

46 Henry Street Ancoats, Manchester

Noise Impact Assessment Report

Client:

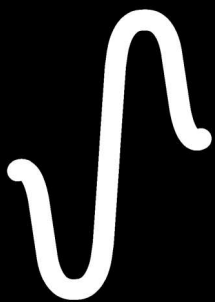
Fresh Fuel Bar (Ancoats) Limited
3rd Flr, Eastgate, Castle Street
Manchester, M3 4LZ

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**JAMESON
ACOUSTICS**

Consultants in acoustics,
noise and vibration

Document Control

Revision	Date	Author	Description
0	24-01-2023	AJ	First issue
1	20-03-2023	AJ	Updated plant noise assessment
2	21-03-2023	AJ	To reflect latest development description/layouts
3	27-04-2023	AJ	Updated plant noise assessment for revised plant location

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1.0 Introduction

Planning permission is sought for the conversion of the ground and first floor of 46 Henry Street in Ancoats, Manchester from offices/storage into a Fresh Fuel Bar restaurant.

Jameson Acoustics Limited has been commissioned to undertake a noise assessment to supplement the planning application. The assessment seeks to demonstrate that noise generated from the operation of the proposed development can be suitably controlled to mitigate the risk of adverse noise impacts on the locality.

Our findings are presented herein.

For a description of the acoustic terminology used herein, please see Appendix A.

2.0 Objectives

To review national and local planning policies/requirements and relevant design standards and good practice guides that will inform the noise impact assessments.

To carry out a baseline environmental noise survey at the site over a minimum 4-day period, capturing weekday and weekend day/night noise levels in accordance with BS 7445 and BS 4142.

Based on the survey results, to propose operational noise limits for the Proposed Development (relating to operational activities and external plant installations) with the aim of mitigating risks of adverse noise impacts on the locality.

To undertake a noise impact assessment of the Proposed Development operating under its new use, based on information provided by the client/design team, considering:-

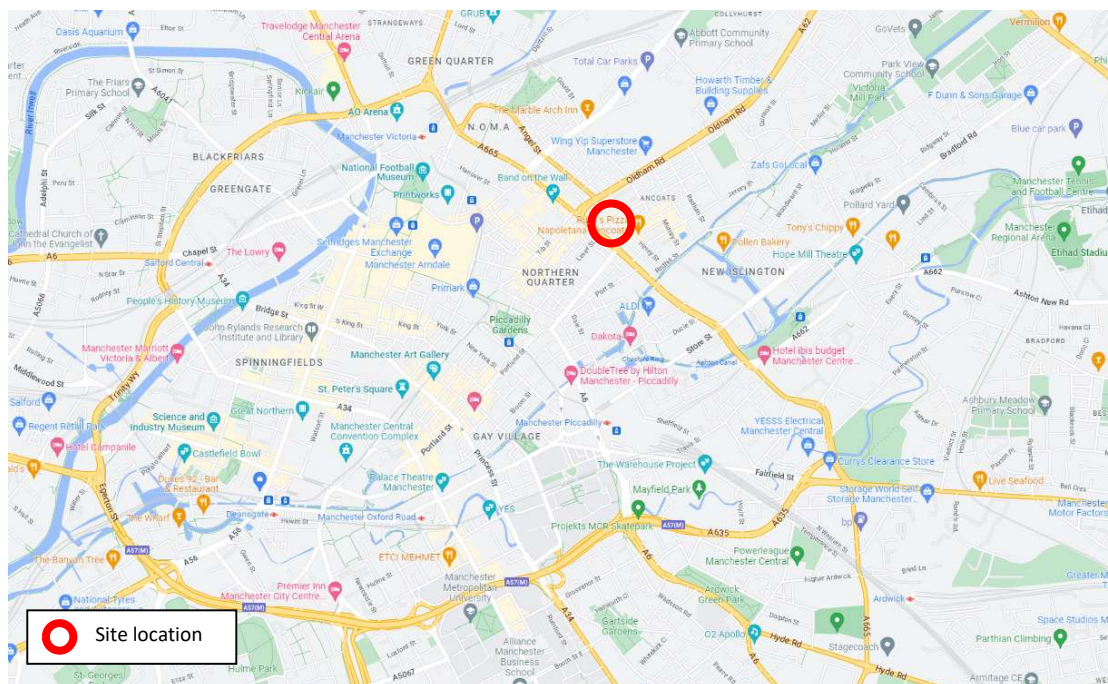
- Noise from new items of external plant;
- General operation noise egress from the restaurant & kitchen.

To evaluate the acceptability and advise on noise mitigation measures as required to satisfy the proposed operational noise limits.

3.0 Site Description

3.1 Location

The site is located at 46 Henry Street in Ancoats, Manchester. It falls under the jurisdiction of Manchester City Council. See Location Plan below.



