
Our Reference: NIA/1505/26/605/v1.0/444 Wakefield Road

23rd January 2026

Mr Umar Hussain
UH Design
32 Macaulay Road
Birkby
Huddersfield
HD2 2US



Dear Sir,

NOISE IMPACT ASSESSMENT

444 WAKEFIELD ROAD, DALTON, HUDDERSFIELD, HD5 8PS

CHANGE OF USE OF BUILDING FROM RETAIL / LIGHT INDUSTRY (USE CLASS A1/B1) TO DWELLING FLATS (USE CLASS C3)

KIRKLEES PLANNING PERMISSION 2018/62/92301/W; CONDITION 6: ROAD TRAFFIC NOISE

RETROSPECTIVE FULL APPLICATION FOR A SINGLE GABLE ROOF ATOP THE EXISTING THREE-STOREY BLOCK (REPLACING TWO SMALLER GABLES)

KIRKLESS COUNCIL PLANNING APPLICATION 2025/62/91692/W

1.00 INTRODUCTION

- 1.01 RP Acoustics Limited has been commissioned by I and Sons Holdings Limited to undertake a noise impact assessment for a change of use of building from retail / light industry (Use Class A1/B1) to dwelling flats (Use Class C3) at 444, Wakefield Road, Dalton, Huddersfield, HD5 8PS (hereafter referred to as the application site).
- 1.02 Planning permission for the change of use was granted by Kirklees Council on 14th March 2019 (2018/62/92301/W), subject to conditions. Condition 6 related to road traffic noise as follows:

Prior to the hereby approved residential units being brought into use, a report specifying the measures to be taken to protect all approved units with habitable rooms fronting onto Wakefield Road from road traffic noise from Wakefield Road shall be submitted to and approved in writing by the Local Planning Authority.

The report shall: a) determine the existing noise climate, b) predict the noise climate in gardens (daytime), bedrooms (night-time) and other habitable rooms of the development, c) detail the proposed attenuation/design necessary to protect the amenity of the occupants of the new residences (including ventilation if required).

Unless otherwise approved in writing with the Local Planning Authority the development shall not be occupied until all the works approved in the specified report have been carried out in full, and such works shall be thereafter retained.

Reason: To protect the residential amenity of future residents due to the proximity to Wakefield Road, a busy classified A road, in accordance with Policies PLP24 and PLP52 (as modified) of the Kirklees Publication Plan and Chapters 12 and 15 of the National Planning Policy Framework.

- 1.03 For reference, a further retrospective full application for a single gable roof atop the existing three-storey block (replacing two smaller gables) has been submitted (2025/62/91692/W).
- 1.04 The objectives of the noise impact assessment were therefore to:
- Determine the ambient noise climate at the application site
 - Provide recommendations for mitigation measures in accordance with the relevant guidance
- 1.05 This report sets out the methodology and findings of the noise impact assessment. It has been prepared on behalf of I and Sons Holdings Limit for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties making reference to the report should consult I and Sons Holdings Limit (applicant), ASC Planning UH Design (applicant's agent) and RP Acoustics Limited as to the extent to which the findings may be appropriate for their use.
- 1.06 A glossary of acoustic terms is contained in Appendix 1 for reference.

2.00 APPLICATION SITE SETTING

- 2.01 The application site is located in a residential use setting circa 2.5 kilometres east of Huddersfield town centre.
- 2.02 The application site location plan is reproduced in Appendix 2 for reference.
- 2.03 The proposed floor plans and elevations are reproduced in Appendix 3 for reference.
- 2.04 The floor plans illustrates that over the first two floors the building is split down the middle to form 2 dwelling flats on each floor (with the dwelling flats spanning from 'front to back'), which at the top floor a single dwelling flat is formed within the roof space at the rear.

