1468 Ashton Old Road
Manchester

Indoor Sound Survey Report
1329/ISSR1
Revision 1

9 September 2026

For:

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1.0 Introduction

Lighthouse Acoustics has been appointed by Jamieson Contracting to undertake an indoor sound survey at 1468 Ashton Old Road, Manchester in order to demonstrate that the internal sound limits for residential flats are achieved.

The survey methodology, results and assessment are presented in this report.

2.0 Objectives

To visit site to undertake a detailed indoor sound survey in order to establish indoor daytime and night-time sound levels within the residential flats.

To compare the measured indoor daytime and night-time sound levels to the internal sound limits for residential flats and comment on the acceptability.

3.0 Site Description

The residential flats are at 1468 Ashton Old Road, Manchester. The site comprises a new build 3 storey end terrace building with 1No. flat at Ground, 1st and 2nd floors.

The site is bound by Ashton Old Road (A635) to the north, adjacent residential property to the east, Lassell Street (pedestrianised) to the south and adjoining residential property to the west.

The residential flats feature acoustic trickle ventilators and a Heat Recovery Mechanical Extract Ventilation system that provides ventilation to the flats without the need to open windows.

The site plan overleaf indicates the extent of the site and the surrounding environment.



Site plan indicating the extent of the site and the surrounding environment

4.0 Acoustic Requirements

The internal sound limits for residential flats required by Manchester City Council are detailed in the table below.

Room Type	07:00 to 23:00	23:00 to 07:00
Livingroom/Kitchen	35dB $L_{Aeq,16hour}$	-
Bedroom	35dB $L_{Aeq,16hour}$	30dB $L_{Aeq,8hour}$ 45dB $L_{Amax,F}$*

** Individual noise events should not normally exceed 45dB $L_{Amax,F}$ by more than 15 times.*

5.0 External Sound Break-In Survey

5.1 Measurements

Automated indoor sound measurements were undertaken from 12:00 hours on Thursday 2 July 2026 to 12:00 hours on Friday 3 July 2026 at Position B and between 07:00 hours on 5 September 2026 and 07:00 hours on 6 September 2026 at Position A. During these periods the $L_{Amax,F}$ and L_{Aeq} sound pressure levels were measured continuously over 15 minute periods.

In addition, the sound level meters were set to log the number of events exceeding $L_{Amax,F}$ 45dB during the night-time periods (23:00 to 07:00 hours).

Windows and doors were closed for the duration of the survey period.

The Heat Recovery Mechanical Extract Ventilation systems were not commissioned at the time of the survey and were therefore inoperable during the survey period.

All rooms were unfurnished (with the exception of fitted kitchens) and did not feature any soft floor finishes. As such, a 3dB correction has been applied to the measurement results to allow for the excessively reverberant space in which the measurements were undertaken.

5.2 Weather Conditions

At the start of the July survey period there was a gentle westerly breeze (<5m/s) and the sky was overcast. There was no rainfall and road surfaces were dry. The temperature was approximately 17°C.

At the end of the July survey period there was a light westerly breeze (<3m/s) and the sky was scattered cloud. There was no rainfall and road surfaces were dry. The temperature was approximately 21°C.

At the start of the September survey period there was a light south westerly breeze (<3m/s) and the sky was scattered cloud. There was no rainfall and road surfaces were dry. The temperature was approximately 13°C.

At the end of the September survey period the wind conditions were calm (<1m/s) and the sky was scattered cloud. There was no rainfall and road surfaces were dry. The temperature was approximately 14°C.

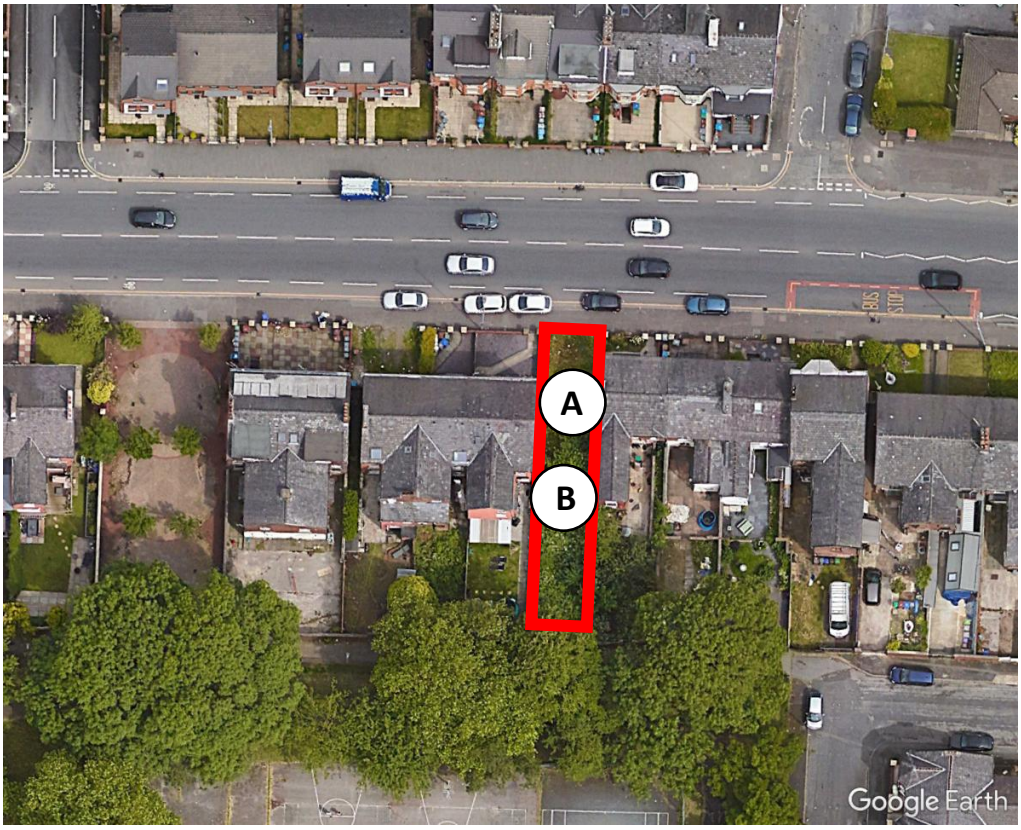
Based on publicly available weather data for the survey periods it is understood that weather conditions remained similar for the duration of the surveys with no significant periods of rainfall or strong breezes. The weather conditions during the survey periods are therefore considered to be suitable for undertaking measurements of sound levels.

