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Acoustic Survey and Assessment for Proposed conversion of first floor to residential apartments at 37 Union Street, Dewsbury, WF13 1AS.

Prepared for:

Planning Management Ltd
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WF17 6ER.

February 2026

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1. Introduction

1.1. Martin Environmental Solutions has been commissioned to undertake an acoustic survey and assessment to support a discharge of planning condition for the conversion of the first floor from storage to two residential apartments at 37 Union Street, Dewsbury, WF13 1AS.

Site Location and Context

1.2. The development site is situated to the west of Union Street and on the corner of Croft Street. The property consists of a two storey brick built property. The ground floor is retail. Additional retail units are located on both sides of Union Street with a mixture of retail and residential along Croft Street.

1.3. An aerial Photograph is enclosed in Figure 1, together with a proposed layout drawing in Figure 2.

1.4. The report has been produced to clarify the potential impact on the proposed development and to identify mitigation measures if required to ensure the development is appropriate in terms of noise impact.

2. Policy and Guidance

2.1. The impact of noise can be a material consideration in the determination of planning applications. The planning system has the task of guiding development to the most appropriate locations. It is recognised that on occasions it will be difficult to reconcile some land uses, such as housing, hospitals, or schools, with other activities that generate high levels of noise. However, the planning system is tasked to ensure that, wherever practicable, noise-sensitive developments are separated from major sources of noise (such as road, rail and air transport and certain types of industrial development).

2.2. The Government's publication of the National Planning Policy Framework (NPPF), updated in December 2024, states that planning policies and decisions should prevent new and existing development from contributing to or being put at unacceptable risk from, of being adversely affected by unacceptable levels of noise pollution.

2.3. The Government have also issued the Noise Policy Statement for England (NPSE). The NPSE clarifies the Government's underlying principles and aims in relation to noise and sets a vision to promote good health and a good quality of life through the effective management of noise while having regard to the Government's sustainable development strategy. The NPSE aims to mitigate and minimise adverse impacts on health and quality of life through the effective management and control of noise.

2.4. The NPSE introduces the following terms, although no sound levels are given to represent these, many authorities have identified the sound level criteria in line with the World Health Organisation, BS8233:2014 and BS4142: 2014 levels. The terms introduced by the NPSE are:

NOEL – No Observed Effect Level; this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

LOAEL – Lowest Observed Adverse Effect Level. this is the level of noise exposure above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level. This is the level of noise exposure above which significant adverse effects on health and quality of life occur.

2.5. The Planning Practice Guidance on Noise supports the above and highlights that plan-making and decision making need to take account of the acoustic environment and 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 a good standard of amenity can be achieved.

In line with the NPSE this includes whether the overall effect of the noise exposure would be above or below the SOAEL.

2.6. Other commonly used examples of standards utilised by Local Planning authorities for the consideration of noise impacts include comparison of the likely noise levels to be experienced at a development, with levels that have been recommended by the World Health Organisation (WHO) as Guidelines for the prevention of Community Noise Annoyance and within BS8233: 2014.

2.7. The WHO recommended noise levels for outdoor amenity areas (gardens) that should not be exceeded are 55dB(A) $L_{Aeq,16hr}$ in order to avoid 'Serious Community Annoyance or 50dB(A) $L_{Aeq,16hr}$ to avoid 'Moderate Community Annoyance' during the day. For indoor levels WHO set 35dB(A) $L_{Aeq,16hr}$ during the day to prevent Moderate Annoyance and 30 dB(A) $L_{Aeq,8hr}$ at night to prevent sleep disturbance.

2.8. The WHO guidance also recommends that maximum sound levels at night should not regularly exceed 45dB(A) within bedrooms to prevent sleep disturbance. Regularly is considered to be more than 10 times during any 8-hour night-time period.

2.9. BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings' also specifies desirable noise levels to be achieved inside dwellings.

2.10. BS 8233:2014 'Sound insulation and noise reduction for buildings – Code of Practice' also specifies desirable noise levels to be achieved inside dwellings. BS 8233 presents two levels, the first between the hours of 07:00 – 23:00 and the second between 23:00 -07:00.

2.11. The daytime period suggests internal noise levels of 35dB $L_{Aeq,16hr}$, for resting in living rooms and bedrooms while for night-time a level of 30dB LAeq,8hr is recommended. Criteria for external areas mirrors that within the WHO guidance.

