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LIGHTHOUSE ACOUSTICS

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Dear Shvan

60a OLDHAM STREET, MANCHESTER
PROPOSED CONVENIENCE STORE

Further to our site visit on 25 August 2026 we are pleased to present our findings as detailed below.

1.0 Introduction

It is understood that the vacant ground floor commercial unit is proposed to be converted from a former late night bar to a convenience store. Existing residential flats are situated above at 1st floor level.

Lighthouse Acoustics has subsequently been appointed to undertake an airborne sound insulation test across the existing 1st floor construction between the existing ground floor commercial unit and existing 1st floor flat in order to establish the existing performance and highlight any flanking paths.

The measurement methodology, results and discussion are presented in this report.

2.0 Objectives

To undertake an airborne sound insulation test across the existing 1st floor construction between the existing ground floor commercial unit and existing 1st floor flat in order to establish the existing performance and highlight any flanking paths.

To comment on the measured result and the likelihood of achieving an appropriate level of sound insulation between the proposed ground floor convenience store and existing 1st floor flat. To advise on additional treatment if required in order to maximise the airborne sound insulation performance between the proposed ground floor convenience store and existing 1st floor flat.

3.0 Site Description

The proposed convenience store is situated at Oldham Street, Manchester. The existing building comprises a 4 storey mid-terrace building with commercial units at ground floor and flats at 1st, 2nd and 3rd floors.

It is understood that there are no new items of building services proposed to serve the convenience store and that there will be no amplified music within it.

As such, operational sound levels from the commercial unit will be significantly reduced compared to the former use as a late night bar with amplified music.

4.0 Separating Floor Construction

It is understood that the existing separating floor to be retained between the existing ground floor commercial unit and existing 1st floor flats comprises the following build-up:

- Floor finish;
- Concrete floor (construction unknown);
- Suspended plasterboard ceiling.

In addition, it is understood that a new ceiling tile system is to be suspended beneath the existing plasterboard ceiling. This will further increase the existing level of sound insulation provided by the 1st floor construction.

5.0 Requirements

It is understood that Manchester City Council have requested that an assessment is undertaken to confirm that the noise generated by the development will not have a detrimental impact on neighbouring amenity.

Building Regulations Approved Document E requires a minimum airborne sound insulation performance of $D_{nT,w} + C_{tr}$ 43dB for separating floors between flats formed by material change of use and $D_{nT,w} + C_{tr}$ 45dB for separating floors between purpose built flats.

In addition, Building Regulations Approved Document E 2010 states the following with regard to communal or non-domestic spaces:

> *"The performance standards set out in Tables 1a and 1b are appropriate for walls, floors and stairs that separate spaces used for normal domestic purposes. A higher standard of sound insulation may be required between spaces used for normal domestic purposes and communal or non-domestic purposes. In these situations the appropriate level of sound insulation will depend on the noise generated in the communal or non-domestic space. Specialist advice may be needed to establish if a higher standard of sound insulation is required and, if so, to determine the appropriate level."*

The proposed use of the ground floor commercial unit as a convenience store only with no amplified music is considered to be a low level source of noise generation.

As such it is proposed that the airborne sound insulation performance of the separating floor should achieve a minimum of $D_{nT,w}$ + C_{tr} 50dB. This is subject to approval by Manchester City Council.

6.0 Sound Insulation Testing

6.1 Equipment

The following equipment was used to undertake the sound insulation tests.

Equipment	Manufacturer	Model	Serial No.	Calibration Date
Class 1 Sound Level Meter	Bruel & Kjaer	2250	2626230	01/11/2024
Preamplifier	Bruel & Kjaer	ZC-0032	21309	01/11/2024
Microphone	Bruel & Kjaer	4189	2621208	04/11/2024
Class 1 Sound Calibrator	Casella	120/1	3864878	05/11/2025
10" Active Loudspeaker with Vented Cabinet	Yamaha	DBR10	-	-

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

6.2 Test Procedure

Lighthouse Acoustics visited site on 25 August 2026 to undertake an airborne sound insulation test across the existing 1st floor construction between the existing ground floor commercial unit and existing 1st floor flat.

The existing ground floor commercial unit was unfurnished whilst the existing 1st floor flat was fully furnished.

An airborne sound insulation test was undertaken across separating floor construction in accordance with BS EN ISO 140-4: 1998, *"Acoustics. Measurement of sound insulation in buildings and of building elements. Field measurements of airborne sound insulation between rooms"*.

6.3 Test Locations

An airborne sound insulation test across the existing 1st floor construction was undertaken between the following spaces.

Test Ref.	Source Room	Receive Room
A	Ground Floor Commercial Unit	1st Floor Studio Flat No.2

6.4 Test Results

The result of the airborne sound insulation test is presented in the following table.

Test Ref.	Source Room	Receive Room	Measured Airborne Sound Insulation $D_{nT,w} + C_{tr}$ dB	Proposed Minimum Airborne Sound Insulation $D_{nT,w} + C_{tr}$ dB
A	Ground Floor Commercial Unit	1st Floor Studio Flat No.2	63	≥ 50

6.5 Discussion of Results

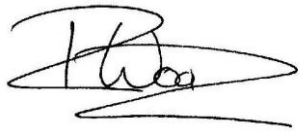
Test A exceeded the proposed minimum requirement of $D_{nT,w} + C_{tr}$ 50dB by 13dB. As such, the existing 1st floor construction is likely to provide an appropriate level of sound insulation between the proposed ground floor convenience store and existing 1st floor flats.

7.0 Conclusions

An airborne sound insulation test across the existing 1st floor construction between the existing ground floor commercial unit and existing 1st floor flat have been undertaken I n order to establish the existing performance and highlight any flanking paths.

The result indicates that the existing 1st floor construction is likely to provide an appropriate level of sound insulation between the proposed ground floor convenience store and existing 1st floor flats.

Yours sincerely
for LIGHTHOUSE ACOUSTICS



Robin Wood