Location Plan (© maps.google.co.uk)

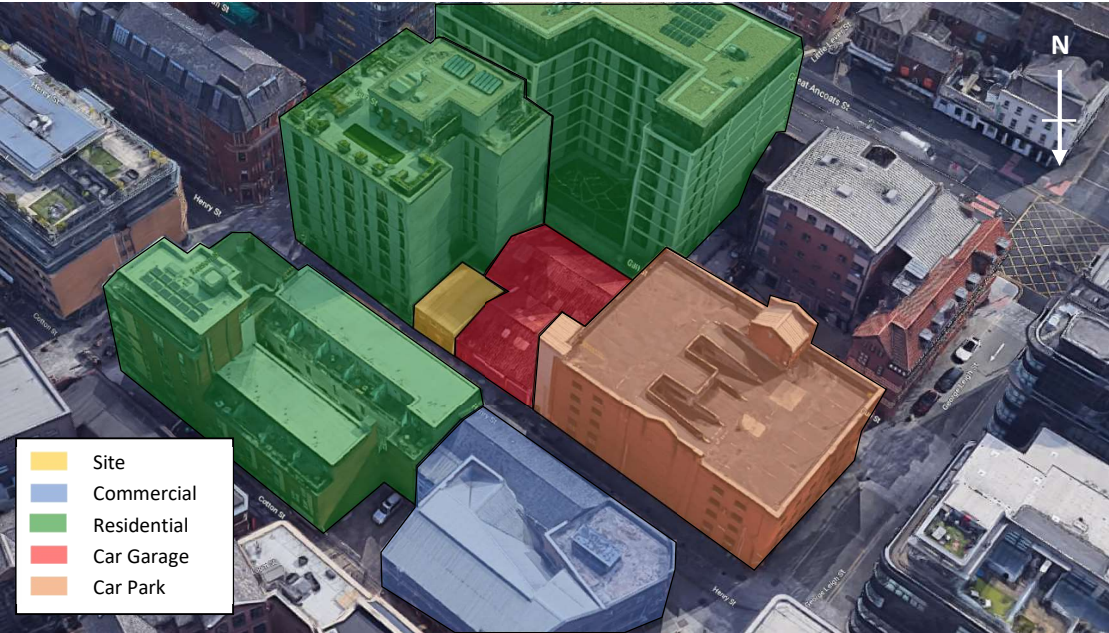
3.2 Description

The building is located on the south side of Henry Street in the block bounded by George Leigh Street and Blossom Street. The property is a two-storey building with a pavement-side front elevation. It is adjoined to a single storey car MOT garage to the west and south, and is next door to a residential apartment building to the east (not structurally connected).

The building is currently used for storage at ground floor (accessed through a garage door) with office accommodation at first floor. The first floor has three windows on the front elevation onto Henry Street and three narrow high-level windows at the rear.

The dominant source of noise on-site is road traffic, primarily distant road traffic from Great Ancoats Street to the south, a major city thoroughfare. Traffic on Henry Street is sparse, and primarily used as a local access road. The operation of the car MOT garage produces notable noise output during its daytime operating hours. The noise is typical of this type of facility, with regular engine revving and the use of pneumatic and air compression tools.

The surrounding area is a mix of commercial and residential properties. The nearest noise sensitive residential windows are noted to be those in the adjacent apartment blocks to the east and across Henry Street to the north. See 3D Site Plan below.



3D Site Plan (© maps.google.co.uk)

4.0 Proposed Development

The proposed development is for the conversion of the ground and first floor of 46 Henry Street from office/storage to a Fresh Fuel Bar restaurant. The kitchen would be located on the first floor at the rear of the floor plan with seating to the front. The ground floor will provide a servery area with further seating and a disabled WC. See below Floor Plans.



5.0 Planning Policy, Legislation & Assessment Guides

5.1 National Planning Policy

National planning policies are set out in the following:

- Noise Policy Statement for England [NPSE], 2010;
- National Planning Policy Framework [NPPF], 2021;
- National Planning Practice Guidance – Noise [PPGN], 2019.

These documents provide a qualitative approach to noise assessments. See Appendix B for a detailed description of each.

5.2 Local Planning Requirements

5.2.1 Local Plans & Policies

Manchester City Council's [MCC] Core Strategy was adopted on the 11 July 2012 and is the key document in the Manchester Local Plan. It sets out the long-term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against.

The Core Strategy requests that all new developments follow the 'Development Principles' and accord with the design guidance set out in the Supplementary Planning Documents. In accordance with Policy DM1, this includes the effects on amenity due to noise generated by a new development and, conversely for noise sensitive uses (e.g. residential), the effects of environmental noise onto the new development.

MCC's Supplementary Planning Document relating to noise is their 'Planning & Noise, Technical Guidance' published in October 2022 by their Environmental Protection Team. This document provides guidance to applicants and consultants concerning the assessment and prediction of environmental noise associated with a particular development. The key elements relevant to this development are summarised below.

5.2.2 Specific Guidance on Noise

In relation to commercial developments, MCC's guidance advises that *"BS 4142 should be used to assess the likely impact of noise from industrial and commercial sources at noise sensitive premises"*.

The Council consider that new developments should contribute and enhance the area in which they are located and where possible, i.e. prevent 'noise creep', contribute to the

improvement of people's health and quality of life as per the NPSE. With this in mind, the design objective should be:

'The development should be 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.'

In relation to noise from deliveries, the guide states that *"Deliveries and collections are usually controlled by restricting operational hours but depending on the extent of these activities, a Noise Management Plan (NMP) may be requested, which would include an assessment of noise"*. In this case, deliveries are likely to be relatively low key, e.g. occasional van drop-offs by the front door, and no specific assessment of delivery noise should be necessary.

For fixed plant, the Council advises a BS 4142 assessment that demonstrates 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 (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location'.

5.3 Assessment Guides

5.3.1 BS 4142: 2014

British Standard BS 4142 looks at the assessment of noise of a commercial / industrial nature. It describes methods for rating and assessing outdoor sound of an industrial and/or commercial nature *"on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident"*. In relation to this development, this includes sound from fixed installations, comprising M&E plant and equipment.

