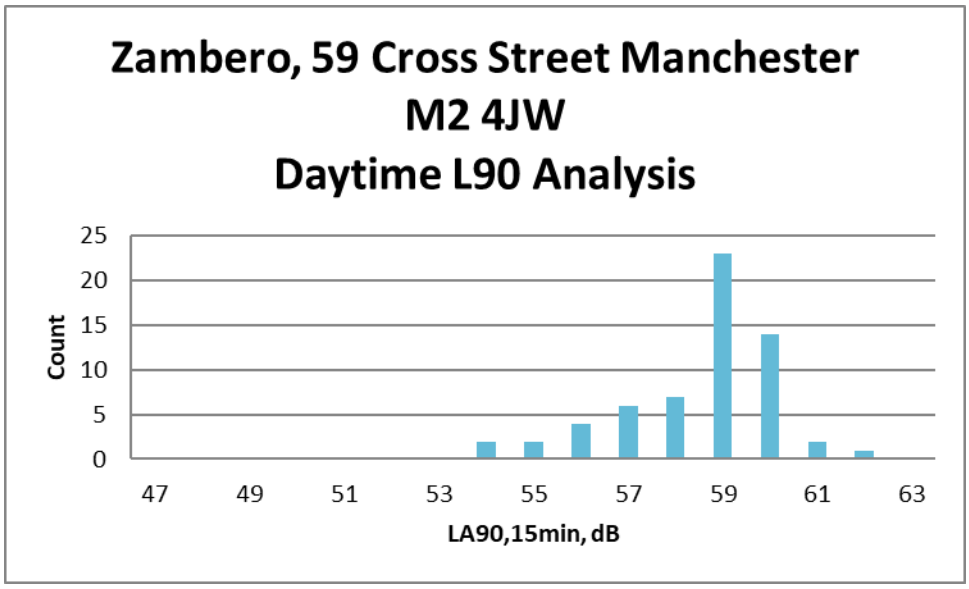
4.1. An environmental noise survey was undertaken to establish the typical background sound levels at a location representative of the noise climate outside the façades of the nearest noise sensitive receptors to the proposed plant area during the quietest times at which the plant will operate.

4.2. The results of the environmental sound survey are summarised in Table 1 below. The full set of measurement results and details of the survey methodology are presented in **Appendix D**.

Table 1 Summary of survey results

Measurement period	Range of recorded sound pressure levels (dB)			
	$L_{Aeq(15mins)}$	$L_{Amax(15mins)}$	$L_{A10(15mins)}$	$L_{A90(15mins)}$
Daytime (07.00 – 23.00 hours)	66-85	83-114	67-75	54-62
Night-time (23.00 – 07.00 hours)	56-77	80-104	55-72	48-54

Figure 1 Histogram of daytime L_{A90} background sound pressure levels

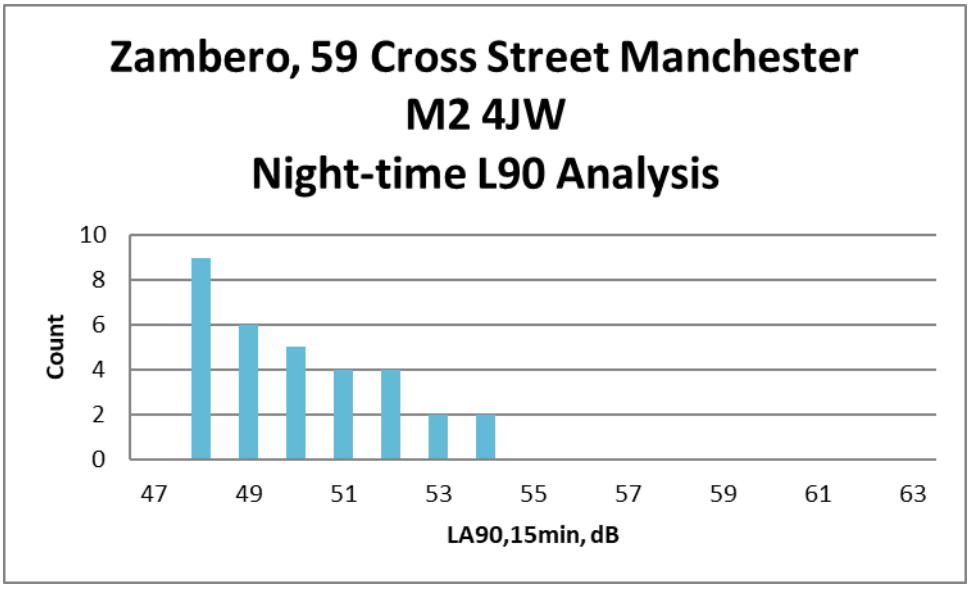


4.3. Further statistical analysis has been undertaken on the data, and the mean, mode and median values are shown in Table 2 below.

