

NOISE IMPACT ASSESSMENT

BS8233:2014

Proposed Community Hall



NOISE
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YOUR LOCAL ACOUSTIC SPECIALIST

REPORT DETAILS

Report Title	Noise Assessment: Proposed Community Hall
Site Address	393 Bradford Rd, Huddersfield, HD2 2QY
Project No.	NALPRO191125.01
Consultant Contact	jonathan@noiseassessments.co.uk

QUALITY ASSURANCE

Issue No.	Status	Issue Date	Comments	Author	Approved
1	FINAL	28/11/25	-	J Mape BSc (Hons) PgDip IOA Cert. Environ. Noise Noise Consultant	D Warren Director

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Assessment Summary

The two-storey semi-detached property (referred to as the site) is looking to be used as a community hall.

The proposed include, break out rooms, offices, meeting rooms, toilet facilities, and a get-together open hall for socials and to confirm that the impact from visitors entering and exiting the site (see Appendix A) complies with external noise guidance. The client has been requested by the Local Council to complete a noise assessment at 393 Bradford Rd, Huddersfield, HD2 2QY.

Worst case number of visitors could be 25 (and up to 40, 2-3x /year) utilising the ground and first floors. However, most gatherings will be in the main hall on the ground floor.

The Council want to understand noise levels during a worst-case scenario with several visitors attending at once. Noise breakout from visitors talking and music/singing played is based on the windows and doors being open, however, the windows will remain closed, whilst the main door will not be left open.

Noise breakthrough into the adjoining ground floor to residential lounge will be assessed to determine if improvements to the wall is required.

BS4142:2014 is the prescribed standard for assessing fixed plant sources of industrial and commercial noise on residential receptors for the UK. It is noted the assessment omits usage for music and entertainment noise sources, however, the method of referencing noise emissions to the background noise climate is deemed a useful tool for the assessment.

According to BS4142:2014, the following 'Low Impact' target should be achieved. It is useful to consider the exceedance of the background noise level in relation to the lower frequency bands, 63Hz and 125Hz, due to the prominent low frequency content within recorded music.

Apart from small evening/weekend events, most of the time will be for quiet reflection, discussion.

Noise breakout will also occur through the double-glazed windows. The site will be attended by the local community and majority of visitors will be on foot, with only a small number using vehicles, and the limited parking spaces in the area.

A noise management plan will be discussed with visitors about no radio/music on within cars when arriving to the site. It will be encouraged that on arriving and departing the site, visitors avoid congregating outside.

Outdoor background noise measurements were captured throughout the day on 21st November 2025. The lowest daytime background sound level was measured between 14:30-14:45 as 43 dB LA90,15min.

Internal Breakout Noise

Noise breakout from visitor's voices and background music occurs through the weakest part of the external façade; this is taken to be the front and rear of the site through the double glazing with door closed.

Internal noise level has been derived based on in situ measured music noise levels from a similar scenario in London.

The following spectral data for human voice and music is tabulated below:

Internal Noise Level Frequency, HZ	63	125	250	500	1k	2k	4k	dB LAeq
Visitor voices and background music	68	61	63	66	60	55	50	66

With reductions afforded by the double glazing, distance attenuated break-out noise level from the external façade at NR1 is calculated as 36 dB LAeq and NSR2 31 LAeq. See Appendix E for full calculation details.

Noise breakout from the windows and front and rear of the proposed Site to the residential windows are below the lowest measured background noise level of 43 dB LA90 daytime; therefore, the noise impact because of noise breakout is expected to be **low**.

Noise intrusion levels with residential windows open have been determined assuming that the insulation provided by a window, partially open for ventilation, is 15 dB as suggested by BS 8233 and WHO. the noise impact within bedrooms and living spaces because of noise breakout is expected to be **desirable**.

Internal noise

The noise impact through the wall on the ground floor is deemed to comply with a minimum NR20 requirement.

The results of the noise assessment demonstrate that, noise from the visitor voices/music near sensitive receivers will be considered **low** and **desirable**.