3.00 BASELINE NOISE SURVEY

- 3.01 A 24-hour baseline noise survey was carried out on Friday 12th December 2025. The following noise monitoring positions were adopted at the application site (see Appendix 4):
- NMP1 was located at first floor level (1 metre from the façade) overlooking Wakefield Road (reflective field)
 - NMP2 was located at ground floor level at the rear of the building fully screened from Wakefield Road (free field)
- 3.02 Baseline noise measurements were undertaken using NTi Audio XL2 Type 1 integrating sound level meters. A 90 mm windshield was fitted for all measurements. The measurement system calibration was verified immediately before and after measurement sessions and no drift in calibration level was noted (calibration certificates reproduced in Appendix 5 for reference). Weather conditions throughout the survey were appropriate for monitoring.
- 3.03 Baseline noise measurements consisted of A-weighted broadband parameters, together with linear one-third octave band L_{eq} levels, with a logging interval of 1 second. The following table contains a summary of the data rounded to the nearest decibel (and includes a – 3 decibel façade enhancement correction in order to ascertain free field noise levels at NMP1).

Table 3.1 – NMP1 Noise Measurement Data

NMP	Time	L_{Aeq} (dB)	L_{A90} (dB)	L_{A10} (dB)	L_{A1} (dB)	Comments
1	0700–2300	64	50	67	70	Wakefield Road traffic
	0700–1900	58	38	58	67	
Daytime Ambient Noise Level 64 dB L_{Aeq} (0700–2300) Night-time Ambient Noise Level 58 dB L_{Aeq} (2300–0700) 11th Highest Night-time Maximum Noise Level 72 dB L_{AFMax} (2300–0700, 1 minute sampling rate)						
2	1200–1300	43	42	46	49	Distant, screened traffic
Circa 21 dB lower than Wakefield Road due to increased distance and screening						

3.04 It was observed that in the vicinity of the application site, Wakefield Road (two eastbound lanes and two westbound lanes) is: a) 30 miles per hour (with speed enforcement cameras); b) the nearside westbound lane is a bus lane (until the Stag Public House, circa 40 metres to the west of the application site); and c) the nearside westbound lane is used to turn left at the traffic lights onto Greenhead Lane.

3.05 For reference, the Wakefield Road façade is set back from nearside kerbs by circa 12 metres. This, in addition to the relatively slow speed of passing traffic (with the nearside lane traffic often decelerating) is the reason for the moderate road traffic noise levels.

4.00 BRITISH STANDARD 8233:2014 GUIDANCE ON SOUND INSULATION AND NOISE REDUCTION FOR BUILDINGS

4.01 BS 8233 sets guideline indoor noise levels for dwellings subject to road traffic noise as follows:

Table 4.1 – BS 8233:2014 Indoor Ambient Noise Levels in Dwellings

Activity	Location	0700–2300 hours	2300–0700 hours
Resting	Living Room	35 dB L _{Aeq}	–
Dining	Dining Room	40 dB L _{Aeq}	–
Sleeping (daytime resting)	Bedroom	35 dB L _{Aeq}	30 dB L _{Aeq} ¹

¹ 11th highest night-time maxima (based on 1 minute sampling rate) not to exceed 45 dB L_{AFMax}

5.00 SCHEME OF NOISE MITIGATION

5.01 The existing windows are standard double glazing (4 mm glass / 20 mm air cavity / 4 mm glass); this has a weighted sound reduction index of 31 dB R_w (see Appendix 6).

5.02 In order to comply with BS 8233 guideline indoor noise levels, a building envelope sound reduction of at least 29 decibels from outside to inside is required (64 – 35 = 29).

- 5.03 The attenuation provided by the building envelope has been modelled using the Building Research Establishment's Building Envelope Insulation software (which for reference is based on the methodology advocated in BS 8233) and is illustrated in the figure below.

Figure 5.1 – BRE Building Envelope Insulation Model for Wakefield Road façade

BRE Building Envelope Insulation

Switch to Reverberation Time Calculation

2) Select elements of facade structure, and enter corresponding internal surface area in m² OR enter number of vents.