Table 2 Statistical analysis of $L_{A90,15min}$ levels during the daytime period

dB, L_{A90} daytime period	
mean	58
modal	59
median	59

Figure 2 Histogram of night-time L_{A90} background sound pressure levels



4.4. Further statistical analysis has been undertaken on the data and the mean, mode and median values are shown in Table 3 below.

Table 3 Statistical analysis of $L_{A90,15min}$ levels during the night-time period

dB, L_{A90} night-time period	
mean	50
modal	48
median	50

4.5. The following values are considered robustly representative of the existing background sound pressure levels at nearby noise sensitive premises:

- 56dB L_{A90} during the daytime period.
- 48dB L_{A90} during the night-time period.

5.0 Plant noise impact assessment

Manchester City Council

5.1. The Planning and Noise Technical Guidance document for Manchester City Council[1] provides the following guidance with regards to noise and vibration from fixed plant/equipment.

> *The noise assessment should be based on BS 4142, and any application for fixed plant, equipment or machinery must demonstrate that:*
>
> *'Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location'.*

BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound

5.1. BS 4142:2014 +A1:2019 is intended to be used to assess the likely effects of sound on people residing in nearby dwellings. The scope of BS 4142:2014[2] includes *"sound from fixed plant installations which comprise mechanical and electrical plant and equipment"*.

5.2. The procedure contained in BS 4142:2014 is to quantify the *"specific sound level"*, which is the measured or predicted level of sound from the source in question over a one hour period for the daytime and a 15 minute period for the night-time. Daytime is defined in the standard as 07:00 to 23:00 hours, and night-time as 23:00 to 07:00 hours.

5.3. The specific sound level is converted to a rating level by adding penalties on a sliding scale to account for either potentially tonal or impulsive elements. The standard sets out objective methods for determining the presence of tones or impulsive elements, but notes that it is acceptable to subjectively determine these effects.

5.4. The penalty for tonal elements is between 0dB and 6dB, and the standard notes: *"Subjectively, this can be converted to a penalty of 2 dB for a tone which is just perceptible at the noise receptor, 4 dB where it is clearly perceptible, and 6 dB where it is highly perceptible."*

5.5. The penalty for impulsive elements is between 0dB and 9dB, and the standard notes: *"Subjectively, this can be converted to a penalty of 3 dB for impulsivity which is just perceptible at the noise receptor, 6 dB where it is clearly perceptible, and 9 dB where it is highly perceptible."*

[1] Planning and Noise, Technical Guidance, Manchester City Council, October 2022

[2] For brevity, references to BS 4142 and BS 4142:2014 should be read as BS 4142:2014 + A1:2019

5.6. The assessment outcome results from a comparison of the rating level with the background sound level. The standard states:

- *Typically, the greater this difference, the greater the magnitude of the impact.*
- *A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context;*
- *A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context;*
- *The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.*

5.7. The standard does state that "*adverse impacts include, but are not limited to, annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact.*"

5.8. The standard goes on to note that: *"Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night."*

5.9. In addition to the margin by which the Rating Level of the specific sound source exceeds the Background Sound Level, the 2014 edition places emphasis upon an appreciation of the context, as follows:

"An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context."

5.10. BS 4142:2014 requires uncertainties in the assessment to be considered, and where the uncertainty is likely to affect the outcome of the assessment, steps should be taken to reduce the uncertainty.

National Planning Policy Framework

5.11. A new edition of NPPF was published in December 2023 and came into effect immediately. The original National Planning Policy Framework (NPPF[3]) was published in March 2012, with subsequent revisions made periodically - this document replaced the existing Planning Policy Guidance Note 24 (PPG 24) "Planning and Noise." The December 2023 revised edition contains no new directions or guidance with respect to noise. The paragraph references quoted below relate to the December 2023 edition.

5.12. Paragraph 180 of the NPPF states that the planning system should contribute to and enhance the natural and local environment by, (amongst others) *"preventing new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, water or noise pollution or land instability."*

5.13. The NPPF goes on to state in Paragraph 191:

"planning policies and decisions should ...

a) 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 quality of life;
b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason ...

5.14. The NPPF document does not refer to any other documents or British Standards regarding noise other than the Noise Policy Statement for England (NPSE[4]).