The assessment method is based on the difference between the measured 'background sound level' without the influence of any industrial noise source, and the 'rating level' of the industrial source, at the receiver location. The standard states that:

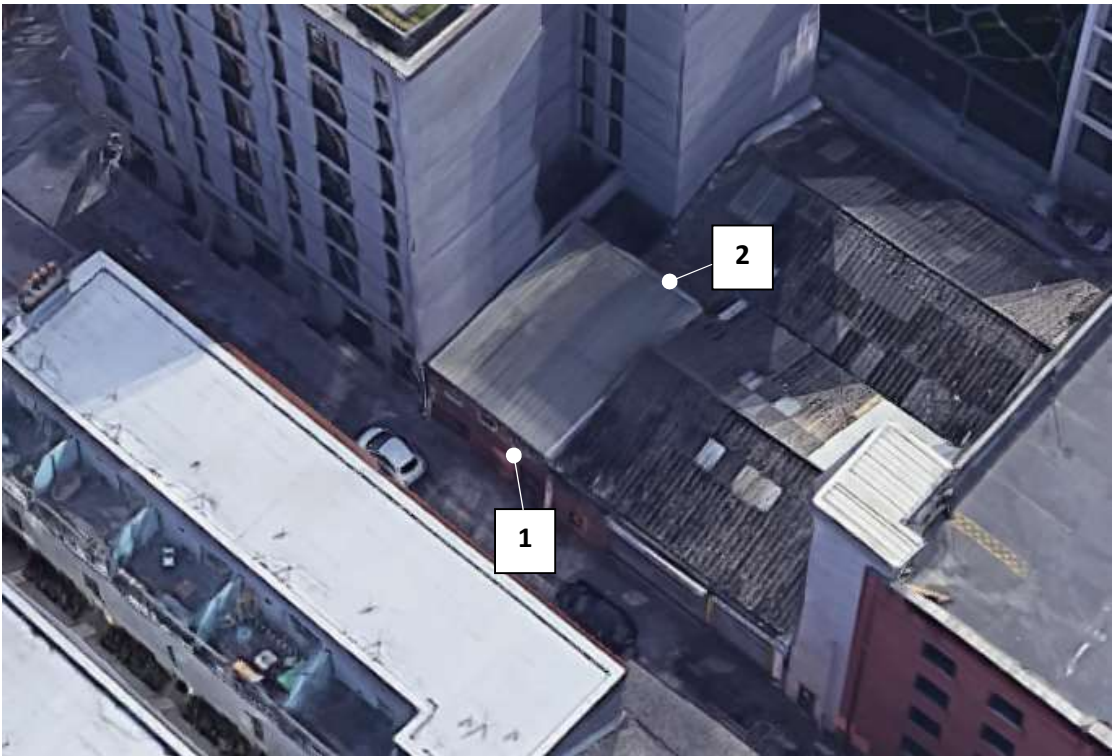
- *"a difference of around +10 dB or more is likely to be an indication of a significant adverse impact";*
- *"a difference of around +5 dB is of marginal significance is likely to be an indication of an adverse impact";*
- *"where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact".*

6.0 Baseline Noise Survey

6.1 Procedure

Automated noise level measurements were taken from 14:00 hours on Thursday 5 January to 11:00 hours on Monday 9 January 2023 at 2nr positions on-site, as described below.

Position	Description
1	[Façade measurement] – Front (Henry St) building elevation, ~1m from building façade, out of first floor window. Purpose: To obtain representative background noise levels on the Henry Street side of the development (apartments across the road).
2	[Façade measurement] – Rear building elevation, ~1m from building façade, out of first floor high level window. Purpose: To obtain representative background noise levels to the rear of the development (adjacent apartment block).



Site plan showing measurement positions (© maps.google.co.uk)

At each position, the microphone was mounted on a pole protruding approximately 1 metre out of a first floor window. Windshields were fitted. The equipment was programme to continuously log all relevant A-weighted broadband (dBA) and linear spectral noise level indices, including L_{eq} , L_{90} , L_{10} and L_{max} , over 15-minute intervals. All measurements were taken in general accordance with BS 7445-1: 2003 ‘Description and Measurement of Environmental Noise’.

6.2 Instrumentation

The instrumentation used for the survey is summarised below. Laboratory calibration certificates are available upon request.

Description	Equipment	Serial Nr	Lab Calibration Expiry	Lab Calibration Certificate Nr
Class 1 sound level meter	Svantek 971A (with Type 7152 microphone)	124663 (82835)	12 August 2024	2292773
Class 1 sound level meter	Cirrus CR:171B (with MK:224 microphone)	G056718 (204055A)	8 Nov 2024	182767 (182766)
Class 1 sound calibrator	Cirrus CR:515	57570	8 Nov 2023	182770

The sound level meters were both hand-calibrated at the beginning and end of the survey period. No significant deviations in calibration level were noted.

6.3 Weather Conditions

Based on internet weather reports for the full survey period, conditions were considered suitable for obtaining representative measurement results. The weather climate was considered representative of typical conditions for this area, including occasional periods of rainfall. Temperatures were typically in the range of 5°C to 12°C, and wind speeds were light (< 4.5 m/s) which is within acceptable tolerance for the equipment windshields.