Element	Selection	Surface area OR number of vents	Unit
Wall 1	Brick/block cavity		m ²
Wall 2	None		m ²
Window 1	4/12/4 double glazing	2	m ²
Window 2	None		m ²
Door	None		m ²
Roof/Ceiling	None		m ²
Vent 1	None		m ²
Vent 2	None		m ²

3) Enter reverberation time of the room. 0.5 seconds

4) Select exterior sound level type
 Option (A) User defined spectrum
 NMP1 64 dB LAeq (day)
 View/Edit Data
 Option (B) Spectrum shape
 Select spectrum shape and enter free field exterior sound level, LAeq (considering only the octave bands between 125Hz and 2kHz)
 LAeq 64 dB
 ISO 717 - 1 (C)
 View Data

Internal sound level
 LAeq 30.8 dB

- 5.04 The existing building envelope provides circa 33 dB attenuation to Wakefield Road traffic.
- 5.05 For reference a 1-hour internal noise measurement was undertaken in the (unfurnished) first floor bedroom overlooking Wakefield Road and the noise level was 34 dB LAeq (1315–1415). This will reduce by circa 3 decibels when furnished (a 0.5 second reverberation time furnished compared to a 1.2 second reverberation time unfurnished).
- 5.06 In summary, the existing glazing is sufficient to achieve compliance with BS 8233 guideline internal indoor noise levels.
- 5.07 The floor plans illustrates that over the first two floors the building is split down the middle to form 2 dwelling flats on each floor (with the dwelling flats spanning from 'front to back'), which at the top floor a single dwelling flat is formed within the roof space at the rear. This layout provides the ability for the dwelling flats to be ventilated from the quiet rear façade for thermal comfort in overheating conditions (note: overheating is combatted by opening windows during the evening and night time periods when external temperature is lower than internal temperature; the basic principal of thermodynamics being that warm air flows towards cooler air i.e. the warm internal air flows outside, thus removing heat from the building). Notwithstanding this, however, the Wakefield road façade is north facing and is therefore not subject to prolonged periods of sunshine (as the sun rises in the east and sets in the west) and is therefore at negligible risk from overheating.

6.00 CONCLUSION

- 6.01 A noise impact assessment has been undertaken for a change of use of building from retail / light industry (Use Class A1/B1) to dwelling flats (Use Class C3) at 444 Wakefield Road, Dalton, Huddersfield, HD5 8PS.
- 6.02 The ambient noise climate is dominated by Wakefield Road traffic albeit at moderate levels. The existing glazing provides sufficient sound insulation to achieve compliance with BS 8233 guideline indoor noise levels.
- 6.03 In conclusion, noise does not represent a material constraint to granting planning permission.

We trust the foregoing is to your satisfaction. Should you have any queries, please do not hesitate to contact us.

Yours sincerely

Richard Pennell
Member of the Institute of Acoustics
For and on behalf of RP Acoustics Ltd

APPENDIX 1 GLOSSARY OF ACOUSTIC TERMS

Sound Pressure Level (L_p)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 μPa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$$L_p = 20 \log_{10}(p/p_0)$$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 μPa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, $L_{Aeq, T}$

The value of the A-weighted sound pressure level in decibels of continuous steady sound that within a specified time interval, T , has the same mean-square sound pressure as a sound that varies with time. $L_{Aeq, 16h}$ (07:00 to 23:00 hours) and $L_{Aeq, 8h}$ (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

$L_{A10, T}$

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T . $L_{A10, 18h}$ is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T . L_{A90} is typically taken as representative of background noise.

$L_{AF \max}$

The maximum A-weighted noise level recorded during the measurement period. The subscript 'F' denotes fast time weighting, slow time weighting 'S' is also used.

Sound Exposure Level (SEL or L_{AE})

The energy produced by a discrete noise event averaged over one second, no matter how long the event actually took. This allows for comparison between different noise events that occur over different lengths of time.