2.12. Another commonly used standard is British Standard 4142:2014 'Method for rating industrial and commercial sound' compares the sound predicted by the source in question against the background, L_{A90} sound levels.

2.13. The "residual" L_{Aeq} measurement is then subtracted from the "ambient" L_{Aeq} measurement (with the sound source) to calculate the sound level created by the "problem" sound alone -termed the "specific" sound level.

2.14. If the "problem" sound is tonal, such as whine or hum, or if it is impulsive such as bangs or clatters or if it is irregular enough to attract attention a correction is added to the "specific level" to produce the "rating level". The "background" L_{A90} measurement is then compared against the "rating level".

2.15. If the "rating level" exceeds the "background" by around 10dB(A) or more this "indicates a significant adverse impact". A difference of around 5dB(A) 'indicates an adverse impact. The lower the commercial noise level is, the lower the likely impact.

2.16. In addition, the 'ProPG Planning & Noise, Professional Practice Guidance on Planning & Noise, New Residential Development' provides a 4-staged approach to undertaking a risk assessment in relation to anticipated sound levels at new residential development and the provision of mitigation measures. The guidance is principally aimed at sites exposed predominantly to noise from transportation sources.

2.17. The first stage consists of an initial noise risk assessment, based on indicative day and night-time *noise* levels. Simply put, the higher the ambient noise in an area the greater the impact. The levels given are shown below although it should be noted that these are in excess of both the WHO and BS 8233: 2014 guidance.

Noise Risk Category*	Potential Effect if Unmitigated	Pre-Planning Application Guidance
0 – Negligible $L_{Aeq,16hr}$ **<50dB** $L_{Aeq,8hr}$ **<40dB**	May be noticeable but no adverse effect on health and quality of life	In this category the development is likely to be acceptable from a noise perspective, nevertheless a good acoustic design process is encouraged to improve the existing environment and/or safeguard against possible future deterioration and to protect any designated tranquil areas. A noise assessment may be requested to demonstrate no adverse impact from noise. Application need not normally be delayed on noise grounds.
1 – Low $L_{Aeq,16hr}$ **50-63dB** $L_{Aeq,8hr}$ **40-55dB**	Adverse effect on health and quality of life	In this category the development may be refused unless a good acoustic design process is followed and is demonstrated via a Level 1 Acoustic Design Statement which confirms how the adverse impacts of noise on the new development will be mitigated and minimised and that a significant adverse impact will not arise in the finished development. Planning conditions and other measures to control noise may be required.
2 – Medium $L_{Aeq,16hr}$ **63-69dB** $L_{Aeq,8hr}$ **55-60dB** L_{AFmax} **>80dB****	Significant adverse effect on health and quality of life	In this category the development is likely to be refused unless good acoustic design process is followed and is demonstrated via a Level 2 Acoustic Design Statement which confirms how the adverse impacts of noise on the new development will be mitigated and minimised, and clearly demonstrates that a significant adverse noise impact will not arise in the finished development. Planning conditions and other measures to control noise will normally be required.
3 – High $L_{Aeq,16hr}$ **>69dB** $L_{Aeq,8hr}$ **>60dB** L_{AFmax} **>80dB****	Unacceptable adverse effect of health and quality of life	In this category the development is very likely to be refused on noise grounds, even if a good acoustic design process is followed and is demonstrated via a Level 2 Acoustic Design Statement. Applicants are advised to seek expert advice on possible mitigation measures. Advice on the circumstances when the refusal of a new housing on noise grounds should normally be anticipated is included in the ProPG.

2.18. Stage 2, consists of a full assessment of the prevailing ambient noise and requires 4 elements to be considered:

I. Element 1 – Good Acoustic Design
II. Element 2 – Internal Noise Level Guidelines
III. Element 3 – External Amenity Area Noise Assessment
IV. Element 4 – Assessment of Other Relevant Issues

2.19. A good acoustic design is implicit in meeting the requirements of the NPPF and can help to resolve many potential acoustic issues.

2.20. Details of the criteria considered suitable are provided above for both internal and external sound levels. Element 4 includes such issues as local and national policy, likely occupants, wider planning objectives.

3. The Assessment

The development

3.1 The proposed development consists of a change of use to the property into four residential apartments. Access will be formed from the front for the ground floor apartments and side for the first floor.

3.2 No external plant was identified during the site visits or picked up on the recordings.

3.3 Figure 2 below provides an overview of the proposed development.

Existing Situation.