5.15. Paragraph 2 of the NPPF states that "planning law requires that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise."

5.16. Paragraph 12 of the NPPF states that "The presumption in favour of sustainable development does not change the statutory status of the development plan as the starting point for decision making. Where a planning application conflicts with an up-to-date development plan (including any neighbourhood plans that form part of the development plan), permission should not usually be granted. Local planning authorities may take decisions that depart from an up-to-date development plan, but only if material considerations in a particular case indicate that the plan should not be followed".

[3] National Planning Policy Framework, DCLG, March 2012
[4] Noise Policy Statement for England, DEFRA, March 2010

5.17. Paragraph 123 states that "Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land".

- *The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.*

Criterion at commercial property

5.18. Typically, local authorities do not consider office premises to be as sensitive to noise as residential properties and, therefore, emissions criteria are generally relaxed at these locations.

5.19. However, it is considered appropriate to control plant noise levels within offices to meet the recommended internal noise levels provided in BS 8233:2014 *'Guidance on sound insulation and noise reduction for buildings'*. The standard states a range of noise levels for various spaces used for 'study and work requiring concentration' between 35 and 50dB L_{Aeq}.

5.20. In addition, BS 8233 provides general guidance on the expected sound insulation performance of a given building façade, with details of how various elements can affect the overall performance. Concerning windows, it states that:

> *If partially open windows were relied upon for background ventilation, the insulation would be reduced to approximately 15dB.*

5.21. This implies that should windows on a noise affected façade be openable, a sound insulation value of 15dB should be applied to the whole façade to an internal room being assessed. It should be noted that a sound insulation performance of much greater than 15dB is expected for non-openable standard double-glazed windows. However, in order to assess the worst-case scenario, this report assumes that windows may be opened if desired.

5.22. Based on the above and assuming a worst-case internal criterion of 35dB L_{Aeq}, cumulative plant noise levels at the façade of the nearest office premises should not typically exceed 50dB L_{Aeq}. Given the relatively high daytime background noise level, it is proposed to apply the residential criterion to commercial receptors.

Summary of applicable emissions criteria

5.23. Manchester City Council typically require the specific sound level due to new plant, at the nearest noise-sensitive residential receptor to be 5dBA below the pre-existing representative background sound level.

5.24. The rating sound level due to the extract system should therefore not exceed the following limits:

Table 4 Extract noise emission limits at the nearest noise sensitive receptor

Receptor	Period	Cumulative plant rating level, dB $L_{Ar,Tr}$
Residential	Daytime (07.00 – 23.00 hours)	51
	Night-time (23.00 – 07.00 hours)	43
Commercial	-	51*

**specific level, not Rating level*

5.25. The above limits have not been approved by the local authority at this stage.

6.0 Kitchen extract noise assessment

6.1. Plant rating levels have been predicted at the nearest noise sensitive receptors. The assessment has taken account of the distance between the plant and the nearest receptors, orientations, screening, reflections and other propagation effects.

6.2. An attenuator has also been included in the calculations. Its insert loss in octave bands can be found in Table 5

Table 5 Atmospheric Side Attenuator Insert Loss values (dB)

Insert Loss, dB, at octave band centre frequencies, Hz							
63	125	250	500	1k	2k	4k	8k
9	17	30	38	40	36	31	24

6.3. Table 6 summarises the results of the assessment outside the nearest noise-sensitive premises. Full calculations are shown in **Appendix F**.

Table 6 Assessment of plant rating levels

Receptor	Period	Predicted plant rating level at receptor, $L_{Ar,Tr}$ (dB)	Proposed design criterion (dB)	Difference (dB)
R1 Flat	Daytime (07.00 – 23.00 hours)	35	51	-16

R2 Office	Daytime (07.00 – 23.00 hours)	48*	51*	-3

**Specific level, not Rating level*

7.0 Noise breakout

Internal noise levels

7.1. The reverberant sound pressure used in the calculations for the assessment comes from reference measurements from a similar style restaurant. The data includes sounds from an open kitchen, background music and diners.

7.2. Typical average (L_{eq}) and maximum (L_{max}) levels are shown in Table 7.

Table 7 Typical internal bistro sound levels

Level	Sound pressure level, dB, at octave band centre frequencies, Hz								
	63	125	250	500	1k	2k	4k	8k	dB(A)
L_{eq}	64	73	76	77	75	72	66	59	80
L_{max}	86	84	90	89	89	88	86	74	94

Predicted noise breakout

7.3. The level of noise breaking out of a window will depend on the internal reverberant sound pressure level, the size of the window and its sound reduction index.