6.4 Observed Noise Climate

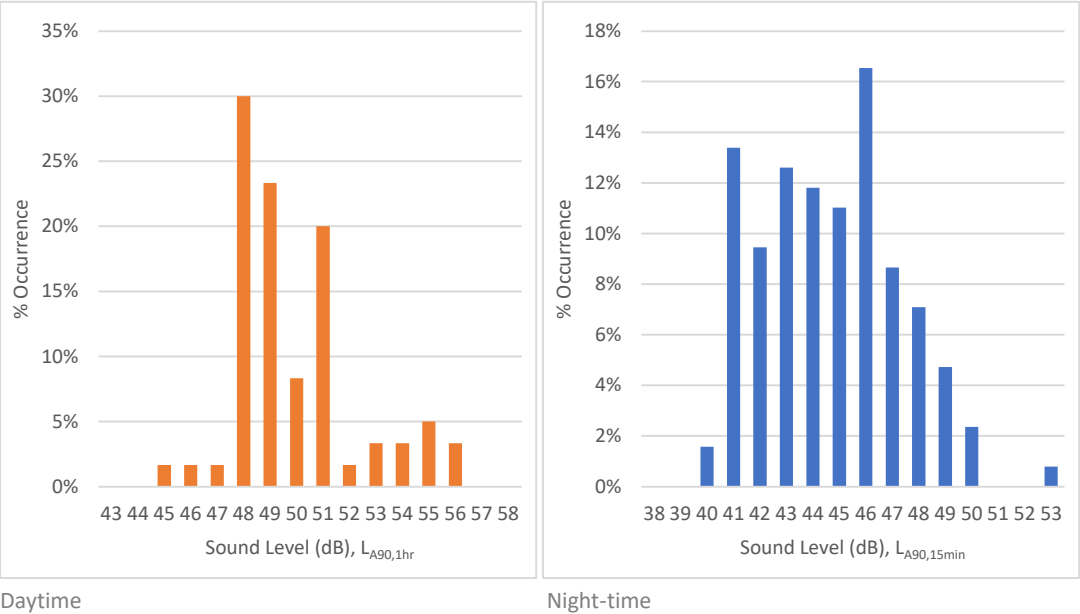
Due to the nature of the survey, i.e. unmanned, it is not possible to describe the noise climate throughout the duration of the survey period. However, on install and collection the noise climate was noted to be dominated by road traffic from Great Ancoats Street to the south. Occasional vehicle movements on Henry Street were noted (one or two vehicles every 5-10 minutes). Noise breakout from the operation of the car MOT garage was notable, in the form of engine revving and the use of air compression tools.

6.5 Results & Analysis

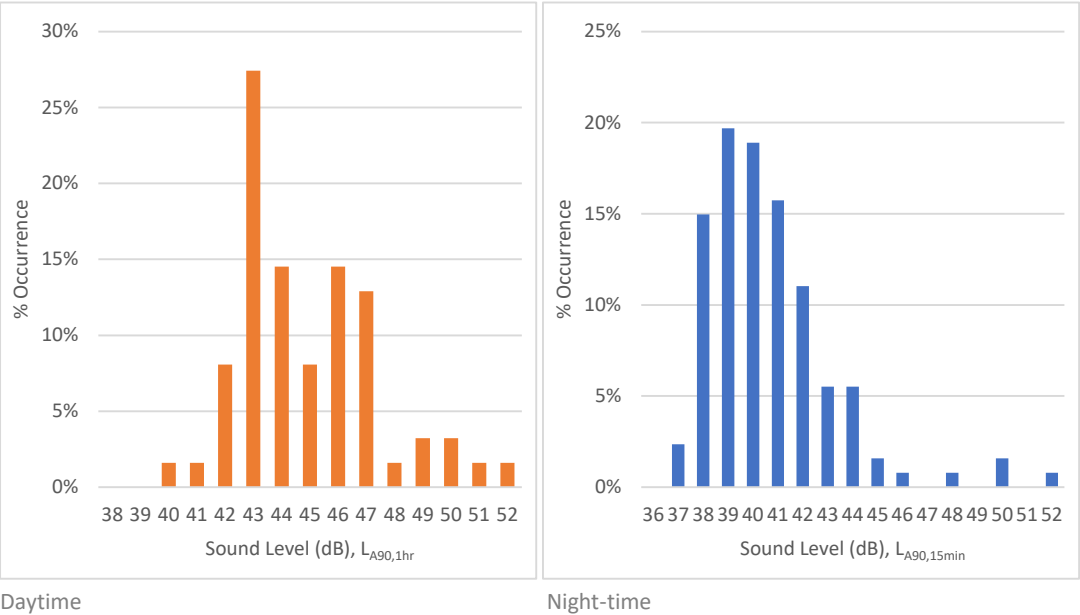
The results of the automated survey have been plotted on Graphs 22014-G1 and G2 enclosed in Appendix C. The graphs present the L_{A90} , L_{Aeq} and L_{Amax} noise levels logged at 15-minute intervals.

In accordance with BS 4142, the representative daytime and night-time background noise levels have been determined through statistical analysis of the survey results. The following graphs illustrate the % occurrence of each noise level through daytime and night-time periods at each position.

POSITION 1 (FRONT)



POSITION 2 (REAR)



7.0 Plant Noise Emissions

7.1 Limits

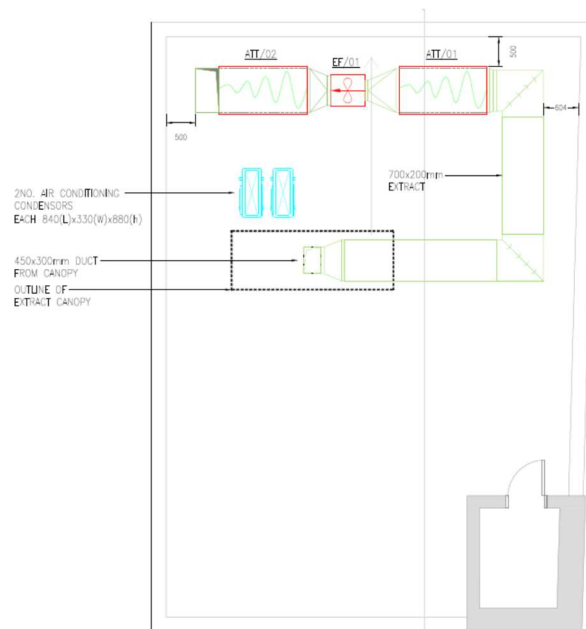
Based on the surveyed 'representative' background noise levels and the requirements of the Local Authority, we propose the following plant noise emission limits to be achieved incident onto noise sensitive residential windows with all proposed plant operating simultaneously.