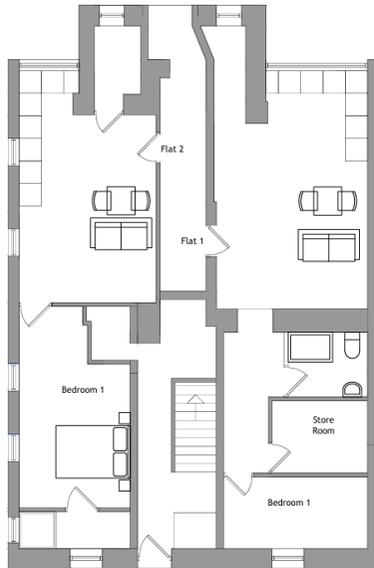
**APPENDIX 2
APPLICATION SITE LOCATION PLAN**



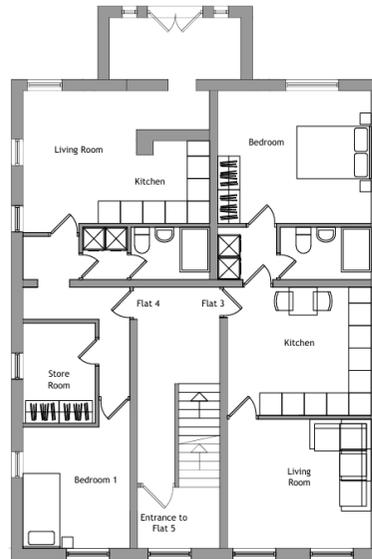
Location Plan 1.1250

APPENDIX 3 PROPOSED FLOOR PLAN

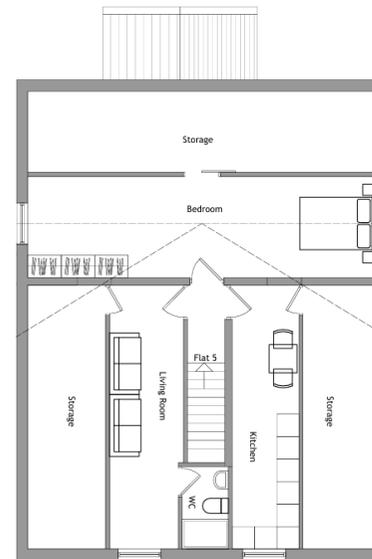
Proposed Layout and Elevations



Ground Floor Layout 1.50



First Floor Layout 1.50



Loft Floor Layout 1.50

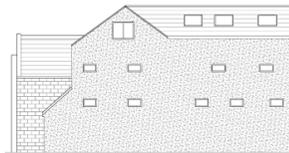
Written dimensions on these drawings shall take precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the project and UH Architectural Services must be notified of any variations from the dimensions and conditions shown by these drawings prior to commencement of any work. All contractors are deemed to have made themselves aware of site conditions prior to entering into any contract.