5.3 Measurement Positions

Indoor sound levels were measured within 2No. rooms on-site as described in the table below.

Position	Description
A	Microphone situated in the centre of the ground floor Bedroom at 1.2m above floor level with secondary glazed window in the north façade overlooking Ashton Old Road.
B	Microphone situated in the centre of the 1st floor Livingroom/Kitchen at 1.2m above floor level with double glazed window in the south façade overlooking Lassell Street.

The measurement positions are shown on the site plan below.



Site plan showing measurement positions

The measurement positions were selected in order to assess typical indoor sound levels in rooms on the front and rear affected facades of the building.

5.4 Equipment

The following equipment was used to undertake the indoor sound survey.

Equipment	Manufacturer	Model	Serial No.	Calibration Date
Class 1 Sound Level Meter	Casella	633C	0721320	06/11/2025
Preamplifier	Casella	495	001414	06/11/2025
Microphone	Casella	251	1025	06/11/2025
Class 1 Sound Level Meter	Casella	633C	0721319	06/11/2025
Preamplifier	Casella	495	001446	06/11/2025
Microphone	Casella	251	1996	06/11/2025
Class 1 Sound Calibrator	Casella	120/1	3864878	05/11/2025

Field calibration checks were performed on the sound level meters prior to and on completion of the survey and were found to be within acceptable tolerance limits.

5.5 Results

5.5.1 $L_{Aeq,T}$ Ambient Sound Levels

In order to compare the results of the indoor sound survey with the internal noise limits it is necessary to convert the $L_{Aeq,15min}$ indoor sound levels into singe figure daytime $L_{Aeq,16hour}$ and night-time $L_{Aeq,8hour}$ sound levels. This has been calculated using the following formula:

$$L_{Aeq,T} = 10\,log_{10}\left(\frac{1}{N}\sum_{i}^{N} 10^{L_{Aeq,15min}{}^{i}/10}\right)$$

The calculated daytime $L_{Aeq,16hour}$ and night-time $L_{Aeq,8hour}$ indoor sound levels at each measurement position are presented in the table below.

Position A		Position B*	
Daytime $L_{Aeq,16hour}$ (dB)	**Night-time $L_{Aeq,8hour}$ (dB)**	**Daytime $L_{Aeq,16hour}$ (dB)**	**Night-time $L_{Aeq,8hour}$ (dB)**
33	28	25	21

* Position in livingroom/kitchen so night-time requirement is not applicable.

5.5.2 $L_{Amax,F}$ Sound Level Events

The number of events exceeding $L_{Amax,F}$ 45dB during the night-time period (23:00 to 07:00 hours) at each position are detailed in the table below.

No. of Events Exceeding $L_{Amax,F}$ 45dB During the Night-time Period	
Position A	**Position B***
7	2

* Position in livingroom/kitchen so night-time requirement is not applicable.

5.6 Discussion of Results

The measured daytime $L_{Aeq,16hour}$ indoor sound level due to external sound break-in achieves the internal sound limit of $L_{Aeq,16hour}$ 35dB for bedrooms at Position A.

The measured night-time $L_{Aeq,8hour}$ indoor sound level due to external sound break-in achieves the internal sound limit of $L_{Aeq,8hour}$ 30dB for bedrooms at Position A.

The measured number of events exceeding the internal sound limit of $L_{Amax,F}$ 45dB during the night-time period for bedrooms due to external sound break-in achieves the limit of 15 events in any night-time period at Position A.

The measured daytime $L_{Aeq,16hour}$ indoor sound level due to external sound break-in achieves the internal sound limit of $L_{Aeq,16hour}$ 35dB for livingroom/kitchen at Position B.

Based on the above, the internal sound limits for residential flats required by Manchester City Council are achieved due to external sound break-in.

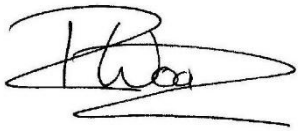
6.0 Mechanical Ventilation Sound

The Heat Recovery Mechanical Extract Ventilation system must achieve the indoor ambient noise level requirements of $L_{Aeq,16hour}$ ≤35dB in livingroom/kitchen and bedrooms during the daytime and $L_{Aeq,8hour}$ ≤30dB in bedrooms at night.

7.0 Conclusions

A detailed indoor sound survey has been undertaken in order to establish indoor daytime and night-time sound levels within the residential flats.

The measured indoor daytime and night-time sound levels due to external sound break-in have been found to comply with the internal sound limits for residential flats required by Manchester City Council.



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LIGHTHOUSE ACOUSTICS