SPRATT+HAMER



Acoustic Verification Report

Project Details	
Client	Krol Corlett Construction Limited
Client Address	Morgan Brightside Building Bradman Road Knowsley Industrial Park L33 7UR
Site Address	75 Mosley Street Manchester M2 3HR
Reference	22989E

Quality Assurance	
Prepared by	Phil Lodge BSc (Hons) AMIOA
Authorised by	Alejo Garcigoy MSc MIOA
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V1	18/08/2026	Phil Lodge	First issue
V2	10/09/2026	Alejo Garcigoy	Inclusion of photographic evidence

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1 Introduction

Krol Corlett Construction Limited has instructed Spratt and Hamer Limited to undertake post-installation noise monitoring to validate the impact of external mechanical plant on nearby occupants following the installation of the plant and associated mitigation measures.

An existing office unit within a seven-storey building has been converted from its former Class E (Commercial, Business and Service) use to a sui generis use. As part of the proposed development, a Mechanical Ventilation with Heat Recovery (MVHR) system has been installed, comprising two rooftop exhaust cowls at sixth-floor level and louvre system at seventh floor level. The report is to be submitted in support of an application to formally discharge condition 3b of planning permission ref. 143759/FO/2025 for the development site Manchester City Council in response to a conditional approval.

This report is prepared solely for Krol Corlett Construction Limited. Spratt and Hamer Limited accepts no responsibility for its use by any third party.

This document has been prepared using the various documents listed within the appendices of this report, together with drawings, technical information and additional verbal representations made by third parties. We have not audited nor independently verified the content or accuracy of any of the documents and information provided to us in the preparation of this report.

If additional information comes to light subsequent to the production of this report, we reserve the right to revise our opinions and the conclusions reached within this report.

1.1 Verification Noise Assessment

Spratt and Hamer Limited has undertaken an acoustic validation assessment at 75 Mosley Street, Manchester, M2 3HR. External noise measurements were conducted over a representative period of operation to determine the noise levels emanating from the plant.

A previous acoustic assessment was undertaken at the site, during which external noise measurements were conducted over a continuous 72-hour period to establish representative background sound levels within the surrounding area. The initial environmental survey was carried out from Friday to Monday to capture both weekday and weekend acoustic conditions.

This report will state the measured noise levels and will refer to guidance relevant to the nature of this survey whilst considering Local Planning Authority guidance and conditions.

1.2 Assumptions, Limitations & Uncertainty

a. It is assumed that the sound pressure levels measured on site during the monitoring period are typical of the site.
b. It is assumed that all information supplied by Krol Corlett Construction Limited and Atkins Realis is up to date and correct.
c. Restricted site access prevented direct on-site measurements of the rooftop exhaust cowl units. Consequently, evidence of the implemented mitigation measures is provided.

1.3 Local Planning Authority Criteria

A planning application, under reference 143759/FO/2025, was submitted to the Local Authority and was approved with conditions. The following noise related conditions were produced:

"Condition 3a: Any 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. Prior to commencement of the use hereby approved, the scheme shall be submitted to and approved in writing by the City Council as the Local Planning Authority in order to secure a reduction in the level of noise emanating from the site. The scheme shall be implemented in full before the use commences."

"Condition 3b: Prior to the operation of the scheme, a verification report shall be submitted to and approved in writing by the City Council as local planning authority to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic report. The report shall also undertake post completion testing to confirm that the noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria."

An initial Noise Impact Report was prepared under *reference 22989E Noise Impact Report – Mosley Street V2* in support of the discharge of Condition 3a. This report has been prepared to address and support the discharge of Condition 3b.

1.4 Site Description

The proposed development is an existing seven-storey building situated in the centre of Manchester, approximately 585m north from the Manchester Oxford Road station, in the Chinatown area. The surrounding area is predominantly commercial in character, featuring multi-storey office buildings. The vicinity experiences heavy traffic flow and pedestrian activity.

The surrounding road network experiences high levels of vehicular traffic flow, particularly along Mosley Street and Nicholas Street, which are main transportation links running northwest and southwest of the site. The tram line also operates along Mosley Road. Several businesses such as restaurants (Myprotein Kitchen), shops (Sainsburys Local), banks (Bank of China) and others carry out their activity on the ground floor of the surrounding office buildings. No residential properties were identified in the immediate vicinity.

The associated office is currently located on the sixth floor of 75 Mosley Street, overlooking the neighbouring office blocks and surrounding mechanical plant, installed on the rooftops.