Location Plan 1.1250



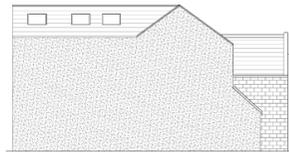
Site Plan 1.500



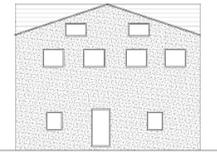
South West Elevation (Side) 1.100



North West Elevation (Front) 1.100



North East Elevations (Side) 1.100



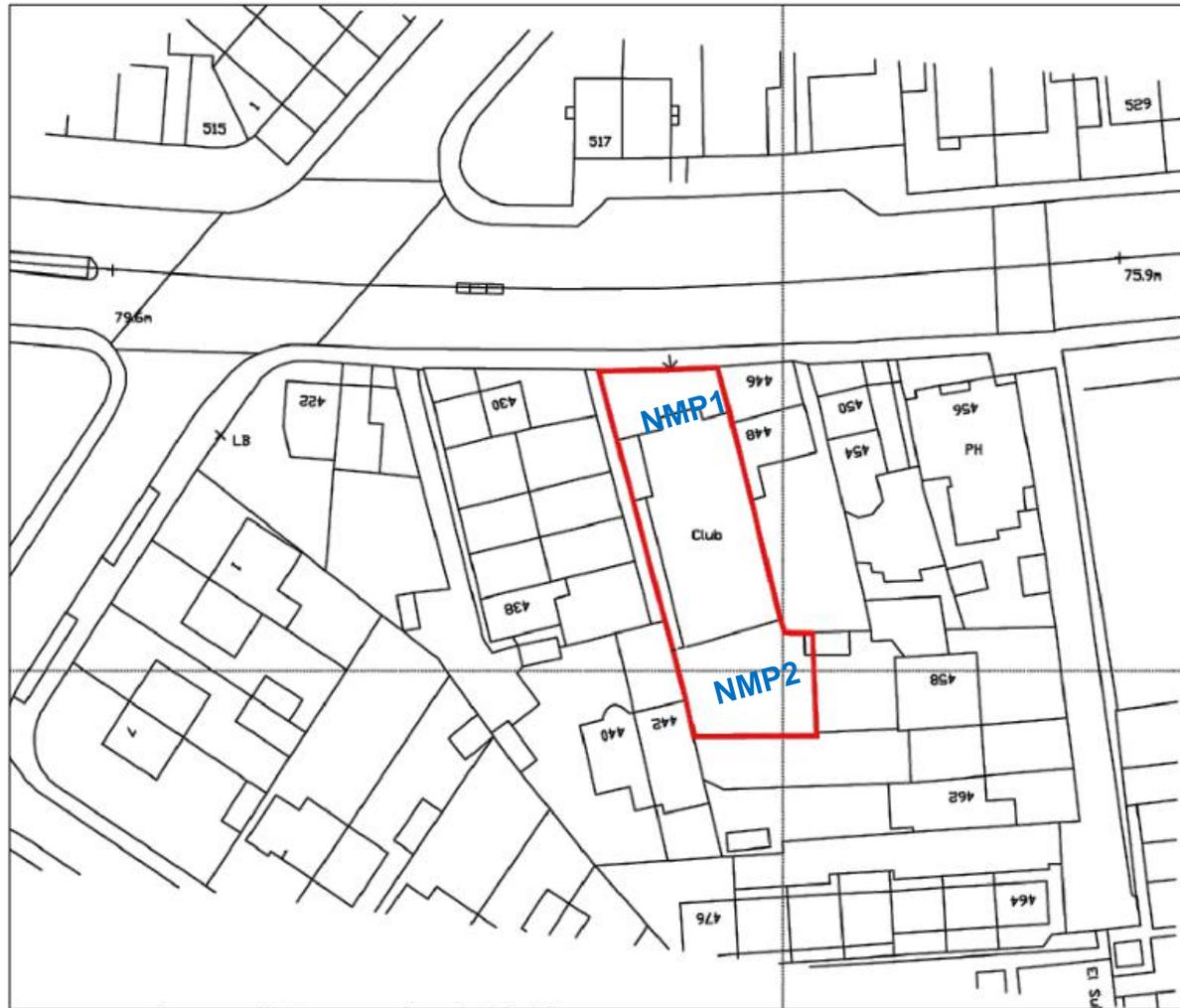
South East Elevation (Rear) 1.100

REV	DESCRIPTION	DATE	BY/APP

07704906935
Umar@UHDesign.co.uk
UHDesign Architectural Services

CLIENT			
ADDRESS 444 Wakefield Road, Dalton HD5 8PS			
PROJECT Roof Reorientation			
DRAWING Proposed Layout and Elevations			
DRAWN	UH	DATE	March 25
SCALE		1.100@A1	
ENCL. No. 2509/02B			
STATUS PLANNING			

**APPENDIX 4
APPLICATION SITE NOISE MONITORING POSITIONS**



Location Plan 1.1250

APPENDIX 5
CALIBRATION CERTIFICATE FOR SOUND LEVEL METER (CALIBRATION EVERY 2 YEARS)

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration and Conformance

Certificate number: **U46717**

Test Object: **Sound Level Meter, BS EN IEC 61672-1:2013 Class 1**
Associated Frequency Analyser to BS EN IEC 61260:1996 Class 1

Producer: **NTi Audio**
Type: **XL2-TA**
Serial number: **A2A-17283-E0**
Customer: **RP Acoustics Ltd**
Address: **1 Dobcroft Close,
Sheffield. S11 9LL.**
Contact Person: **Richard Pennell**
Order No: **RPA/24/CAL/01**

Introduction:

Calibration has been performed as set out in CA Technical Procedures which are based on the procedures for periodic verification of sound level meters as per the Test Object listed above. Results and conformance statement are overleaf and detailed results, where appropriate, are provided in the attached Measurement Report.