7.4. For the purposes of this assessment, data for 6mm thick single glazing has been used. The following sound reduction indices have been used and are likely to represent a conservative assessment of the installed performance.

Table 8 Assumed sound reduction index

Glazing	SRI, dB, at octave band centre frequencies, Hz							
	63	125	250	500	1k	2k	4k	8k
6mm sealed	15	22	25	29	31	25	34	36

7.5. Calculations of the breakout predictions are shown in **Appendix D**. The results are summarised in Table 9 below:

Table 9 Predicted breakout sound level at receptor

Index	L_p at receptor
L_{Aeq}	28
L_{Amax}	43

Discussion

7.6. Absolute levels of predicted restaurant breakout noise at nearby receptors are low. Average (L_{Aeq}) and maximum (L_{Amax}) noise levels due to the restaurant are both significantly below expected ambient levels (from existing noise sources), in the absence of noise from the premises.

8.0 Summary

8.1. Noise Solutions Ltd (NSL) has been commissioned to provide acoustic guidance to Zambrero for the proposed 59 Cross Street, Manchester, restaurant. This report includes a noise impact assessment for the kitchen extract system and an assessment of noise breakout through the restaurant frontage.

8.2. The external noise levels of the kitchen extract have been predicted based on performance data of the specified extract fan and attenuator performance.

8.3. Overall noise levels from the extract levels at both receptor (R1) and (R2) will be comply with Manchester City Council's usual requirements and should therefore be acceptable.

8.4. External noise levels due to breakout from the restaurant have been predicted, based on typical internal noise levels for a similar establishment and assumed sound reduction index data for the glazing.

8.5. Overall breakout noise levels from the restaurant windows are predicted to be low and unlikely to be a cause for concern.

Appendix A Acoustic terminology

Parameter	Description
Ambient Noise Level	The totally encompassing sound in a given situation at a given time, usually composed of a sound from many sources both distant and near ($L_{Aeq,T}$).
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 $\log_{10}$ (s1/s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa. The threshold of normal hearing is in the region of 0 dB and 140 dB is the threshold of pain. A change of 1 dB is only perceptible under controlled conditions.
dB(A), L_{Ax}	Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) which differentiates between sounds of different frequency (pitch) in a similar way to the human ear. Measurements in dB(A) broadly agree with people's assessment of loudness. A change of 3 dB(A) is the minimum perceptible under normal conditions, and a change of 10 dB(A) corresponds roughly to halving or doubling the loudness of a sound. The background noise in a living room may be about 30 dB(A); normal conversation about 60 dB(A) at 1 metre; heavy road traffic about 80 dB(A) at 10 metres; the level near a pneumatic drill about 100 dB(A).
Fast Time Weighting	Setting on sound level meter, denoted by a subscript F, that determines the speed at which the instrument responds to changes in the amplitude of any measured signal. The fast time weighting can lead to higher values than the slow time weighting when rapidly changing signals are measured. The average time constant for the fast response setting is 0.125 (1/8) seconds.
Free-field	Sound pressure level measured outside, far away from reflecting surfaces (except the ground), usually taken to mean at least 3.5 metres
Façade	Sound pressure level measured at a distance of 1 metre in front of a large sound reflecting object such as a building façade.
$L_{Aeq,T}$	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
$L_{max,T}$	A noise level index defined as the maximum noise level recorded during a noise event with a period T. L_{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
$L_{10,T}$	A noise level index. The noise level exceeded for 10% of the time over the period T. L_{10} can be considered to be the "average maximum" noise level. Generally used to describe road traffic noise. $L_{A10,18h}$ is the A –weighted arithmetic average of the 18 hourly $L_{A10,1h}$ values from 06:00-24:00.
$L_{90,T}$	A noise level index. The noise level that is exceeded for 90% of the measurement time interval, T. It gives an indication of the lower levels of fluctuating noise. It is often used to describe the background noise level and can be considered to be the "average minimum" noise level and is a term used to describe the level to which non-specific noise falls during quiet spells, when there is lull in passing traffic for example.