The noise profile of the area is dominated by vehicular traffic, tram operation and noise emanating from plant, mixed with other noise sources secondary in nature such as bird song.

1.5 Subjective Observations

During the site visit, the acoustic environment was subjectively dominated by road traffic noise from Mosley Road, including noise attributable to tram movements along this route. Noise from neighbouring mechanical plant was also clearly audible from the south-eastern façade overlooking Back George Street.

Notwithstanding the presence of these external noise sources, the prevailing residual sound climate was the dominant influence on the local acoustic environment while the plant under assessment was in operation.

2 Noise Measurement Procedure

2.1 Survey Date & Personnel Present

Date	Survey	Personnel Present
08/07/2026	External attended measurements	Sam Coulbrook BSc (Hons)

Table 1: Survey Date & Personnel

2.2 Survey Equipment Used

Manufacturer	Model	Serial No.	Description
Rion	NL-52	01054205	Integrating Sound Level Meter and Real Time Analyser
Pulsar	Model 105	59964	Acoustic Calibrator

Table 2: Survey Equipment Used

2.3 Calibration

The sound level meter was calibrated with the field calibrator to a level of 94.0 dB @ 1 kHz prior to and on completion of the survey. No significant drift in calibration was observed. The meter used during the survey is a precision grade Class 1.

Calibration certificates are available on request.

2.4 Specific Sound Measurements

The measurement location chosen during the survey was deemed suitable for the determination of the specific sound levels associated with the plant items assessed.

The sound level meter was set to measure broadband and 1:1 octave frequency bands L_{Aeq}, L_{A90}, in 10-second periods.

2.4.1 Monitoring Position 1 (MP1)

The sound level meter was positioned at a height of approximately 1.5m above the scaffold platform and 1m away the noise source.

3 Validation Assessment

Exhausts cowl units and MVHR inlet and discharge louvres are installed at sixth and seventh floor levels, respectively. Spratt and Hamer Limited has been informed that acoustic attenuators have been incorporated.

Due to restricted access preventing direct measurement or inspection of the exhaust cowls, assumptions regarding the proposed acoustic mitigation measures will be made based on the information currently available.

3.1 External Measurement Results

The following table presents the measured $L_{Aeq,t}$ results from MP1. All values are rounded to integers such that 0.5 is rounded up. Data charts can be found in the appendix.

Monitoring Position	Measurement	Time Period t	Sound Level $L_{Aeq,10secs}$ (dB)
1	Ambient	15:07 – 15:13	61
1	Residual	15:18 – 15:24	60

Table 3: Measurement Results

As the ambient and residual sound levels differed by less than 3 dB, the specific sound level attributable to the plant could not be determined reliably, indicating that plant noise was effectively masked by the prevailing acoustic environment. Accordingly, the measured ambient level of 61 dB L_{Aeq} has been adopted for the assessment as a conservative worst-case scenario.

3.2 MVHR Numerical Assessment

As previously assessed, the following considerations have been taken into account based on the location and noise emissions of the plant:

- The nearest noise-sensitive receptors (ANSR 1) are the windows associated with the office, located approximately 1m away from the noise source.
- The unit is placed out of the line of sight of the receptor. A -10 dB attenuation for full shielding will be applied.
- The modal background $L_{A90,1\text{-hour}}$ of 59 dB will be adopted for the assessment during the operational hours of the office premises.
- In accordance with the initial report, it is considered unlikely that detrimental acoustic characteristics will occur, and no penalty rating correction is proposed.

Description	ANSR 1 Sound Level (dB)
Measured Sound Pressure Level $L_{Aeq,t}$ at 1m	61
Shielding	-10
Rating Sound Level $L_{Ar,Tr}$ at ANSR 1	51
Modal Background Noise Level L_{A90}	59
Exceedance	-8
Exceedance over Local Guidance ($L_{A90,T}$ – 5)	-3

Table 4: BS4142 Initial Impact Assessment

The calculation above indicates that plant noise remains 8 dB below the representative background sound level and 3 dB below Manchester City Council noise requirement. This demonstrates that the system has been installed in accordance with the recommendations of the initial report and that the required acoustic attenuators have been appropriately implemented, thereby satisfying Condition 3b.

3.3 Rooftop Cowls

Direct measurement or inspection of the exhaust cowls was not possible due to safety considerations, and access to the roof was restricted. However, the client has confirmed that an Allaway Acoustics ATT/05, L1 600mm / L2 150mm attenuator has been incorporated into the system. Photographic evidence is presented in the Appendix.