1. Proposal

- 1.1 The two-storey semi-detached property (referred to as the site) is looking to be used as a community hall.
- 1.2 The proposed include, break out rooms, offices, meeting rooms, toilet facilities, and a get-together open hall for socials and to confirm that the impact from visitors entering and exiting the site (see Appendix A) complies with external noise guidance. The client has been requested by the Local Council to complete a noise assessment at 393 Bradford Rd, Huddersfield, HD2 2QY.
- 1.3 Worst case number of visitors could be 25 (and up to 40, 2-3x /year) utilising the ground and first floors. However, most gatherings will be in the main hall on the ground floor.
- 1.4 The Council want to understand noise levels during a worst-case scenario with several visitors attending at once. Noise breakout from visitors talking and music/singing played is based on the windows and doors being open, however, the windows will remain closed, whilst the main door will not be left open.
- 1.5 Noise breakthrough into the adjoining ground floor to residential lounge will be assessed to determine if improvements to the wall is required.
- 1.6 Apart from small evening/weekend events, most of the time will be for quiet reflection, discussion.

2. Existing Context

- 2.1 The proposed site is currently a semi-detached brick-built property with two floors adjacent to a residential dwelling to the east and west, along a main road for residential dwellings and some commercial units located around the site.
- 2.2 The environmental health department of the local planning authority raised concerns of noise emissions from the noise from visitors on neighbouring noise sensitive residential dwellings during the daytime.

3. Criteria

- 3.1 The following targets have been selected in accordance with 'BS 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound.' This will be achieved when the Rating Level is below the representative background sound level.
- 3.2 Whilst there are no prescribed standards for the assessment of noise impact where human voice is the primary source, reference can be made to 'BS8233:2014 – Guidance on sound insulation and noise reduction for buildings' [British Standards Institution] which gives guideline criteria for internal ambient noise levels in residential dwellings.

3.3 The operational noise from the hall should not exceed NR20 Leq,T, within the adjoining residential dwelling.

3.4 The NR20 criterion is spectrum-based criterion, which require that the maximum noise level at a range of frequencies should not be exceeded as indicated in the table below.

Octave Centre-Frequency Band, Hz							
NR20	63	125	250	500	1k	2k	4k
	51	39	31	24	20	17	14

4. Noise Policy and Guidance

Noise Policy Statement for England (NPSE)

4.1 The NPSE sets out the Government's policy on noise and includes the long-term vision of promoting good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.

4.2 This long-term vision is supported by the following aims:

4.3 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; and
- where possible, contribute to the improvement of health and quality of life.

4.4 There are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are:

- NOEL (No Observed Effect Level) – this is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise;
- LOAEL (Lowest Observed Adverse Effect Level) – this is the level above which adverse effects on health and quality of life can be detected.

4.5 Extending these concepts further, NPSE leads to the concept of a significant observed adverse effect level:

- SOAEL (Significant Observed Adverse Effect Level) – this is the level above which significant adverse effects on health and quality of life occur.

4.6 NPSE acknowledges that it is not possible to have a single objective noise-based measure that defines NOEL, LOAEL and SOAEL that is applicable to all sources of noise in all situations. It is

therefore suggested that more specific advice from other applicable noise standards and guidance could be employed to determine suitable noise level criteria within the overall principles of the NPSE.

National Planning Policy Framework (NPPF)

- 4.7 The revised NPPF was updated in December 2024 and sets out the government’s planning policies for England and how these are expected to be applied. This document replaces the first NPPF published in March 2012 and includes minor clarifications to the revised version published in July 2018, February 2019, July 2021, and 2023.
- 4.8 Where issues of noise impact are concerned the NPPF provides brief guidance in Chapter 15 ‘*Conserving and enhancing the natural environment*’ as follows:

Paragraph 170:

Planning policies and decisions should contribute to and enhance the natural and local environment by preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.

Paragraph 180:

Planning policies and decisions should also ensure that 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. In doing so they should:

- a) 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;
- b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and
- c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Paragraph 182:

Planning policies and decisions should ensure 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 (PPG)

- 4.9 PPG is written in support of the NPPF and provides an increased level of specific planning guidance.
- 4.10 It suggests that noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. It is also suggested that noise should not be considered in isolation and separately from issues such as the economic, social and other environmental dimensions of proposed development.
- 4.11 Local planning authorities' plan-making and decision taking should take account of the acoustic environment and in doing so consider:
- whether or not a significant adverse effect is occurring or likely to occur;
 - whether or not an adverse effect is occurring or likely to occur; and
 - whether or not a good standard of amenity can be achieved.

Technical Guidance

BS 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound'

BS4142 is a recognised standard for assessing the noise impact of fixed plant machinery via relation of noise emissions to current background noise levels.