3.4 In order to obtain representative background sound levels for the area on site monitoring was undertaken over the 15th-17th January 2026.

3.5 A Cirrus Optimus Green sound level meter was utilised for the monitoring. The meter was placed over 1m from the first-floor façade overlooking both Union Street and Croft Street.

3.6 The meter was field calibrated at the start and end of the monitoring period with no significant variation and full laboratory calibration certificates are available on request.

3.7 The weather during the monitoring was dry with little wind <5m/s.

3.8 The full results are shown in Appendix A, with a summary in the tables below.

Start Time	End Time	Duration	LAeq	LA90	LAMax
15/01/2026 15:00	15/01/2026 23:00	07:59:59	54.2	47.3	84.2
15/01/2026 23:00	16/01/2026 07:00	08:00:00	48.6	39.2	70.2
16/01/2026 07:00	16/01/2026 23:00	16:00:00	56.0	50.3	81.9
16/01/2026 23:00	17/01/2026 07:00	08:00:00	48.1	41.9	75.4
17/01/2026 07:00	17/01/2026 10:00	03:00:01	53.5	47.2	71.4

3.9 Background sound levels were dominated by passing traffic with night-time maximum sound levels not regularly exceeded identified at 66.8dB(A) from passing traffic.

3.10 Given a 15dB attenuation[1] for an open window the sound levels to be experienced by the future occupants are above those identified within the guidance documents detailed in section 2 of the report. Therefore, further mitigation measures are required.

3.11 A standard 6/12/6 double glazing unit will, when closed, provide a sound reduction, $R_w(C;C_{tr})$, of 36(-2;-5). Therefore, adequate to protect the future occupants of the accommodation from the prevailing environmental sound levels. particularly if the full façade of the property is taken into account.

3.12 Therefore, to ensure that suitable internal sound levels are maintained it is recommended that all habitable rooms are fitted with the 6/12/6 standard double glazing units.

3.13 In order to be able to keep windows closed additional ventilation provision must be made for the property. As such it is recommended that a ventilation system is used incorporating acoustic trickle ventilators for all windows to habitable rooms to the proposed properties. The ventilators must achieve a similar of better performance to the windows when open and a number of suitable models are available from suppliers including the Greenwood DN Vent providing 34dB (C_{tr}) attenuation or the Titon, Trimvent Select S13 Ventilator providing 33dB (C_{tr}) attenuation. Other models and manufacturers area available.

3.14 Care must be taken to ensure that windows are well fitted and gaps between the window frame and the brick work are minimised. Where gaps do occur, these should be filled with a suitable acoustic material, not expandable foam. The window frame should be sealed across the full depth of the frame and not just around the edges. This will ensure that sound does not 'leak' around the edge of the frame.

3.15 It is worth noting that the above provision does not prohibit the short opening of windows for purge ventilation of the property. The recommended trickle ventilation is design to achieve the required background ventilation for the property.

3.16 A consideration of the Building Regulations, and Approved Document O requirements around overheating is essential given the need for closed windows. The Regulations

[1] BS8233: 2014; Guidance on sound insulation and noise reduction for buildings

require adequate provision to be made for the removal of heat from the building and to limit solar gain.

Sound Transfer Between Units

3.17 It is important to ensure that sound transfer between the different units is minimised to ensure no adverse impact is experienced by the future occupants.

3.18 A specification for the internal separating walls and walls has been identified and is provided in Appendix C. These specifications will result in an attenuation level of >55dB R_w, thus sound levels of up to 85dB(A) could be generated in the neighbouring property while still achieving the desired night-time sound level .

3.19 The figure of 85dB is unlikely to be generated and is equivalent to the upper action level within the Control of Nosie at Work Regulations, where mandatory ear protection is required. This level is therefore unlikely to be produced within a small retail unit or domestic setting.

3.20 The above specifications will ensure no adverse impact is experienced by the future residents.

4 Conclusion

4.1 On-site monitoring has identified existing background sound levels will result in an adverse impact on the proposed development. As such additional mitigation measures are required.

4.2 These have been identified as standard double-glazing units with trickle window vents to ensure a suitable level of ventilation is achieved.

4.3 These have been identified as standard double-glazing units with trickle window vents to ensure a suitable level of ventilation is achieved, and 1.8m high close-boarded fencing to the garden amenity areas front the road.