3.3.1 Recommended Mitigation Measures

As identified in the initial acoustic assessment, only minimal attenuation was required to achieve the relevant noise criteria. The extract below sets out the recommendations provided in the initial report to discharge condition 3a:

> *"A silencer is to be installed downstream of the fan serving the WCs. The table below specifies the minimum insertion loss of the silencer across the relevant frequency bands.*

Description	1/1 Octave Centre Frequencies (Hz) dB							
	63	125	250	500	1k	2k	4k	8k
Recommended IL	-1	-2	-4	-10	-12	-15	-8	-8

Table 5: Initial Report Recommended Insertion Loss

3.3.2 Verification: Comparative Assessment

The client has confirmed that an Allaway Acoustics ATT/05 attenuator, with L1 = 600mm and L2 = 150mm, has been incorporated into the system. The acoustic datasheet for the installed attenuator, sourced from Allaway Acoustics, is provided in the Appendix.

Accordingly, the following table presents the manufacturer's acoustic performance data and compares this against the required insertion loss (IL) established within the initial assessment.

Description	1/1 Octave Centre Frequencies (Hz) dB							
	63	125	250	500	1k	2k	4k	8k
Silencer IL by manufacturer	-1	-2	-6	-16	-23	-19	-17	-12
Required IL	-1	-2	-4	-10	-12	-15	-8	-8
Difference	0	0	-2	-6	-11	-4	-9	-4

Table 6: Allaway Attenuator IL & Comparison

As demonstrated in the table above, the installed attenuator exceeds the required insertion loss (IL). Consequently, noise emissions at the receptor are expected to remain more than 5 dB below the representative background noise level, in accordance with Manchester City Council's local policy, thereby satisfying Condition 3b.

4 Conclusion

The verification assessment confirms that the installed MVHR louvres incorporate acoustic attenuators and achieve the noise performance levels predicted within the initial acoustic assessment, with operational noise levels at least 5 dB below the representative background noise level.

Direct measurement or inspection of the exhaust cowls was not possible due to safety considerations, and access to the roof was restricted. Accordingly, and as identified within the initial report, internal visual inspection has been undertaken. Photographic evidence of the installed Allaway acoustic attenuators, together with the relevant manufacturer technical datasheets and sound reduction data, has been provided. This evidence demonstrates that the installed mitigation is consistent with the recommendations of the initial assessment and that operational noise from the exhaust cowls is expected to remain at least 5 dB below the representative background noise level.

Accordingly, it is concluded that the findings of this verification assessment demonstrate that the recommended acoustic mitigation has been appropriately implemented and that the relevant noise criteria is achieved. Therefore, the requirements of Manchester City Council's noise criteria have been addressed and condition 3b is considered to have been satisfactorily discharged.

Appendix

MVHR Specific Sound Measurement: Monitoring Position 1



Exhaust Cowl Photographic Evidence

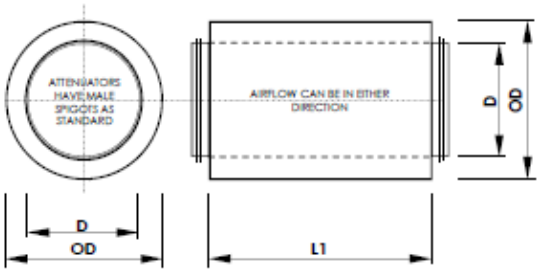




DATA SHEET **A13G**
CIRCULAR ATTENUATOR SPIGOT CONNECTION
MODEL **PL** (WITHOUT POD)
MODEL **PLP** (WITH POD)

THIS IS NOT A STAND ALONE DOCUMENT AND UNLESS REFERRED TO IN A DATED EQUIPMENT SCHEDULE IS SUBJECT TO REVISION WITHOUT NOTICE.

DIMENSIONS



NOMINAL DIAMETER (D)	OUTSIDE DIAMETER (OD)
BETWEEN 100 - 499 mm	D + 100 mm.
ABOVE 499 mm	D + 200 mm.

LENGTH (L1) IS NOMINAL CASING DIMENSION, EXCLUDING SPIGOTS.

SPECIFICATION

ATTENUATORS ARE CONSTRUCTED IN ACCORDANCE WITH DW 144 SPECIFICATION FOR MEDIUM PRESSURE (CLASS B) DUCTWORK.

CASES ARE STIFFENED AND FITTED WITH MALE SPIGOTS WITH INTEGRAL SEALS.