BS8233:2014 – Guidance on sound insulation and noise reduction for buildings

- 4.12 The following targets have been selected in line with 'BS8233:2014 – Guidance on sound insulation and noise reduction for buildings' [British Standards Institution]:
- •35 dB LAeq, 16hr within living areas during the day (07:00 – 23:00)
 - •30 dB LAeq, 8hr within bedrooms during the evening (23:00 – 07:00)

5. Nearest Sensitive Receptor Locations

- 5.1 The nearest noise sensitive receptors (NSRs) have been identified as a residential building west (NSR1) (4m) and east (NSR2) (7m), of the site with habitable windows having no direct line of sight to the façades of the proposed site.

6. Subjective Impressions

6.1 The noise climate around the site is dominated by noise from nearby road traffic throughout the day and evening including cars and HGVs / LGVs where tyre / road interaction noise was most prominent.

7. Measurement Locations

7.1 Attended background noise measurements were undertaken outside of the nearest sensitive receptor. The data collected during this period has been used to characterise the existing acoustic environment around the site and specific noise from visitors' voices.

7.2 Measurement and NSR locations are shown in figure 1 below:

Figure 1: Site & Measurement Location



- Background measurement location M1
- ▬ Site location
- ★ NSR1 4m ★ NSR2 9m

8. Measurement Procedure

8.1 Noise levels were measured on 21st November 2025. Full measurement times and durations can be found in **Appendix B**.

9. Measurement Equipment

9.1 Measurements were undertaken using a calibrated, Pulsar N45 class 1 sound level meter. Full equipment details can be found in **Appendix C**.

9.2 During all measurements the microphone was protected with an outdoor windshield.

9.3 The calibration level of the meter was checked before and after the survey with a Pulsar N45 sound calibrator with no variation in the levels observed.

9.4 The sound level meters were set to measure various noise parameters including LAeq and LMax values using a 'fast' time weighting.

9.5 Full calibration details can be found in **Appendix D**.

10. Weather Conditions

10.1 Weather conditions were deemed acceptable for background noise measurement. Full meteorological conditions are detailed in **Appendix E**.

11. Background Sound Level

11.1 Environmental noise levels were measured on site on 21st November 2025.

11.2 The lowest daytime background sound level was measured between 14:30-14:45 as 43 dB LA90,15min at M1.

12. Internal Noise Level

12.1 The dominant noise source on-site will be voices of visitors and background music within the Site.

12.2 Internal noise level has been derived based on in situ measured music noise levels from a similar scenario in London.

12.3 The following spectral data for human voice and music is tabulated below:

Internal Noise Level Frequency, HZ	63	125	250	500	1k	2k	4k	dB LAeq
Visitor voices and background music	68	61	63	66	60	55	50	66

13. Noise Breakout

- 13.1 Noise breakout from visitor's voices and background music will occur through the weakest part of the external façade; this is taken to be the double glazing with door closed.
- 13.2 With reductions afforded by the double glazing, distance attenuated break-out noise level from the external façade at NR1 is calculated as 36 dB LAeq and NSR2 31 LAeq. See Appendix E for full calculation details.
- 13.3 It is demonstrated above that under the current proposed façade scheme, noise breakout at 63 Hz and 125Hz is below the 1/1 octave band criteria, Full calculations can be seen in Appendix E.
- 13.4 Noise breakout from the windows at the front and rear of the site to the residential windows is below the lowest measured background noise level of 43 dB LA90 daytime; therefore, the noise impact because of noise breakout is expected to be low.
- 13.5 Noise intrusion levels with residential windows open have been determined assuming that the insulation provided by a window, partially open for ventilation, is 15 dB as suggested by BS 8233 and WHO. The noise impact within bedrooms and living spaces because of noise breakout is expected to be desirable.

14. Internal Noise Transfer

Wall Breakout

- 14.1 The adjoining wall is plasterboard, and brick.
- 14.2 The initial model of the current ground floor wall showed a performance of around Rw 38 this will be adequate in attenuating internal noise transfer to within the target criteria to reduce the noise levels within the receiving room.
- 14.3 Based on an addition of an acoustic wall, the result of the noise on the ground floor wall is shown below.