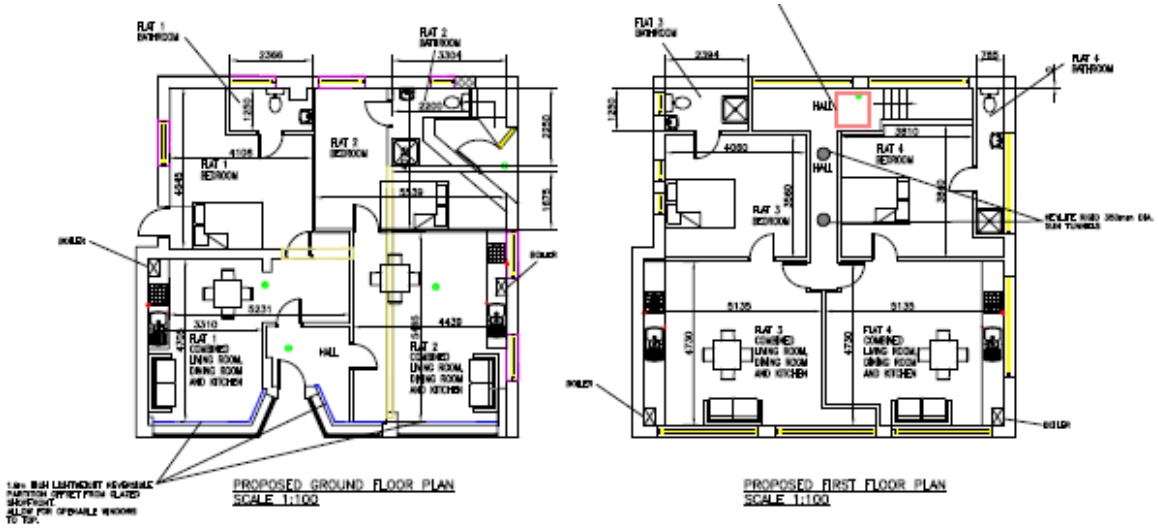
4.4 The inclusion of the above mitigation measures to all habitable rooms will ensure that the internal and external sound levels are acceptable and will result in a No Observe Effect on the future residents in line with the Noise Policy Statement for England.

4.5 As such the development will meet the objectives of the National Planning Policy Framework in ensuring that no significant adverse impact is experienced by the future residents. The development is therefore considered to be acceptable in terms of noise.