Receptor Location	Plant Noise Rating Limit, $L_{A,r,T,r}$ ref. BS 4142 (dB)	
	Daytime (07:00-23:00)	Night-time (23:00-07:00)
North (apartments over Henry Street)	43	36
South (adjacent apartment block)	38	34

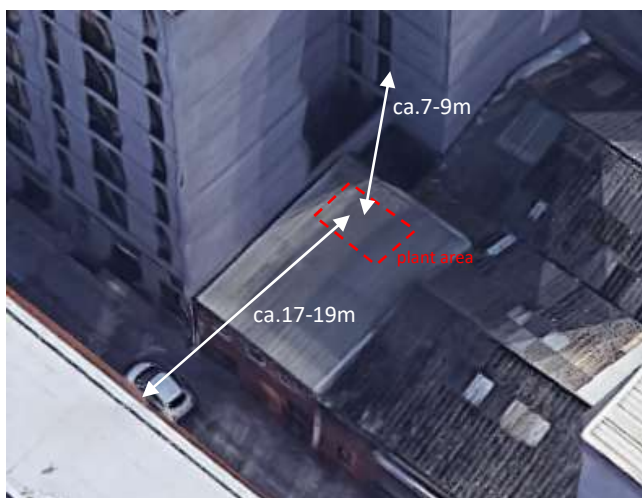
Noise shall be assessed in accordance with BS 4142:2014 with corrections applied for any plant emitting noise of a tonal or irregular quality. The above limits shall be subject to the final approval of the Local Authority.

7.2 Plant Design Proposals & Noise Mitigation

The design proposals for external plant allow for the installation of 2nr new rooftop condenser units and a rooftop extract fan, as illustrated below.



Based on the below indicative plant area location, units would be approximately 7-9 metres away from the nearest noise sensitive windows of the adjacent apartment block [Receptor A], and approximately 17-19 metres away from apartments over Henry Street [Receptor B].



The manufacturer's noise data for the units are tabulated below. This information has been taken directly from manufacturer datasheets and is understood to be representative of the plant operating at full (maximum) duty.

Unit	Make/Model	Source	Data	Sound Level (dB) at OBCF (Hz)						
				63	125	250	500	1k	2k	4k
C1 (Cooling Condenser)	Mitsubishi SUZ-M71 VAR 1	Unit	L_p @ 1m*	50	53	49	46	43	38	32
C2 (Cooling Condenser)	Mitsubishi SUZ-M71 VAR 1	Unit	L_p @ 1m*	50	53	49	46	43	38	32
EF1 (Extract Fan)	S&P KABB-400D/355	Outlet	L_w	62	73	73	68	67	64	62
		Casing	L_w	60	65	61	54	46	43	42

*hemi-spherical sound pressure level (49 dBA at 1m).

The manufacturer's data does not indicate any tonal noise characteristics. We would also expect smooth ramp up/down characteristics from new units. Hence, no acoustic feature correction would apply in line with BS 4142.

The kitchen extract unit is to be fitted with an atmospheric side in-duct attenuator by Caice (or equal and equivalent) with a length of 1500mm. This attenuator shall provide the following minimum insertion losses. Air velocity and pressure drops across the attenuator shall be controlled to 4.0 m/s and 60 Pa respectively to control regenerated noise.

Unit	Location	Length	% Free-Area	Minimum Insertion Loss (dB) at OBCF (Hz)						
				63	125	250	500	1k	2k	4k
Attenuator	EF1 Discharge	1500mm	40%	5	11	21	33	37	36	27

Based on the above, we have carried out calculations of noise emissions to the nearest receptors A and B in line with BS 4142 which are presented below.

Receptor A: Adjacent Apartments		63	125	250	500	1k	2k	4k	dBA
KITCHEN EXTRACT									
Exhaust									
Source									
Silencer	40 %	1500 mm							
Duct losses									
End correction	400 mm	400 mm							
Angular correction	45 °	0 °							
Distance loss	7 m								
Directivity factor correction	h (s=spheric, h=hemi, q=quarter)								
Screening (y=yes, j=just, n=no)	n (y=yes, j=just visible, n=none)								
Acoustic feature (y=yes, n=no)	n (y=yes, n=no)								
Lp at Receptor									
		62	73	73	68	67	64	62	
		-5	-11	-21	-33	-37	-36	-27	
		-10	-5	-2	0	0	0	0	
		1	1	2	3	3	4	4	
		-17	-17	-17	-17	-17	-17	-17	
		-8	-8	-8	-8	-8	-8	-8	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		23	34	27	13	8	7	14	22
Casing Radiated									
Source (Lw or free-field hemi Lp)									
Corrections	Lw	Lw or Lp							
Distance loss	8 m	none							
Directivity factor correction	h (s=spheric, h=hemi, q=quarter)								
Screening (y=yes, j=just, n=no)	n (y=yes, j=just visible, n=none)								
Acoustic feature (y=yes, n=no)	n (y=yes, n=no)								
Lp at Receptor									
		60	65	61	54	46	43	42	57
		-18	-18	-18	-18	-18	-18	-18	
		-8	-8	-8	-8	-8	-8	-8	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		34	39	35	28	20	17	16	30
CONDENSERS									
Source (Lw or free-field hemi Lp)									
Corrections	Lp	Lw or Lp	1						
Distance loss	9 m	2 units							
Directivity factor correction	h (s=spheric, h=hemi, q=quarter)								
Screening (y=yes, j=just, n=no)	n (y=yes, j=just visible, n=none)								
Acoustic feature (y=yes, n=no)	n (y=yes, n=no)								
Lp at Receptor									
		50	53	49	46	43	38	32	48
		3	3	3	3	3	3	3	
		-19	-19	-19	-19	-19	-19	-19	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		34	37	33	30	27	22	16	32
Total Lp at Receptor									
		37	42	37	32	28	23	20	34

