



Project No. 25774

350 Huddersfield Road, Mirfield

Acoustic Design Advice

The Property Intellects





Revision	Date	Prepared By	Reviewed By	Comments
V1	20/07/25	William Shuttleworth	Bailey Hoare	First Issue

The report has been prepared in good faith by enevo, with all reasonable skill and care, based on information provided or available at the time of its preparation and within the scope of work agreement with the Client. We disclaim any responsibility to the Client and others in respect of any matters outside the scope of the above. The report is provided for the sole use of the named Client and is confidential to them and their professional advisors. No responsibility is accepted to other parties



enevo

ENABLING
EVOLUTION

1.0 Introduction

Details of Instruction

The Property Intellects has appointed enevo to carry out Acoustic Design Advice of the proposed wall and floor structures at 350 Huddersfield Road, Mirfield.

2.0 Guidance

BS 8233:2014 - Guidance on sound insulation and noise reduction for buildings

BS 8233:2014 - Guidance on sound insulation and noise reduction for buildings, provides an assessment matrix for determining the required sound insulation based on the perceived activity noise of source rooms and the perceived noise sensitivity of receiving rooms. The table below displays the matrix.

Table 1
Example on-site sound insulation matrix (dB $D_{nT,w}$)

Privacy Requirement	Activity noise of source room	Noise sensitivity of receiving rooms		
		Low sensitivity	Medium sensitivity	Sensitive
Confidential	Very High	47	52	57
	High	47	47	52
	Typical	47	47	47
	Low	42	42	47
Moderate	Very High	47	52	57
	High	37	42	47
	Typical	37	37	42
	Low	No rating	No rating	37
Not Private	Very High	47	52	57
	High	37	42	47
	Typical	No rating	37	42
	Low	No rating	No rating	37

There are no specific limits for reverberation times set out in BS 8233:2014, therefore, limits for this have been set using recommendations and advice from BB93, BCO Guide to fit out and Building Regulations. These limits are stated in Section 3 below.

3.0 Proposed Structures

Proposed Floor

Proposed Floor - Theatre/Café

1 No. Layer 18 mm Flooring Particle Board + 1 No. Layer 4 mm Rubber + 1 x 18 mm Pine, Solid Joist with resilient rail (182 mm x 45 mm), Stud spacing 600 mm, Cavity Width 200 mm + 100 mm Rockwool (100kg/m³), 1 No. Layer 13 mm Duraline 15mm + 1 No. Layer 15mm Gyproc Fireline 15mm + 1 No. Layer 3 mm Sand/Cement render (plaster), Panel Size 2.4 m x 2.4 m (Based on Hush Design)

Table 2
Proposed Floor Acoustic Performance

Wall Type	Required Airborne Acoustic Performance, $D_{nT,w} + C_{tr}$	Predicted Airborne Acoustic Performance, $D_{nT,w} + C_{tr}$	Required Impact Acoustic Performance, $L_{nT,w}$	Predicted Impact Acoustic Performance, $L_{nT,w}$
Proposed Floor (Option 1)	47	56	64	57

As can be seen from Table 3 above, the proposed floor will meet the airborne and impact sound insulation requirements set by enevo in section 2.

Proposed Wall

Proposed Wall – Theatre/Corridor

1 No. Layer 3 mm Sand/Cement render (plaster) + 1 No. Layer 15 mm Gyproc SoundBloc 15mm + 1 x 100 mm Brick, Timber stud + Resilient rail/bar (68 mm x 45 mm), Stud spacing 600 mm, Cavity Width 80 mm + 50 mm Rockwool (100kg/m³), 2 No. layer 15 mm Gyproc SoundBloc 15mm + 1 No. Layer 3 mm Sand/Cement render (plaster) (Based on Hush Design)

Table 3
Proposed Wall Acoustic Performance

Wall Type	Recommended Airborne Acoustic Performance, $D_{nT,w} + C_{tr}$	Predicted Airborne Acoustic Performance, $D_{nT,w}$ + C_{tr}
Theatre/Corridor	47	63

As can be seen from Table 3 above, the proposed wall will meet the airborne sound insulation requirements set by enevo in section 2.

Conclusion

The results of the assessment show that the proposed wall and floor structures will meet the requirement set by enevo in section 2.