Figure 1 – Aerial Photograph



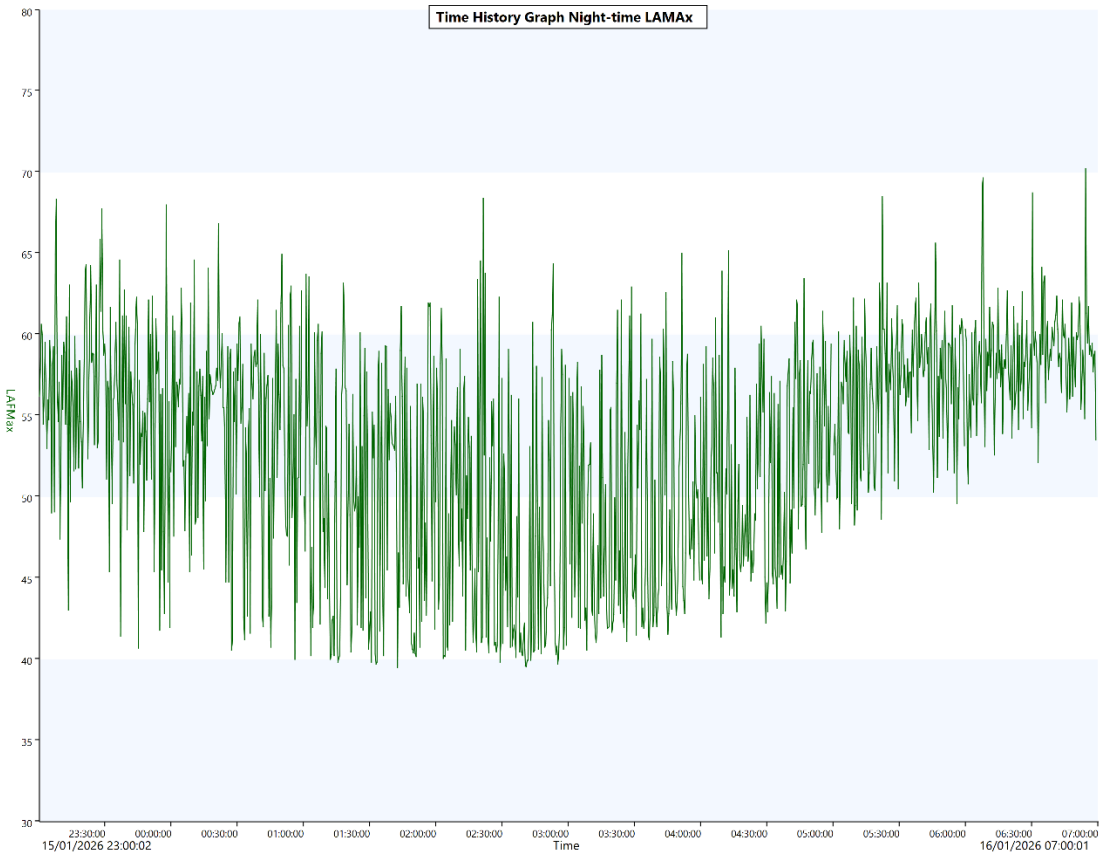
Figure 2 – Proposed Layout Plan

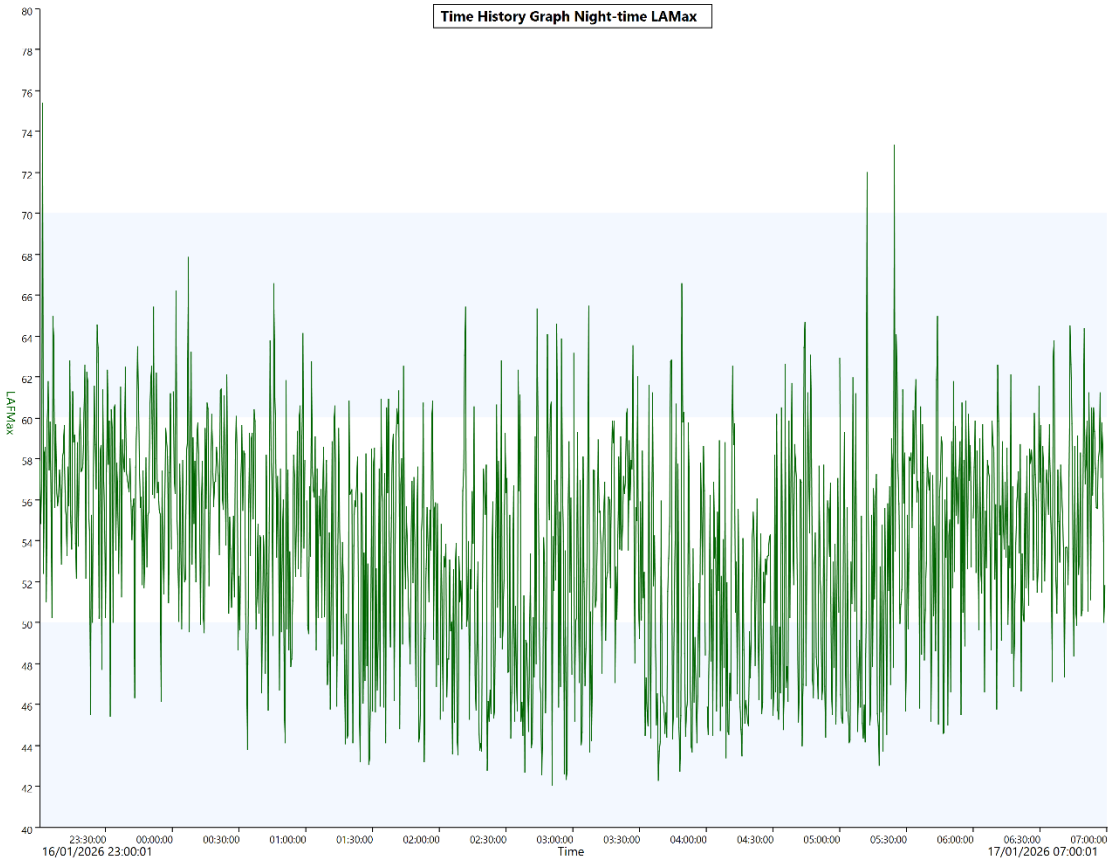


Appendix A – Full Monitoring Results

Time	L_{Aeq} (dB)	L_{AMax} (dB)	L_{A90} (dB)
15/01/2026 15:00	55.8	81.6	50.4
15/01/2026 16:00	55.3	83.9	50.3
15/01/2026 17:00	55.0	71.2	50.4
15/01/2026 18:00	55.2	84.2	49.7
15/01/2026 19:00	53.5	71.1	48.1
15/01/2026 20:00	53.6	77.0	46.8
15/01/2026 21:00	52.5	71.3	45.7
15/01/2026 22:00	50.8	70.8	43.1
15/01/2026 23:00	49.3	68.3	40.4
16/01/2026 00:00	47.6	66.8	39.6
16/01/2026 01:00	45.0	63.7	38.4
16/01/2026 02:00	43.5	68.4	38.3
16/01/2026 03:00	44.6	65.0	39.8
16/01/2026 04:00	46.6	65.1	41.6
16/01/2026 05:00	50.9	68.5	46.7
16/01/2026 06:00	52.7	70.2	48.5
16/01/2026 07:00	55.0	76.2	50.4
16/01/2026 08:00	55.4	71.0	51.3
16/01/2026 09:00	57.8	71.6	51.1
16/01/2026 10:00	55.0	78.8	49.4
16/01/2026 11:00	54.8	73.6	50.4
16/01/2026 12:00	54.7	69.6	50.2
16/01/2026 13:00	55.3	76.1	50.3
16/01/2026 14:00	59.0	80.6	51.0
16/01/2026 15:00	59.2	81.9	51.8
16/01/2026 16:00	55.5	70.9	51.7
16/01/2026 17:00	56.9	78.1	52.0
16/01/2026 18:00	55.6	78.3	51.8
16/01/2026 19:00	55.5	76.9	50.7
16/01/2026 20:00	54.5	72.5	49.7