Via the wall and acoustic insulation

Frequency, Hz	63	125	250	500	1000	2000	4000
Source Noise Level, dB Lz	68.0	61.0	63.0	66.0	60.0	55.0	50.0
Wall Spec	29.0	50.0	62.0	54.0	60.0	67.0	73.0
Internal Noise, dB Leq	39.0	11.0	1.0	12.0	0.0	-12.0	-23.0
A-Weighting	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0
Internal Noise, dB, LAeq	12.8	-5.1	-7.6	8.8	0.0	-10.8	-22.0
NR 20	51.0	39.0	31.0	24.0	20.0	17.0	14.0
Difference NR20	-38.2	-44.1	-38.6	-15.2	-20.0	-27.8	-36.0

Receiver Room Level, dB LA	14.5
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14.4 Overall Airborne Performance: 63dB (DnT,w+Ctr) Includes correction for low frequency performance.

15. Noise Management

15.1 To keep noise in the community as low as practical, several noise reduction measures will be discussed with visitors visiting the Site.

- Avoid congregating outside the Site before and after their visit.
- When arriving by car, turn off music/radio prior to exiting the vehicle in the car park and not to congregate in the car park.

16. Summary

- 16.1 The two-storey semi-detached property (referred to as the site) is looking to be used as a community hall.
- 16.2 The proposed include, break out rooms, offices, meeting rooms, toilet facilities, and a get-together open hall for socials and to confirm that the impact from visitors entering and exiting the site (see Appendix A) complies with external noise guidance. The client has been requested by the Local Council to complete a noise assessment at 393 Bradford Rd, Huddersfield, HD2 2QY.
- 16.3 Worst case number of visitors could be 25 (and up to 40, 2-3x /year) utilising the ground and first floors. However, most gatherings will be in the main hall on the ground floor.
- 16.4 The Council want to understand noise levels during a worst-case scenario with several visitors attending at once. Noise breakout from visitors talking and music/singing played is based on the windows and doors being open, however, the windows will remain closed, whilst the main door will not be left open.
- 16.5 Noise breakthrough into the adjoining ground floor to residential lounge will be assessed to determine if improvements to the wall is required.
- 16.6 BS4142:2014 is the prescribed standard for assessing fixed plant sources of industrial and commercial noise on residential receptors for the UK. It is noted the assessment omits usage for music and entertainment noise sources, however, the method of referencing noise emissions to the background noise climate is deemed a useful tool for the assessment.
- 16.7 According to BS4142:2014, the following 'Low Impact' target should be achieved. It is useful to consider the exceedance of the background noise level in relation to the lower frequency bands, 63Hz and 125Hz, due to the prominent low frequency content within recorded music.
- 16.8 Apart from small evening/weekend events, most of the time will be for quiet reflection, discussion.
- 16.9 Noise breakout will also occur through the double-glazed windows. The site will be attended by the local community and majority of visitors will be on foot, with only a small number using vehicles, and the limited parking spaces in the area.
- 16.10 A noise management plan will be discussed with visitors about no radio/music on within cars when arriving to the site. It will be encouraged that on arriving and departing the site, visitors avoid congregating outside.
- 16.11 Outdoor background noise measurements were captured throughout the day on 21st November 2025. The lowest daytime background sound level was measured between 14:30-14:45 as 43 dB LA90,15min.

Internal Breakout Noise

16.12 Noise breakout from visitor's voices and background music occurs through the weakest part of the external façade; this is taken to be the front and rear of the site through the double glazing with door closed.

16.13 Internal noise level has been derived based on in situ measured music noise levels from a similar scenario in London.

16.14 The following spectral data for human voice and music is tabulated below:

Internal Noise Level Frequency, HZ	63	125	250	500	1k	2k	4k	dB LAeq
Visitor voices and background music	68	61	63	66	60	55	50	66

16.15 With reductions afforded by the double glazing, distance attenuated break-out noise level from the external façade at NR1 is calculated as 36 dB LAeq and NSR2 31 LAeq. See Appendix E for full calculation details.

16.16 Noise breakout from the windows and front and rear of the proposed Site to the residential windows are below the lowest measured background noise level of 43 dB LA90 daytime; therefore, the noise impact because of noise breakout is expected to be low.

16.17 Noise intrusion levels with residential windows open have been determined assuming that the insulation provided by a window, partially open for ventilation, is 15 dB as suggested by BS 8233 and WHO. the noise impact within bedrooms and living spaces because of noise breakout is expected to be desirable.