Appendix B Aerial photograph site showing areas of interest

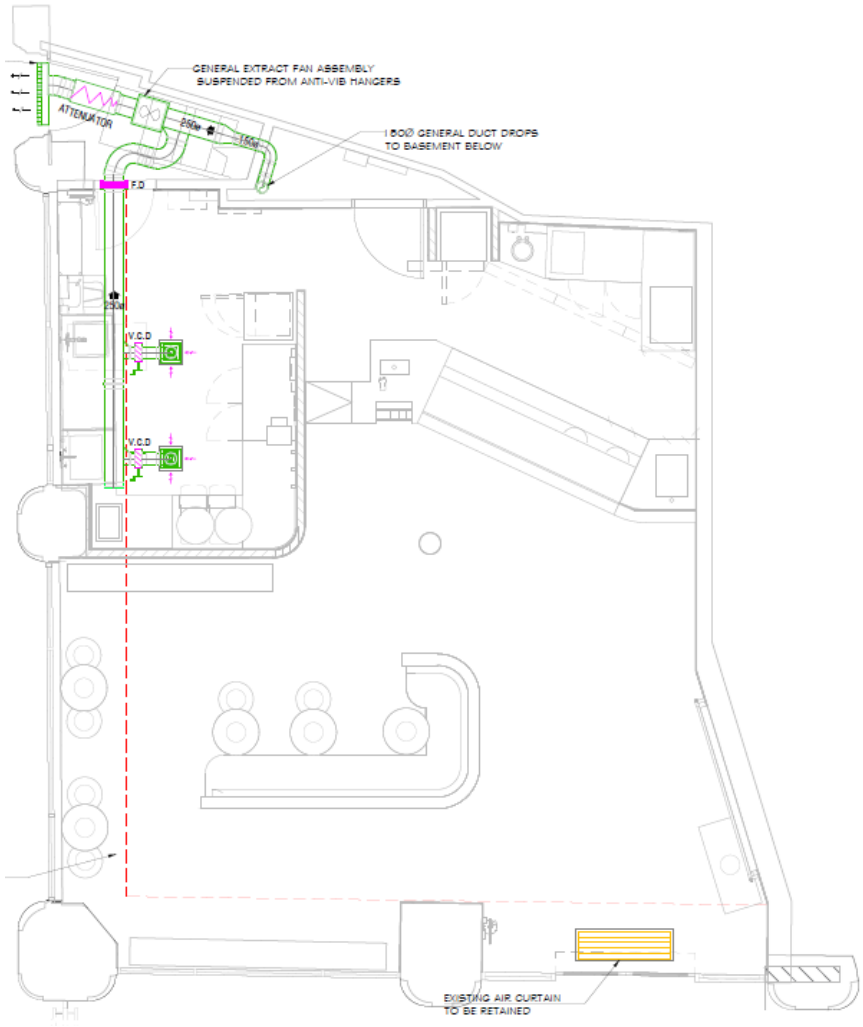


Figure showing the shop front on Cross Street

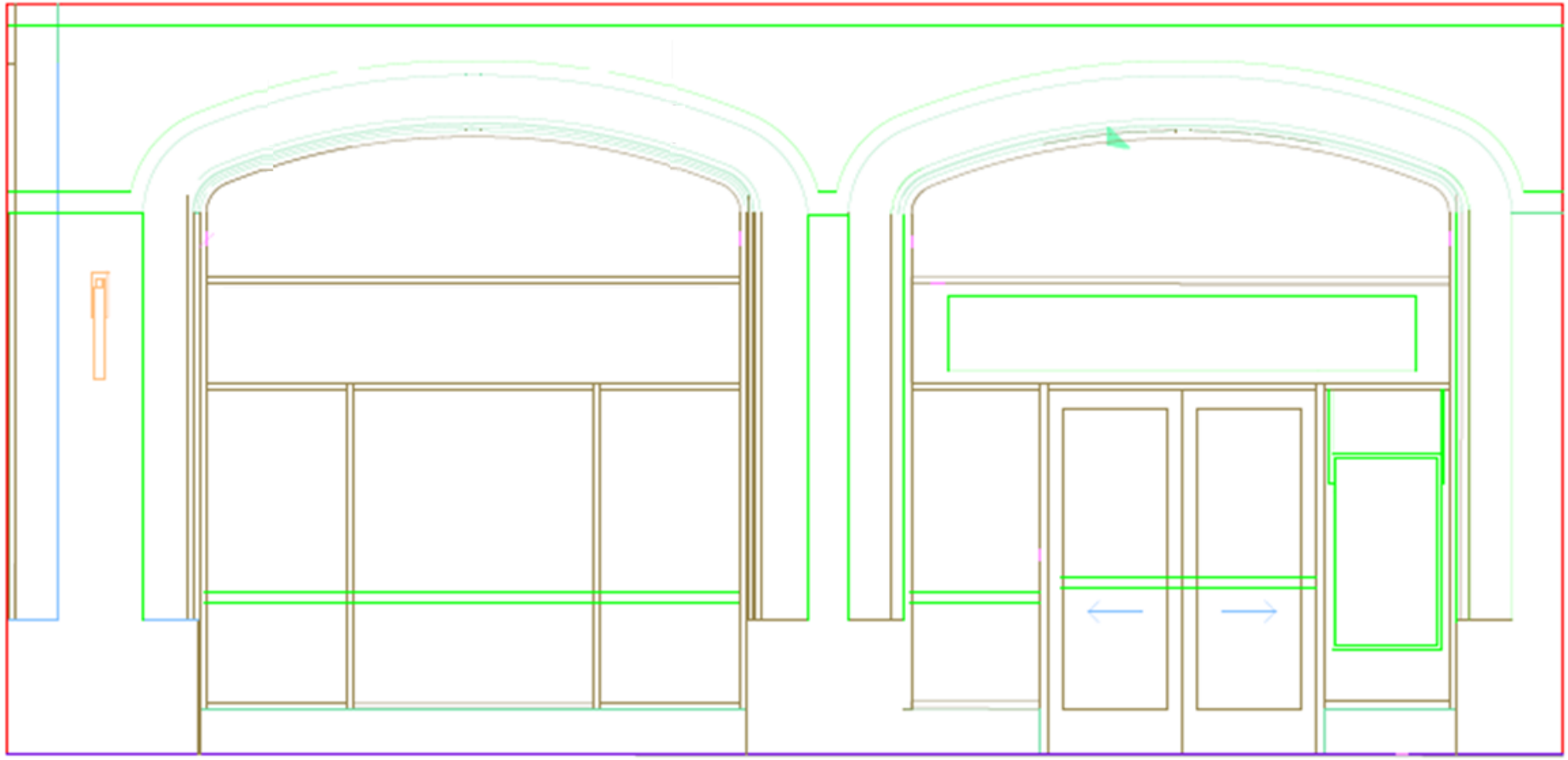


Appendix C Proposals

Ground floor layout



Cross Street Elevation



Appendix D Environmental noise survey

Details of environmental sound survey

D.1 Measurements of the existing background sound levels were undertaken between 12.00hours on Tuesday 24th September and 11.15 hours on Wednesday 25th September 2024.

D.2 The sound level meter was programmed to record the A-weighted L_{eq}, L_{90}, L_{10} and L_{max} noise indices for consecutive fifteen-minute sample periods for the duration of the survey.

Measurement position