16/01/2026 21:00	53.6	74.3	48.8
16/01/2026 22:00	52.8	69.9	46.9
16/01/2026 23:00	50.6	75.4	43.9
17/01/2026 00:00	48.7	67.8	42.7
17/01/2026 01:00	46.4	62.7	41.2
17/01/2026 02:00	46.5	65.4	40.6
17/01/2026 03:00	46.5	66.5	41.5
17/01/2026 04:00	46.1	64.7	41.8
17/01/2026 05:00	48.3	73.3	42.2
17/01/2026 06:00	49.5	64.5	44.4
17/01/2026 07:00	51.1	65.3	46.0

17/01/2026 08:00	53.7	71.4	47.9
17/01/2026 09:00	55.0	68.8	49.5


Time History Graph Night-time LAMAx
LAFMax
80
75
70
65
60
55
50
45
40
35
30
23:30:00
00:00:00
00:30:00
01:00:00
01:30:00
02:00:00
02:30:00
03:00:00
03:30:00
04:00:00
04:30:00
05:00:00
05:30:00
06:00:00
06:30:00
07:00:00
15/01/2026 23:00:02
Time
16/01/2026 07:00:01


Time History Graph Night-time LAMax
LAFMax
80
78
76
74
72
70
68
66
64
62
60
58
56
54
52
50
48
46
44
42
40
23:30:00
00:00:00
00:30:00
01:00:00
01:30:00
02:00:00
02:30:00
03:00:00
03:30:00
04:00:00
04:30:00
05:00:00
05:30:00
06:00:00
06:30:00
07:00:00
16/01/2026 23:00:01
Time
17/01/2026 07:00:01

Appendix B – Standard Glazing Attenuation

Sound Insulation Prediction (v10.0.6)

Program copyright Marshall Day Acoustics 2023 | Margin of error is generally within Rw ±3 dB

Date: 14/09/2025

Job Name:

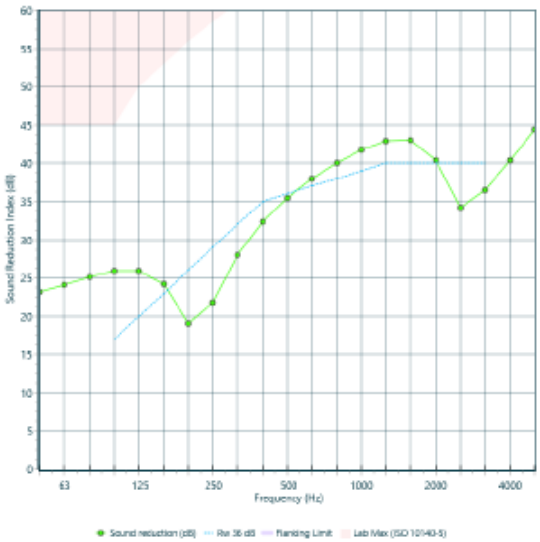


Rw 36 dB
C -2 dB
Ctr -5 dB

System description

Pane 1	1 x 6 mm Glass
Cavity	: 12 mm
Pane 2	1 x 6 mm Glass
Details	Energy-based model, Panel Size 1.3 m x 1.5 m, Partition surface mass = 29.2 kg/m², Mass-air-mass resonant frequency = : 200 Hz

freq. (Hz)	R (dB)	Roct (dB)
50	23	
63	24	24
80	25	
100	26	
125	26	25
160	24	
200	19	
250	22	22
315	28	
400	32	
500	35	35
630	38	
800	40	
1000	42	41
1250	43	
1600	43	
2000	40	38
2500	34	
3150	36	
4000	40	39
5000	44	



Appendix C – Separating Structures

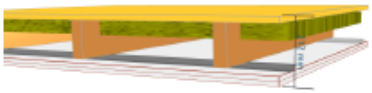
Proposed Floor/ceiling

Sound Insulation Prediction (v10.0.6)

Program copyright Marshall Day Acoustics 2023 | Margin of error is generally within Rw ±3 dB

Date: 04/11/2025

Job Name:

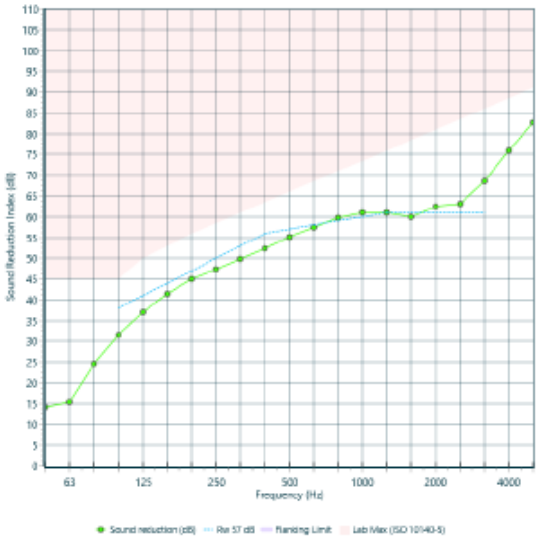


Rw 57 dB
C -2 dB
Ctr -8 dB

System description

Panel 1	1 x 20 mm Flooring Particle Board
Frame	Solid Joist with resilient rail (144 mm x 47 mm), Stud spacing 600 mm , Cavity Width 162 mm + 60 mm Fibreglass (10kg/m3) 60mm
Panel 2	2 x 15 mm Gyproc Fireline 15mm
Details	Panel Size 2.7 m x 4.0 m, Partition surface mass = 38.2 kg/m², Mass-air-mass resonant frequency = : 49 Hz

freq. (Hz)	R (dB)	Roct (dB)
50	14	
63	15	16
80	25	
100	31	
125	37	35
160	41	
200	45	
250	47	47
315	50	
400	52	
500	55	55
630	58	
800	60	
1000	61	61
1250	61	
1600	60	
2000	62	62
2500	63	
3150	68	
4000	76	72
5000	83	



Proposed Internal Walls (solid and Stud)

Sound Insulation Prediction (v10.0.6)

Program copyright Marshall Day Acoustics 2023 | Margin of error is generally within Rw ±3 dB

Date: 04/11/2025

Job Name:

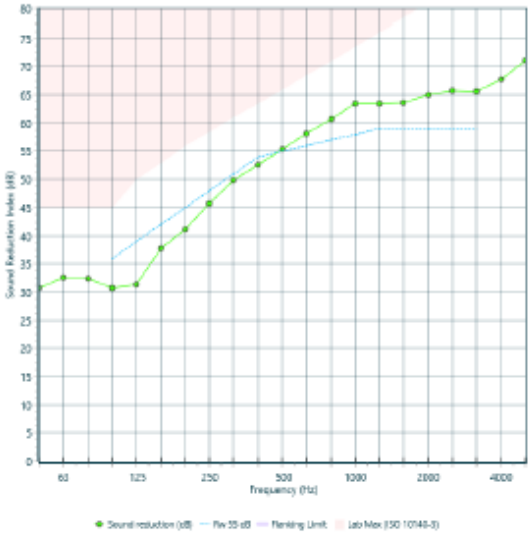


Rw 55 dB
C -3 dB
Ctr -9 dB

System description

Panel 1	1 x 122 mm Plastered Brick
Frame	Timber stud (50 mm x 47 mm), Stud spacing 600 mm , Cavity Width 50 mm + 60 mm Fibreglass (10kg/m3) 60mm
Panel 2	1 x 12.5 mm Gyproc Wallboard 12.5mm
Details	Panel Size 2.7 m x 4.0 m, Partition surface mass = 204 kg/m², Mass-air-mass resonant frequency = 93 Hz

freq. (Hz)	R (dB)	Roct (dB)
50	31	
63	33	32
80	32	
100	31	
125	31	32
160	38	
200	41	
250	46	44
315	50	
400	53	
500	55	55
630	58	
800	61	
1000	63	62
1250	63	
1600	64	
2000	65	65
2500	66	
3150	66	
4000	68	68
5000	71	

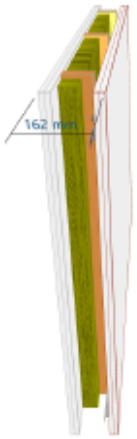


Sound Insulation Prediction (v10.0.6)

Program copyright Marshall Day Acoustics 2023 | Margin of error is generally within Rw ±3 dB

Date: 04/11/2025

Job Name:

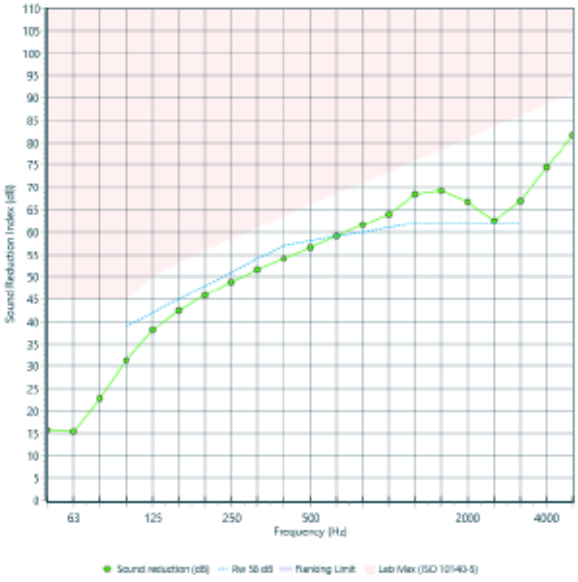


Rw 58 dB
C -2 dB
Ctr -9 dB

System description

Panel 1	2 x 15 mm Gyproc Fireline 15mm
Frame	Timber stud + Resilient rail/bar (90 mm x 45 mm), Stud spacing 600 mm , Cavity Width 102 mm + 60 mm Fibreglass (10kg/m3) 60mm
Panel 2	2 x 15 mm Gyproc Fireline 15mm
Details	Panel Size 2.7 m x 4.0 m, Partition surface mass = 47.4 kg/m², Mass-air-mass resonant frequency = 53 Hz

freq. (Hz)	R (dB)	Rocт (dB)
50	16	
63	15	17
80	23	
100	31	
125	38	35
160	43	
200	46	
250	49	48
315	51	
400	54	
500	57	56
630	59	
800	62	
1000	64	64
1250	68	
1600	69	
2000	67	65
2500	63	
3150	67	
4000	75	71
5000	82	



Appendix D - Report Author Details

This report has been produced by Neil Martin, BSc (Hons), PGDip, CEnvH MCIEH, MIOA.

Neil is the principal acoustic consultant at Martin Environmental Solutions Ltd, a consultancy company specialising in Environmental Health disciplines including environmental noise assessment and control. He holds a Bachler's degree in Environmental Health and Diploma in Acoustics. He is a Chartered Member of the Chartered Institute of Environmental Health and a Full member of the Institute of Acoustics.

Neil has over 20year's experience working within a Local Authority Environmental Health setting, principally in the Environmental Protection and Public Health areas and has been working as an acoustic consultant since 2011.

Since its formation, Martin Environmental Solutions has advised and assisted many groups including residents, developers and local authorities about the problems of noise and vibration in the environment and the possible solutions. Neil also acts as an expert witness in the area of acoustics.