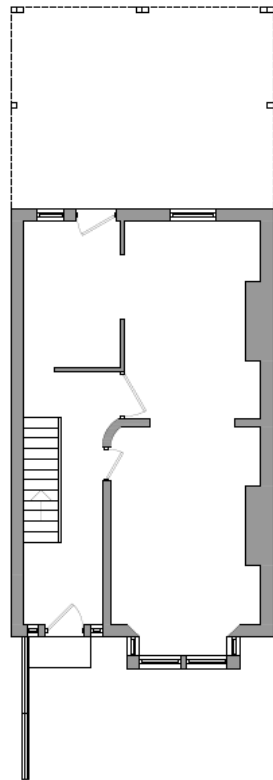
Internal noise

16.18 The noise impact through the wall on the ground floor is deemed to comply with a minimum NR20 requirement.

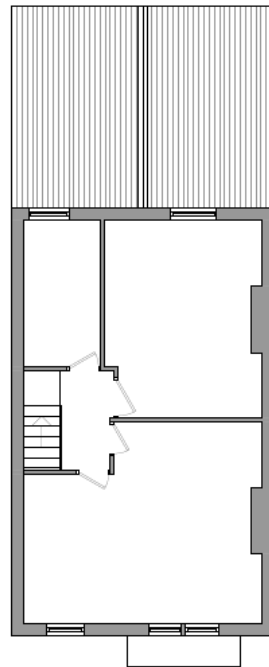
16.19 The results of the noise assessment demonstrate that, noise from the visitor voices/music near sensitive receivers will be considered low and desirable.

Appendices

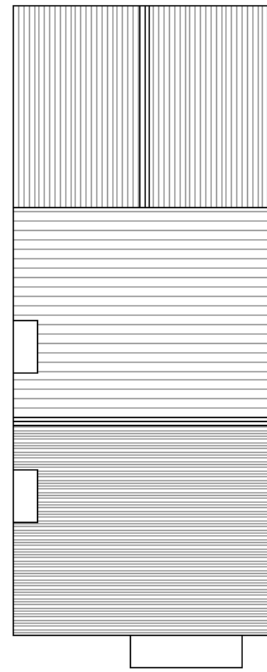
APPENDIX A –Layout drawings of the proposed



Ground Floor Layout 1.50

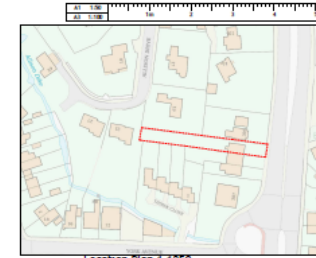


First Floor Layout 1.50



Roof Layout 1.50

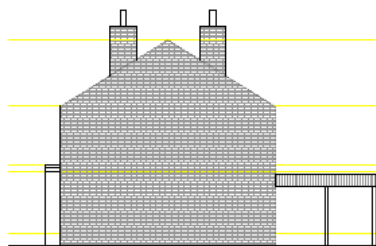
Written dimensions on these drawings shall take precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the project and the client must be notified of any variations from the dimensions and conditions shown by these drawings prior to commencement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



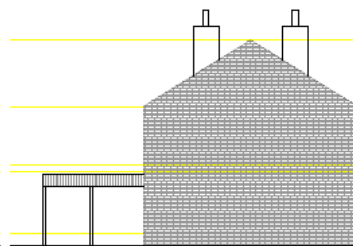
Location Plan 1:1250



Site Plan 1:500



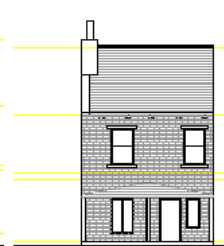
North - Side Elevation 1:100



South - Side Elevation 1:50



East - Front Elevation 1:50



West - Rear Elevation 1:50

NO	DESCRIPTION	DATE	BY

CLIENT			
ADDRESS 393 Bradford Road Huddersfield, HD2 2QY			
PROJECT Change of Use			
DRAWING Existing Layout and Elevations			
DRAWN	UH	DATE	Oct 25
SCALE	1:50@A1		
DWG. NO. 2549/01			
STATUS PLANNING			

HM Land Registry
Official copy of
title plan

Title number YY178414
Ordnance Survey map reference SE1418NE
Scale 1:1250
Administrative area West Yorkshire :
Kirklees



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APPENDIX B - Measurement Details

Measurement	Start Date	Start Time	End Date	End Time
M1	21/11/25	08:15	21/11/25	21:15

