



Education



HUSH ACOUSTICS
Sound Insulation Products and Systems

Noise Control for Schools and Education Environments

Comprehensive technical advice from our experienced team will ensure your project complies with all acoustic building requirements.



Education



“ Good acoustic performance in educational environments is essential. ”

The ability of the teacher keeping student attention can be significantly reduced if noise levels are high from neighbouring classrooms or if there is a reverberation noise issue within the classroom.

There are several areas to treat within educational environments. All performance levels for educational environments are detailed in Building Bulletin 93 (BB93). Section E4 of the Building Regulations details that acoustic performance standards have to be achieved within educational environments. BB93 is the normal means of compliance with these regulations. Please see back of this leaflet for full table.

The performance standards that are covered in BB93 are:

- Indoor ambient noise levels in unoccupied spaces
- Airborne sound insulation between spaces
- Airborne sound insulation between circulation spaces and other spaces used by students
- Impact sound insulation of floors
- Reverberation in teaching and study spaces
- Reverberation and acoustic absorption in sports halls
- Sound absorption in corridors and stairwells
- Open plan teaching and learning

Hush Acoustics can provide technical information to comply with the revised BB93 standards for both New Build developments and Refurbishment projects. We offer practical and economic solutions to acoustically treat problematic areas. We will offer consultancy on the best way to minimise noise levels, including recommended layouts, ensuring each area is fitted with the correct material to maximise sound insulation and a reduction in ambient noise levels. This technical service will ensure staff have the ability to teach more effectively.



Hush Acoustics have developed products and systems to ensure compliance with BB93. We have developed many easy to install systems that are designed to optimise space within a classroom/teaching room for refurbishment projects. We have developed an acoustic absorber range that has many colour options to ensure these fit in with existing colour schemes. Creating a better learning environment for students will make it easier for teachers to get their message across.



“ Hush can offer guidance on projects of any size, from a single classroom to an entire school. ”

We can explain how individual areas within an educational building can be affected by sound. We can give expert advice on reverberation noise within a room. If the reverberation time is too high within a teaching space then the speech intelligibility/clarity will be poor making it difficult to hear anything said by a teacher or a pupil. The Hush Absorber range will cater for any reverberation issues.

Hush Acoustics offer a full consultancy service and an extensive product range to ensure compliance with the performance standards in BB93.

Hush Acoustics offers the following services, to ensure these targets are achieved and therefore compliance with E4 of the Building Regulations.

- Environmental noise surveys
- Separating floors, ceilings and walls design advice
- Reverberation time calculations
- Specification of the Hush Absorption range
- Acoustic testing to show compliance with the BB93 performance standards
- BREEM guidance and consultancy service
- Specialist acoustic product range to achieve performance standards detailed in BB93

Find out more about BB93 compliant services and product range and talk to one of our experienced consultants who can create a bespoke solution for your school.

Call us now on 0151 933 2026

BB93 PERFORMANCE STANDARDS.

Hush Acoustics have developed products and systems to ensure compliance with the BB93 standards. The core of BB93 is understanding how each space within a educational environment is affected by acoustics. This is summarised in the tables below.



