



ACOUSTIC PERFORMANCE OF BRICKWORK



Except in very special situations, mass is still the best defence against noise penetration. One of the main advantages of brickwork is an ability to provide such mass together with structural strength, and so brick walls provide a very good way of insulating against sound. The quality of sound insulation does not vary much from brick type to brick type, and so it is possible to generalise about sound reduction values.

Method of Construction	Average Sound Reduction in dB
110 mm unplastered wall	42
110 mm wall plastered both sides	45
220 mm wall plastered both sides	50
Cavity wall construction	50
330 mm Solid wall	53

The potential value of a good sound barrier is lost if noise can be readily transferred by an alternative route, typical examples of which include:

- Windows which would govern the value of an external wall.
- Lightweight corridor walls, transmitting noise past an insulating cross wall.
- Lightweight roof or flue letting in aircraft and other vehicle noise thereby reducing the value of wall insulation.
- Ceiling or roof voids allowing transmission over the top of a partition wall.

Considerable reduction in sound insulation value occurs even through quite small cracks or openings and typical examples of this would include:

- Cracks around pipes passing through a wall.
- Air bricks or similar openings.