APPENDIX C - Equipment Details

Equipment	Make	Model	Class	Serial Number
Sound Meter	Pulsar	N45	1	1365
Calibrator	Pulsar	PM1	1	011121C

APPENDIX D - Calibration Details

Measurement	Calibrator Ref Level (dB)	Level Before (dB)	Deviation Before (dB)	Level After (dB)	Deviation After (dB)
M1	94.0	94.0	0	94.0	0

APPENDIX E - Meteorology Details

Date	Temp C	Wind Speed m/s*	Wind Direction	Humidity %	Precipitation mm	Cloud Cover (Oktas)
21/11/25	6	2.9	ssw	78	0.1	5/8

*Windspeeds measured on site using a Skywatch Xplorer 2 Anemo-Thermometer.

APPENDIX F – Noise Breakout – Windows

Frequency, Hz	63	125	250	500	1000	2000	4000
Source, dB Leq Lz	68	61	63	66	60	55	50
Glazing Spec	20	24	20	25	34	37	36
Comp R, dB	-20.0	-24.0	-20.0	-25.0	-34.0	-37.0	-36.0
Breakout, dB Leq	49.0	38.0	44.0	42.0	27.0	19.0	15.0
A-Weighting, dB	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0
Line of sight	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
Breakout, dB LAeq	17.8	16.9	30.4	33.8	22.0	15.2	11.0
Background L90	28.0	32.0	34.0	37.0	40.0	39.0	35.0
Difference	-10.2	-15.1	-3.6	-3.2	-18.0	-23.8	-24.0

Breakout Sum, dB LAeq	35.8
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Source - Receiver, m	4
Noise Source, dB Leq	66

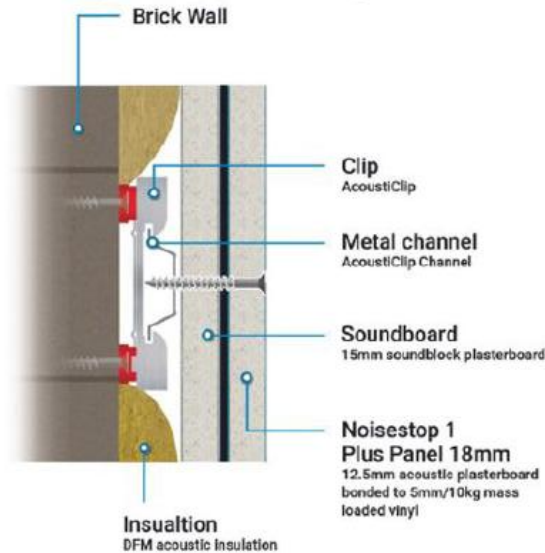
Frequency, Hz	63	125	250	500	1000	2000	4000
Source, dB Leq Lz	68	61	63	66	60	55	50
Glazing Spec	20	24	20	25	34	37	36
Comp R, dB	-20.0	-24.0	-20.0	-25.0	-34.0	-37.0	-36.0
Breakout, dB Leq	44.1	33.1	39.1	37.1	22.1	14.1	10.1
A-Weighting, dB	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0
Line of sight	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
Breakout, dB LAeq	12.9	12.0	25.5	28.9	17.1	10.3	6.1
Background L90	28.0	32.0	34.0	37.0	40.0	39.0	35.0
Difference	-15.1	-20.0	-8.5	-8.1	-22.9	-28.7	-28.9

Breakout Sum, dB LAeq	30.9
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Source - Receiver, m	7
Noise Source, dB Leq	66

APPENDIX H –Noise Control

Sound Insulation Test AcoustiClip Direct to Wall System



www.noisestopsystems.co.uk
info@noisestopsystems.co.uk
01 234 339163



Mass air resonant frequency = 42Hz
Panel size = 2.7m x 4.0m
Partition surface area mass = 152kg/m²