Tested:	Producer	Type	Serial No	Certificate No
Microphone	NTi Audio	MC230A	A23655	46716
Calibrator*	Larson Davis	CAL200	17115	U48700
Preamplifier	NTi Audio	MA220	11174	Included

* The calibrator was complete with any required coupler for the microphone specified.

Additional items that have also been submitted for verification:

Wind shield N/A
Attenuator N/A
Extension cable N/A

These items have been taken into account wherever appropriate.

Instruction Manual: NTi-Audio XL2 Operating Manual v3.11.02 August 2016 Firmware Version: V4.71 The test object is a single channel instrument.

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	97.15 ±0.02	22.30 ±0.4	43.48 ±0.65

Calibration Dates:

Received date: 23/01/2024 Reviewed date: 09/02/2024
Calibration date: 09/02/2024 Issued date: 09/02/2024

Technicians: (Electronic certificate)

Calibrated by: *Palanivel Marappan B.Eng (Hons), M.Sc*

Reviewed by: *Darren Batten*

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Doc ref: Sim-Cert-Master-V3-07

APPENDIX 6 SOUND REDUCTION OF GLAZING

info.glass@nichollsandclarke.com 0845 6051350



COMPARISON CHART

The charts below show comparisons between various types of glass and insulated glass units and also between the Rw, Rw+C & Rw+Ctr indices.

Single Glass	Rw	Rw+C	Rw+Ctr
6.4mm Laminated Safety Glass	32 dB	31 dB	29 dB
6.8mm Laminated Safety Glass	33 dB	31 dB	29 dB
10.8mm Laminated Safety Glass	34 dB	33 dB	31 dB
6.8mm Acoustic Laminated	35 dB	34 dB	32 dB
8.8mm Acoustic Laminated	37 dB	36 dB	33 dB
10.8mm Acoustic Laminated	38 dB	37 dB	36 dB
12.8mm Acoustic Laminated	39 dB	39 dB	37 dB
16.8mm Acoustic Laminated	40 dB	40 dB	38 dB

Double Glazed Units	Rw	Rw+C	Rw+Ctr
4mm / 20 spacer / 4mm IGU	31 dB	30 dB	25 dB
6mm / 16 spacer / 6mm IGU	31 dB	30 dB	27 dB
8mm / 16 spacer / 6mm IGU	35 dB	33 dB	29 dB
10mm / 16 spacer / 6mm IGU	40 dB	38 dB	35 dB
6.8mm Acoustic / 16 spacer / 6mm IGU	38 dB	36 dB	33 dB
8.8mm Acoustic / 16 spacer / 6mm IGU	41 dB	38 dB	34 dB
10.8mm Acoustic / 16 spacer / 6mm IGU	41 dB	39 dB	35 dB
12.8mm Acoustic / 16 spacer / 6mm IGU	41 dB	40 dB	36 dB
16.8mm Acoustic / 16mm spacer / 16.8mm Acoustic	48 dB	46 dB	42 dB

Triple Glazed Units	Rw	Rw+C	Rw+Ctr
4mm / 8mm spacer / 4mm / 8mm spacer / 4mm	31 dB	30 dB	27 dB
4mm / 10mm spacer / 4mm / 10mm spacer / 4mm	32 dB	31 dB	26 dB

Secondary Glazing	Rw	Rw+C	Rw+Ctr
6 / 100 / 4	46 dB		37 dB
6 / 150 / 4	47 dB		39 dB
10 / 200 / 6	49 dB		45 dB

Sound insulation data measured in accordance with BS EN ISO 140-3 and indices derived in accordance with BS EN ISO 717-1