Receptor B: Apartments Over Henry St		63	125	250	500	1k	2k	4k	dBA
KITCHEN EXTRACT									
Exhaust									
Source									
Silencer	40 %	1500 mm							
Duct losses									
End correction	400 mm	400 mm							
Angular correction	0 °	0 °							
Distance loss	19 m								
Directivity factor correction	h (s=spheric, h=hemi, q=quarter)								
Screening (y=yes, j=just, n=no)	n (y=yes, j=just visible, n=none)								
Acoustic feature (y=yes, n=no)	n (y=yes, n=no)								
Lp at Receptor									
		62	73	73	68	67	64	62	
		-5	-11	-21	-33	-37	-36	-27	
		-10	-5	-2	0	0	0	0	
		1	2	3	4	5	6	6	
		-26	-26	-26	-26	-26	-26	-26	
		-8	-8	-8	-8	-8	-8	-8	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		14	25	19	5	1	0	7	15
Casing Radiated									
Source (Lw or free-field hemi Lp)									
Corrections	Lw	Lw or Lp							
Distance loss	19 m	none							
Directivity factor correction	h (s=spheric, h=hemi, q=quarter)								
Screening (y=yes, j=just, n=no)	n (y=yes, j=just visible, n=none)								
Acoustic feature (y=yes, n=no)	n (y=yes, n=no)								
Lp at Receptor									
		60	65	61	54	46	43	42	57
		-26	-26	-26	-26	-26	-26	-26	
		-8	-8	-8	-8	-8	-8	-8	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		26	31	27	20	12	9	8	23
CONDENSERS									
Source (Lw or free-field hemi Lp)									
Corrections	Lp	Lw or Lp	1						
Distance loss	17 m	2 units							
Directivity factor correction	h (s=spheric, h=hemi, q=quarter)								
Screening (y=yes, j=just, n=no)	n (y=yes, j=just visible, n=none)								
Acoustic feature (y=yes, n=no)	n (y=yes, n=no)								
Lp at Receptor									
		50	53	49	46	43	38	32	48
		3	3	3	3	3	3	3	
		-25	-25	-25	-25	-25	-25	-25	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		28	31	27	24	21	16	10	27
Total Lp at Receptor									
		31	35	31	26	22	17	14	28

These calculations indicate compliance with the plant noise limits without the need for further noise mitigation measures.

8.0 Operational Noise Emissions

The proposed ground and first floors shall be used as a restaurant with daytime operational hours only.

We understand the unit will operate 48nr covered seats at first floor, with a servery at ground floor and kitchen at first floor. Based on historic measurements of ambient noise levels within a similar sized restaurant/cafe, reverberant internal noise is expected to typically reach the following levels. NB These readings were taken inside a Federal Café busy with customers, moderate background music playing and an active kitchen with extract fan running.

Area	Reverberant Sound Pressure Level, $L_{Aeq,5min}$ (dB)
Within customer seating/dining area	69
At servery (with coffee machine operating)	68
Within back of house kitchen	70

The facility will be renovated with new double glazed windows/curtain walling frontage and an insulated plasterboard ceiling to the top floor (to under-draw the existing metal roof). The existing building is formed from brickwork. The minimum sound reduction performance of each of the building's external building fabric elements is expected to be as follows (windows closed).

Brick walls (single leaf, internal lining):	50 dB R'_w
Roof (with new plasterboard ceiling and insulated cavity):	40 dB R'_w
Double glazed frontage incl. door & windows (e.g. 6-16-6mm):	32 dB R'_w

Based on the above, we have undertaken noise egress calculations to determine the resultant operational noise breakout levels incident onto windows of the apartments over Henry Street and those in the adjacent apartment block (overlooking the roof). Our calculations (based on the following equation) are presented in the tables below.

$$SPL_{out} = SPL_m - SRI + 10 \log_{10} \left(\frac{S}{r^2} \right) - 14$$

where,

SRI = sound reduction R'_w (dB),

S = area of separating element (m^2), and

r = distance to receptor (m)

Receptor: Apartments over Henry Street
Separating Element: Frontage Elevation

Description	Sound Level (dB)	
	Ground Floor	First Floor
Internal Source Noise Level, L_{Aeq}	68	69
Composite SRI of frontage, R'_w	-34	-38
$10\log_{10}(S/r^2)$, where $S=7\times3m$, $r=15m$	-10	-10
-14	-14	-14
Specific Noise Level at Apartment Window, L_{Aeq}	10	6
Acoustic Feature Correction (BS 4142) - irregularity		+6
Total Noise Rating Level at Apartment Window, $L_{Ar,Tr}$		17
Background Noise Level (daytime), L_{A90}		48
Level Difference, $L_{Aeq} - L_{A90}$		-31
Risk of Adverse Noise Impact		Low