D.3 The representative measurement position was located on a lamppost at Cross Street . The approximate location of the microphone is indicated on the aerial photograph in **Appendix B**. In accordance with BS 7445-2:1991 *'Description and measurement of environmental noise – Part 2: Guide to the acquisition of data pertinent to land use'*, the measurements were undertaken under free-field conditions.

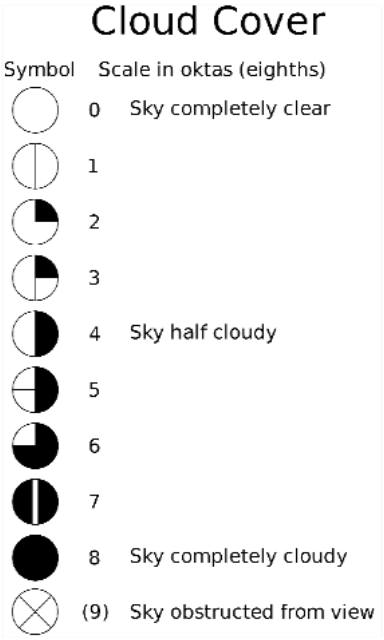
D.4 The survey location was chosen such that the lowest background noise levels were similar to those at the nearest residential receptor (R1) but exclude any potential effect of noise from existing plant serving the store.

Equipment

D.5 Details of the equipment used during the survey are provided in the table below. The sound level meter was calibrated before and after the survey; no significant change (+/-0.2 dB) in the calibration level was noted.