SOUND ABSORBENT INFILL IS ENCAPSULATED WITH GLASS CLOTH AND PERFORATED STEEL.

CENTRAL PODS (TYPE PLP) HAVE AERODYNAMIC FAIRINGS AT EACH END.

NOTES

THIS DATA SHEET IS TO BE READ IN CONJUNCTION WITH THE EQUIPMENT SCHEDULE.

EXCESSIVELY LARGE OR HEAVY ATTENUATORS MAY BE MANUFACTURED IN MATING SECTIONS FOR EASE OF HANDLING.

ATTENUATORS WILL BE SUPPLIED WITHOUT SUPPORT STEELWORK, BRACKETS, FIXINGS, GASKET, MASTIC OR OTHER SUCH ITEMS, UNLESS OTHERWISE STATED.

IT IS THE INSTALLERS RESPONSIBILITY TO SEAL THE ATTENUATOR TO THE CONNECTING DUCT.

INSERTION LOSS, PESSURE LOSS AND FLOW NOISE DATA ARE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLED CONDITIONS.

MANUFACTURING DIMENSIONAL TOLERANCE < 1.0 %.

WEIGHT

WEIGHTS ARE GIVEN ON THE EQUIPMENT SCHEDULE.

SUFFIX

THE SUFFIX TO THE ATTENUATOR MODEL DEFINES THE MATERIAL OF FABRICATION AND ANY ADDITIONAL FEATURES OR SPECIAL CONSTRUCTIONAL DETAILS.

G - PRE-GALVANISED STEEL CONSTRUCTION.

S - GRADE 316 STAINLESS STEEL CONSTRUCTION.

H1 - HIGH TEMPERATURE APPLICATION (2 HOUR/300ºc).

C - HIGH PRESSURE APPLICATION (DW 144, CLASS C).

K - PROTECTIVE PAINT FINISH TO VISIBLE INTERNAL METAL SURFACES.

M - MELINEX ENCAPSULATED INFILL.

X - SPECIAL CONSTRUCTION, REFER TO EQUIPMENT SCHEDULE FOR DETAILS.

FLANGE DETAILS

ATTENUATORS ARE FITTED WITH MALE SPIGOTS AS STANDARD.

STANDARD SIZES

DIAMETER(D) - **100, 125, 150, 160, 180, 200, 224, 250, 300, 315, 355, 400, 450 & 500** mm.

LENGTH (L1) - **600, 900, 1200, 1500, 1800, 2100, 2400, 2700 & 3000** mm.

ALL ATTENUATORS ARE MADE TO ORDER.

NON STANDARD SIZES AVAILABLE.

ALLAWAY ACOUSTICS LIMITED Old Police Station, 1 Queens Road, Hertford SG14 1EN
T | 01992 550825 E | enquiries@allawayacoustics.co.uk W | allawayacoustics.co.uk

PROJECT NAME:	CONSULATE GENERAL OF IRELAND - MANCHESTER	PROJECT No:	106600
DATE:	19/03/2026	SCHEDULE No:	385106600C2
CUSTOMER NAME:	UNITED MEP LTD	ORDER No:	PO003010

Item	System Reference	Code	Suffix	DWG	L1	L2/ID	W	H	Vol	PD	Wt	No.		Performance, dB							
					mm	mm	mm	mm	m^3/s	Pa	kg	Off.		63	125	250	500	1k	2k	4k	8k
1	ATT/05	PL	G	A13G	600	150			0.03	5	6	1	IL	1	2	6	16	23	19	17	12

NOTES

LABEL WITH ITEM NO. & SYSTEM REF.

IL = INSERTION LOSS (dB)

G - SELF FINISH PRE-GALVANISED STEEL CONSTRUCTION.

ALLAWAY ACOUSTICS Old Police Station, 1 Queens Road, Hertford SG14 1EN
T | 01992 550825 E | enquiries@allawayacoustics.co.uk W | **allawayacoustics.co.uk**
Registered in England No. 958950. Registered office: 1 Queens Road, Hertford SG14 1EN



SPRATT+HAMER

Online
sprattandhamer.co.uk

Email
info@sprattandhamer.co.uk

Birmingham
Lewis Building, Bull Street
Birmingham, B4 6AF
0121 828 3120

London
100 Borough High Street,
London, SE1 1LB
0203 286 2019

Liverpool
23 Roscoe Street, Liverpool
L1 2SX
0151 933 6186

Manchester
Peter House, Oxford Street
Manchester, M1 5AN
0161 521 9383