Type of Room	Room Classification for the Purpose of Airborne Sound		Upper Limit for the indoor ambient noise level LAeq,30mins (dB)	Maximum impact sound pressure level L'nT,w dB	Tmf Seconds	
	Activity Noise	Noise Tolerance				
Nursery School Rooms	Average	Medium	35 [40]	60 [65]	≤0.6 [≤0.8]	
Primary School: classrooms, class bases, general teaching areas, small group rooms.	Average	Medium	35 [40]	60 [65]	≤0.6 [≤0.8]	
Secondary schools: classrooms, general teaching areas, seminar rooms, tutorial rooms.	Average	Medium	35 [40]	60 [65]	≤0.8 [≤1.0]	
Secondary schools: language laboratories	Average	Medium	35 [40]	60 [65]	≤0.8 [≤0.8]	
Open Plan						
Teaching Areas	Average	Medium	40 [45]	60 [65]	≤0.5	
Resource/Breakout areas	Average	Medium	40 [45]	60 [65]	≤1.2	
Music						
Primary music room	High	Medium	35 [40]	60 [65]	≤1.0 [≤1.0]	
Secondary music room	Very High	Low	35 [40]	55 [65]	≤1.0 [≤1.0]	
Small practice / group room ≤30m2	Very High	Low	35 [40]	55 [65]*	≤0.6 [≤0.8]	
Large practice / group room >30m2	Very High	Low	35 [40]	55 [65]*	≤0.8 [≤1.0]	
Ensemble Room	Very High	Low	35 [40]	55 [65]*	0.6 -1.2 [0.6 - 1.2]	
Performance / recital room	Very High	Low	35 [40]	55 [65]*	1.0 - 1.5 [1.0 - 1.5]	
Recording studio	Very High	Low	35 [40]	55 [65]*	≤0.5 [≤0.6] *	
Control room - for recording	High	Low	35 [40]	55 [65]	≤0.5 [≤0.6]	
Control room - not for recording	High	Medium	35 [40]	55 [65]	≤0.5 [≤0.6]	
Lecture Rooms						
Small (fewer than 50 people)	Average	Medium	35 [40]	60 [65]*	≤0.5 [≤0.6]	
Large (more than 50 people)	Average	Medium	35 [40]	60 [65]*	≤0.5 [≤0.6]	
Teaching spaces specifically for students Special Educational Needs	Average	Low	30 [35]	55 [60]	≤0.4 averaged from 125Hz to 2KHz octave band centre frequencies and <0.6s in any octave band centre frequency in this range [≤0.4]	
Study room (individual study, withdrawal, remedial work, teacher preparation)	Low	Medium	40 [45]	60 [65]*	≤0.8 [≤1.0]	
Libraries						
Quiet study areas	Low	Medium	40 [45]	60 [65]*	≤1.0 [≤1.2]*	
Resource areas	Average	Medium	40 [45]	60 [65]*	≤1.0 [≤1.2]*	
Science laboratories	Average	Medium	40 [45]	60 [65]	≤0.8 [≤1.0]	
Drama studios	High	Low	35 [40]	60 [65]	≤1.0 [≤1.0]	
Design and Technology						
Resistant Materials, CAD/CAM areas	High	High	40 [45]	60 [65]	≤0.8 [≤1.0]	
Electronics/control, textiles, food, graphics, design/resource areas, ICT rooms, art	Average	Medium	40 [45]	60 [65]	≤0.8 [≤1.0]	
Assembly halls, multi-purpose halls	High	Low	35 [40]	60 [65]	0.8 - 1.2 [0.8 - 1.2]	
Atria, circulation spaces.	Average	Medium	45 [45]	65 [65]	≤1.5 [≤2.0]	
Sports hall	High	Medium	40 [45]	60 [65]	≤2.0 [≤2.0]	
Sports hall	High	Medium	40 [45]	60 [65]	≤2.0 [≤2.0]	
Dance studio	High	Medium	40 [45]	60 [65]	≤1.2 [≤1.5]	
Gymnasium/Activity studio	High	Medium	40 [45]	60 [65]	≤1.5 [≤2.0]	
Swimming pool	High	High	50 [50]	65 [65]	≤2.0 [≤2.0]	
Meeting rooms, Interviewing / counselling rooms	Low	Low	40 [45]	60 [65]	≤0.8 [≤0.8]	
Dining Rooms	High	Medium	45 [45]	65 [65]	≤1.0 [≤1.5]	
Administration and ancillary spaces (for guidance only - non mandatory)	Kitchens	High	High	50 [50]	65 [65]	≤1.5 [≤2.0]
	Offices, medical rooms, staff rooms	Low	Medium	45 [45]	65 [65]	≤1.0 [≤1.0]
	Corridors, stairwells, Coats and locker areas	Average	Medium	45 [45]	65 [65]	See Document E Section 7
	Changing areas	High	High	50 [50]	65 [65]	≤1.5 [≤2.0]
	Toilets	Average	Medium	50 [50]	65 [65]	≤1.5 [≤2.0]

* Please note that where the star has been used on figures, this is what we believe the figure he EFA document intended to indicate. The document does not make this clear, and requirements should always be confirmed with the relevant Assessor or Building Control prior to design. Please note figures in brackets are for conversions and refurbishments of existing buildings.

Minimum DnT,w	Activity noise in source room (see Table 1) (dB)				
		Low	Average	High	Very high
Noise tolerance in receiving room	High	Not applicable	35 [30]	45 [35]	50 [45]
	Medium	40 [30]	45 [40]	50 [45]	55 [45]
	Low	45 [35]	50 [40]	55 [50]	55 [50]