Receptor: Adjacent Apartment Block (Windows overlooking Roof)
Separating Element: Roof & Rear First Floor Windows

Description	Sound Level (dB)	
	First Floor	
Internal Source Noise Level, L_{Aeq}	70	
Composite SRI of roof & rear windows, R'_w	-39	
$10\log_{10}(S/r^2)$, where $S=58m^2$, $r=10m$	-2	
-14	-14	
Specific Noise Level at Apartment Window, L_{Aeq}	15	
Acoustic Feature Correction (BS 4142) - irregularity	+6	
Total Noise Rating Level at Apartment Window, $L_{Ar,Tr}$	21	
Background Noise Level (daytime), L_{A90}	43	
Level Difference, $L_{Aeq} - L_{A90}$	-22	
Risk of Adverse Noise Impact	Low	

Our calculations indicate that, with conventional building solutions, the risk of adverse noise impact on nearby residents due to the internal operation of the restaurant is likely to be **low**.

9.0 Conclusions

Jameson Acoustics has been commissioned to undertake a noise impact assessment of the proposed conversion of 46 Henry Street in Ancoats into a restaurant.

A 5-day noise survey has been undertaken to establish baseline daytime and night-time noise levels during weekday and weekend periods.

The results have been used to set commercial plant noise limits for the development. An assessment of proposed plant installations on the roof of the building has been undertaken. From this, it is envisaged that the proposed plant noise limits should be achieved with the chosen plant and an appropriately sized attenuator onto the kitchen extract discharge duct.

An assessment of restaurant operational noise breakout from the development has been undertaken. Our assessment indicates that, with conventional building solutions, the risk of adverse noise impact on nearby residents due to the internal operation of the restaurant is likely to be low.

Appendix A – Acoustic Terminology

- dB** Decibel - Used as a measurement of sound level. Decibels are not an absolute unit of measurement but an expression of ratio between two quantities expressed in logarithmic form.
- dB(A)** The human ear is more susceptible to mid-frequency noise than the high and low frequencies. The 'A'-weighting scale approximates this response and allows sound levels to be expressed as an overall single figure value in dBA. The _A subscript is applied to an acoustical parameter to indicate the stated noise level is A-weighted (e.g. $L_{Aeq,T}$ in dB). Noise levels in dBA do not have a linear relationship to each other; for similar noises, a change in noise level of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is only just perceptible.
- $L_{Aeq,T}$** $L_{Aeq,T}$ is the equivalent continuous sound pressure level. It is an average of the total sound energy measured over a specified time measurement period, T .
- $L_{10,T}$** L_{10} is the noise level exceeded for 10% of the measurement period T (i.e. the quietest 10% of the measurement) and has, for many years, been used in the assessment of road traffic noise.
- $L_{90,T}$** L_{90} is the noise level exceeded for 90% of the measurement period T (i.e. the quietest 10% of the measurement) and is often used to describe the 'background' noise level.
- L_{max}** L_{max} is the maximum sound pressure level recorded over the measurement period, T . L_{max} is often used in assessing scheduled environmental noise 'events' (such as train passbys), particularly at night where such events may cause sleep disturbance.
- R_w** The weighted sound reduction index, R_w , is a single figure description of sound reduction as defined in BS EN ISO 717-1. It is single-number quantity which characterizes the airborne sound insulating properties of a material or building element over a range of frequencies. The R_w is calculated from sound insulation measurements taken in an acoustic laboratory. Sound insulation ratings derived from site measurements are invariably lower than the laboratory figures and are referred to as the apparent weighted sound reduction index, R'_w .
- $D_{n,e,w}$** The weighted element-normalised level difference, $D_{n,e,w}$, is a single figure description of the sound insulation performance of small building elements, such as a trickle ventilator.
- C_{tr}** C_{tr} is correction term applied against the sound insulation single-number values (e.g. R_w) to provide a weighting against low frequency performance. The reference values used within the C_{tr} calculation are based on urban traffic noise.

Appendix B – Planning Policy & Assessment Guides

Planning Policy

- **Noise Policy Statement for England (NPSE)**

The Noise Policy Statement for England (NPSE) launched in March 2010 states the long-term vision of Government noise policy is to *“promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development”*.

The long-term vision is supported by the following aims; 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;
- Where possible, contribute to the improvement of health and quality of life.

The intention is that the NPSE should apply to all types of noise apart from noise in the workplace (occupational noise).

The NPSE introduces a three-tier concept for the assessment of noise impacts onto a receptor:

- **NOEL – No Observed Effect Level:** The level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.
- **LOAEL – Lowest Observable Adverse Effect Level:** The level above which adverse effects on health and quality of life can be detected.
- **SOAEL – Significant Observed Adverse Effect Level:** The level above which significant adverse effects on health and quality of life occur.

There are no numeric thresholds relating to each of the above. The NPSE acknowledges that the severity of noise impacts vary depending upon the type of noise, the type of receptor, the duration (on-time) of the noise, the characteristics of the noise, the time of day, the day of the week, etc.. As a result, the definition of what constitutes an SOAEL is somewhat flexible.

- **National Planning Policy Framework (NPPF)**

The National Planning Policy Framework (NPPF) was first published in 2012 and sets out the government’s planning policies for England and how these are expected to be applied.