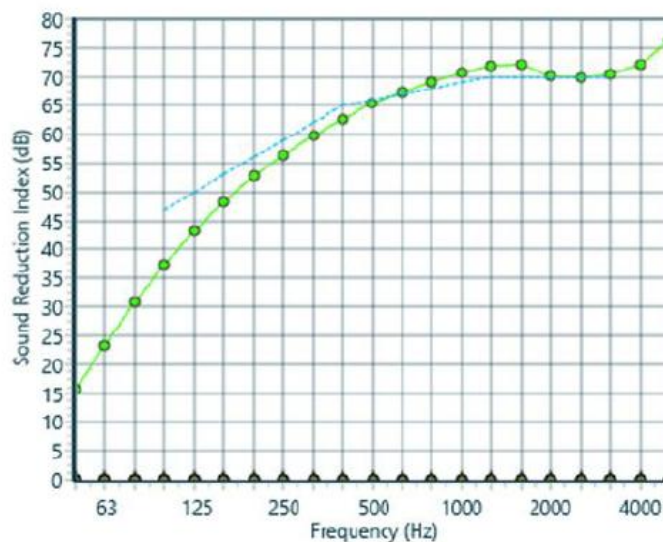
System Description

- The system is applied to a 100mm single-skin brick wall
- AcoustiClip and AcoustiChannel
- 25mm/60kg Acoustic insulation
- 15mm Acoustic plasterboard
- 18mm Noisestop 1Plus Panel (incorporated 12.5 acoustic p/b and 10kg mass-loaded vinyl)
- Acoustic sealant to the edges and perimeter of the boards

Sound Insulation

Untreated 100mm single skin brick wall	DnT,w 38dB
AcoustiClip Direct System applied	DnT,w 63dB
Improvement when solution is applied	DnT,w 25dB

freq.(Hz)	R(dB)	R(dB)
50	24	
63	33	29
80	41	
100	47	
125	52	50
160	57	
200	60	
250	63	62
315	63	
400	54	
500	53	54
630	56	
800	58	
1000	61	60
1250	63	
1600	65	
2000	67	67
2500	68	
3150	69	
4000	87	73
5000	91	



APPENDIX I – Terminology and Definitions

Noise

Sound only becomes noise (often defined as ‘unwanted sound’ or sound that is considered undesirable or disruptive) when it causes or contributes to some harmful or otherwise unwanted effect, like annoyance or sleep disturbance.

Acoustic Environment

Sound from all sound sources as modified by the environment.

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

Value of the A-weighted sound pressure level of a continuous, steady sound that, within a specified time interval T, has the same mean square sound pressure as a sound under consideration whose level varies with time.

A-weighting

The human ear is most sensitive to frequencies in the range 1 kHz to 5 kHz. On each side of this range the sensitivity falls off. A-weighting is used in sound level meters to replicate this sensitivity and respond in the same way as the human ear.

Octave Band

Band of frequencies in which the upper limit of the band is twice the frequency of the lower limit.

Maximum Sound Pressure Level $L_{Amax,T}$

Highest value of the A-weighted sound pressure level with a specified time weighting that occurs during a given event or measuring period.

The $L_{A10,T}$ Sound Level

The A-weighted sound pressure that is exceeded for 10% of a given time interval, T. It is often used to evaluate road traffic noise.

The $L_{A90,T}$ Sound Level

The A-weighted sound pressure that is exceeded for 90% of a given time interval, T, measured using time weighting F. It is often referred to as the background noise level and which might in part be an indication of relative quietness at a given location

Free-field Level

The sound pressure level away from reflecting surfaces.

NOTE Measurements made 1.2 m to 1.5 m above the ground and at least 3.5 m away from other reflecting surfaces are usually regarded as free-field. To minimize the effect of reflections the measuring position has to be at least 3.5 m to the side of the reflecting surface (i.e. not 3.5 m from the reflecting surface in the direction of the source).

Façade Level

The sound pressure level 1 m in front of the façade.

NOTE Façade level measurements of LpA are typically 1 dB to 2 dB higher than corresponding free-field measurements because of the reflection from the facade.

Indoor Ambient Noise

Noise in a given situation at a given time, usually composed of noise from many sources, inside and outside the building, but excluding noise from activities of the occupants.

ABOUT US

HERE TO HELP

We undertake various noise assessments and noise survey for a wide range of clients to meet their noise requirements and obligations, including for Planning Applications, new developments, building extensions, change of use, small businesses, restaurants, shops and much more.

QUALIFIED AND EXPERIENCED

Over 15 years UK and international acoustic engineering experience of undertaking Noise Monitoring, acoustic solutions, noise survey and Reporting.

Members of the Institute of Acoustics. Undertaken projects in Manchester, North West and across the UK.

GET THE PROJECT DONE

We offer competitive, cost effective acoustic solutions, delivering a noise survey report which complies with Local Planning Authority requirements and sound insulation or health and safety obligations.

We can also undertake Noise Modelling if required.