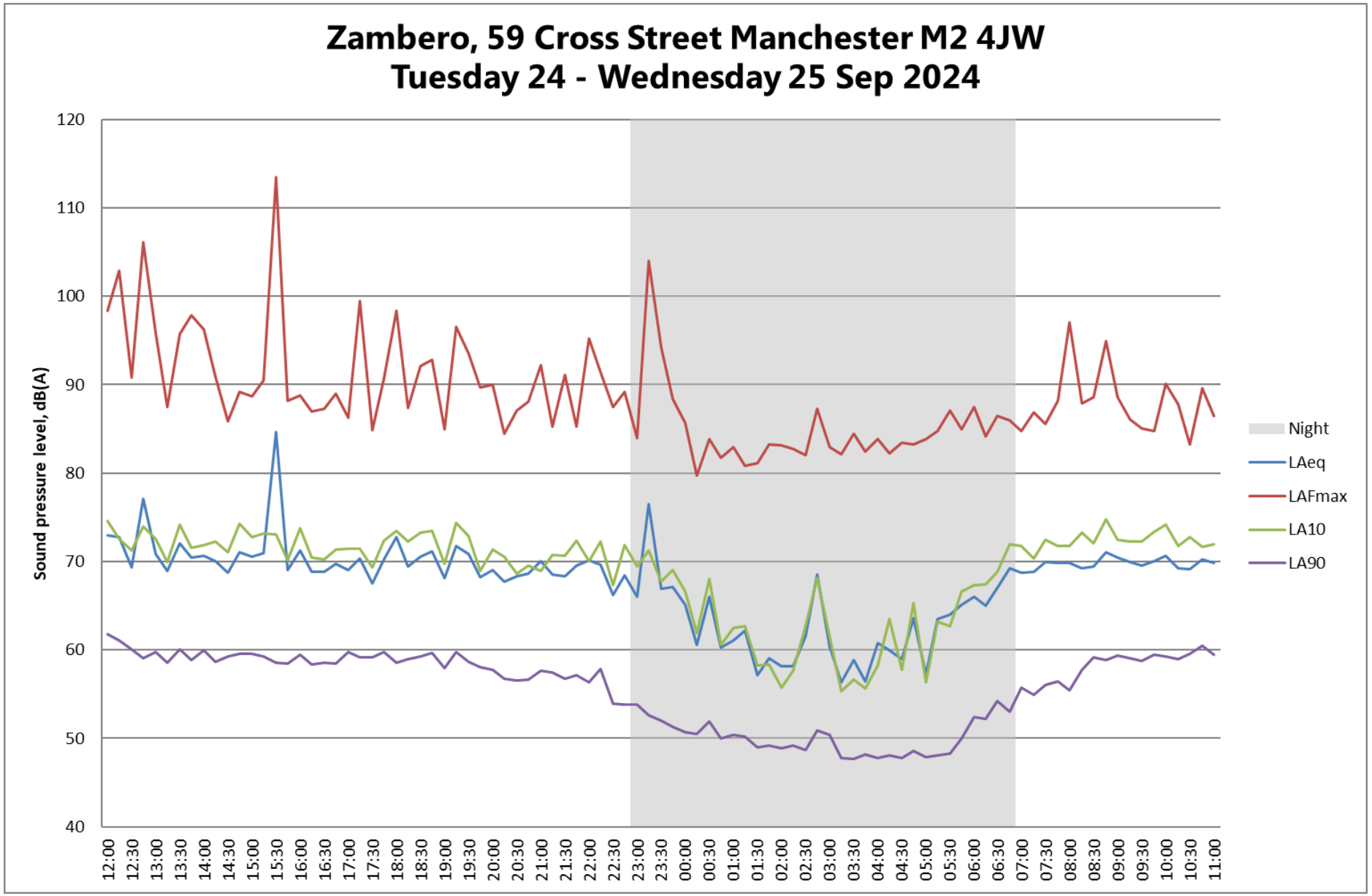
Description	Model / serial no.	Calibration date	Calibration certificate no.
Class 1 Sound level meter	Svantek 977D / 99070	11/05/2023	Factory conformation certificate
Condenser microphone	Microtech MK255 / 25429		
Preamplifier	Svantek SV12L / 126981		
Calibrator	Rion NC-74 / 35094453	03/09/2024	1509491-1

D.6 Weather conditions were determined both at the start and on completion of the survey. It is considered that the meteorological conditions were appropriate for environmental noise measurements. The table below presents the weather conditions recorded on site at the beginning and end of the survey.