The latest revision of the NPPF (July 2021) states that planning system should **contribute to, and enhance**, the natural and local environment by (amongst others) *“preventing both 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 stability.”*

The express inclusion of noise in the NPPF means that it is a material planning consideration for local planning decisions.

Paragraph 123 of the NPPF document states that planning policies and decisions should aim to:

“A. Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;

B. Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;

C. Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and

D. Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.”

NPPF advises that decisions relating to planning applications should ensure *“...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.”*

To achieve this, new developments 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”* and should also *“identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.”*

The NPPF recognises 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.”*

- **Planning Practice Guidance on Noise (PPG)**

The National Planning Practice Guidance (PPG) is a web-based resource, launched by the Department for Communities and Local Government (DCLG) in March 2014 to support the NPPF and make it more accessible. It advises on how planning can manage potential noise impacts in new development. The guidance is regularly reviewed and updated and noise is listed as a specific category. The guidance is for ad hoc developments, as major infrastructure is covered by overarching National Policy Statements.

PPG provides the following tabulated summary of the effects of noise exposure (in terms of health and quality of life) associated with noise generating and sensitive developments.

Response	Examples of Outcomes	Increasing Effect Level	Action
No Observed Effect Level			
Not present	No effect	No Observed Effect	No specific measures required
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

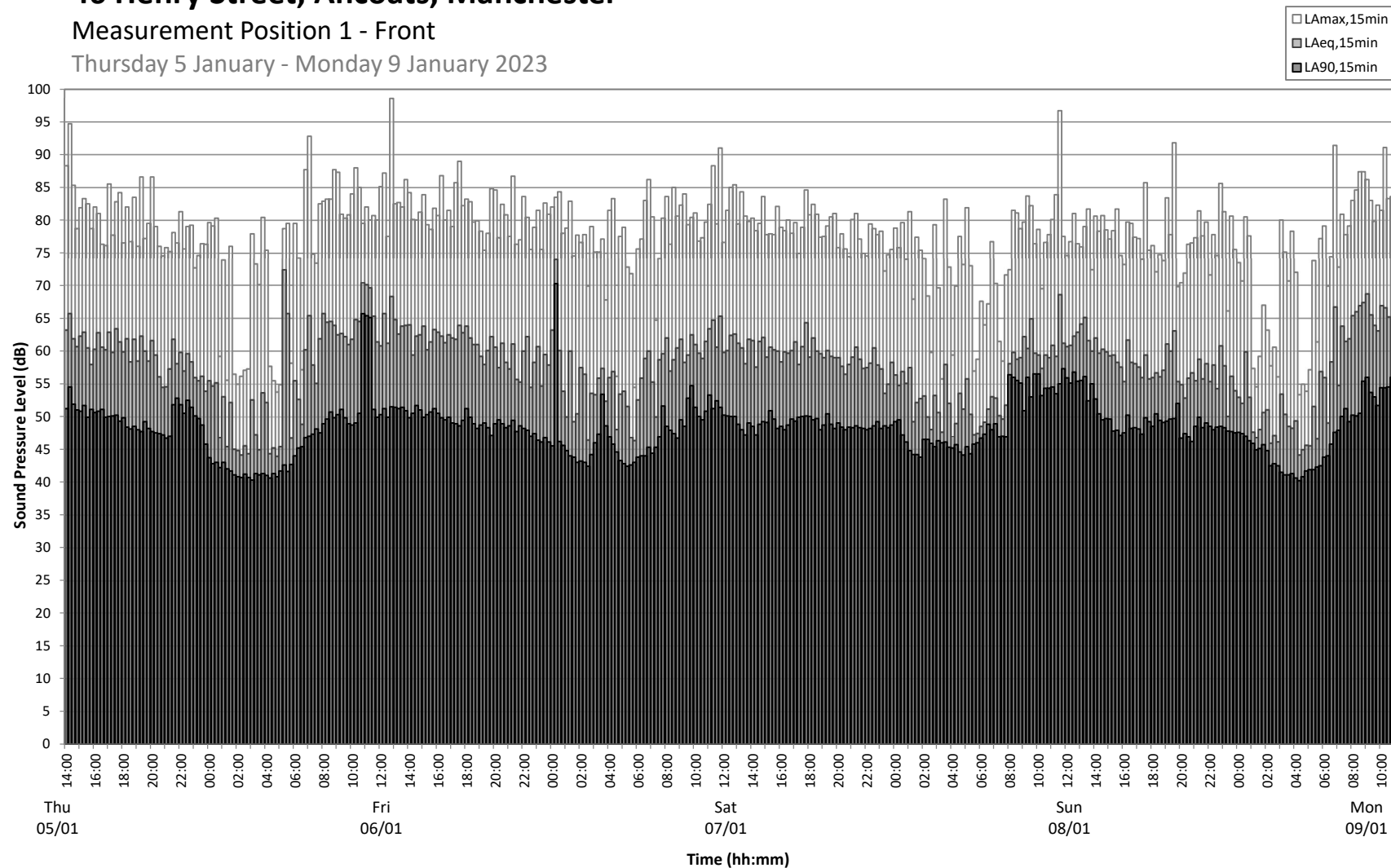
Appendix C – Noise Survey Time History Graphs

46 Henry Street, Ancoats, Manchester

Measurement Position 1 - Front

Thursday 5 January - Monday 9 January 2023

22025-G1



46 Henry Street, Ancoats, Manchester

Measurement Position 2 - Rear

Thursday 5 January - Monday 9 January 2023

22025-G2