<table>
<tr><th colspan="5">Weather Conditions</th></tr>
<tr><th>Measurement Location</th><th>Time/Date</th><th>Description</th><th>Beginning of Survey</th><th>End of Survey</th></tr>
<tr><td>As indicated on Appendix B</td><td>12.00 Tues 23rd September -11.15 Wednesday 24th September</td><td>Temperature (°C)</td><td>15</td><td>12</td></tr>
<tr><td rowspan="9">
</td><td>Precipitation:</td><td>0</td><td>0</td></tr>
<tr><td>Cloud cover (oktas – see guide)</td><td>7</td><td>8</td></tr>
<tr><td>Presence of fog/snow/ice</td><td>n</td><td>n</td></tr>
<tr><td>Presence of damp roads/wet ground</td><td>n</td><td>n</td></tr>
<tr><td>Wind Speed (m/s)</td><td>0.4</td><td>2.1</td></tr>
<tr><td>Wind Direction</td><td>SW</td><td>SSE</td></tr>
<tr><td>Conditions that may cause temperature inversion (i.e. calm nights with no cloud)</td><td>n</td><td>n</td></tr>
</table>

Results

D.7 The results of the survey are considered to be representative of the background sound pressure levels at the façades of the most affected noise sensitive receptors to the plant area during the quietest times at which the plant will operate. The noise climate at the measurement position was dominated by local road traffic and pedestrians with the occasional tram. The results of the survey are presented in a time history graph overleaf.


Zambero, 59 Cross Street Manchester M2 4JW
Tuesday 24 - Wednesday 25 Sep 2024
Sound pressure level, dB(A)
120
110
100
90
80
70
60
50
40
12:00
12:30
13:00
13:30
14:00
14:30
15:00
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05:30
06:00
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:00
Night
LAeq
LAFmax
LA10
LA90

Appendix E Breakout calculations

L_w of the Store Front, L_{eq}

		Octave band centre frequency, Hz								
		63	125	250	500	1000	2000	4000	8000	dB(A)
Internal reverberant L_p		64	73	76	77	75	72	66	59	80
SRI glazing	Single 6 mm	15	22	25	29	31	25	34	36	
Area correction	29m^2	15	15	15	15	15	15	15	15	
in to out correction		-6	-6	-6	-6	-6	-6	-6	-6	
L_w of Glazed frontage		58	59	60	56	53	56	41	31	***60***

L_{eq} at receptor

Distance from window to receptor	Sound power level, dBA	Dist., m	Dist. Loss, dB	L_p at receptor, dB(A)
Store Front	60	16.0	32	**28**

L_w of the Store Front, L_{max}

		Octave band centre frequency, Hz								
		63	125	250	500	1000	2000	4000	8000	dB(A)
Internal reverberant L_p		86	84	90	89	89	88	86	74	94
SRI glazing	Single 6 mm	15	22	25	29	31	25	34	36	
Area correction	29m^2	15	15	15	15	15	15	15	15	
in to out correction		-6	-6	-6	-6	-6	-6	-6	-6	
L_w of Glazed frontage		80	71	74	68	67	72	60	46	***75***

Cumulative L_{max} at receptor

Distance from window to receptor	Sound power level, dBA	Dist., m	Dist. Loss, dB	L_p at receptor, dB(A)
Store Front	75	16.0	32	**43**

Appendix F Kitchen extract calculations

Description				Notes.	Sound level (dB) at octave band centre frequencies (Hz)								dBA
					63	125	250	500	1k	2k	4k	8k	
Source noise level (unattenuated)				In-duct L_w	108	104	95	81	76	72	68	64	**91**
System losses					-9	-5	-1	0	0	0	0	0	
Atmospheric side attenuator				I.L.	-9	-17	-30	-38	-40	-36	-31	-24	
Sound power level leaving terminal					**90**	**82**	**64**	**43**	**36**	**36**	**37**	**40**	**68**
Receptor R1	V angle	H angle											
Directivity correction	15	90	500 x 500 (15,90)		0	0	0	0	-4	-7	-7	-7	
Distance correction	26	m		26 m	-36	-36	-36	-36	-36	-36	-36	-36	
Screening correction	Screened:		δ=	-26	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Surface corrections etc													
Resultant at Receptor R1				L_p	**54**	**46**	**28**	**7**	**-4**	**-7**	**-6**	**-3**	**32**
Receptor R2	V angle	H angle											
Directivity correction	10	10	500 x 500 (10,10)		1	2	3	4	5	6	6	6	
Distance correction	5	m		5 m	-22	-22	-22	-22	-22	-22	-22	-22	
Screening correction	Screened:		δ=	-5	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Surface corrections etc													
Resultant at Receptor R2				L_p	**69**	**62**	**45**	**25**	**19**	**20**	**21**	**24**	**48**

Plant	Resultant at Receptor (dBA)	
	R1	R2
Kitchen Extract	32	48
Cumulative	**32**	**48**
BS 4142:2014 feature correction	3	0
BS 4142:2014 rating level	**35**	**48**
Target	51	51
Excess	**-16**	**-3**