

noise control

The Building Regulations 1991, Document E, for refurbishment work lays down minimum standards for performance of 48dB reduction, or more, for airborne noise, and 65dB reduction, or less, for impact noise. With the introduction of revised standards, there is a requirement to demonstrate that any new installation can meet these requirements.

If an airborne or impact sound insulation test is more than 3dB from the required standard, remedial work must be carried out.

Airborne sound

In this case, the problem is almost exclusively one of insulating the source room so that energy is reflected back into it since airborne sound transmission is a function of surface density.

The use of different materials gives varying results according to the type of building construction and the type of floor. A reduction in the size of floor area and an increase in the mass of the supporting walls will reduce transmitted airborne noise, as will the rigidity of construction between the floor and supporting walls.

Impact sound

In this case, insulation performance depends on a combination of floor density and the type of floor covering applied to it. Tests indicate that increasing the density of the floor construction has little effect on impact sound transmission, whereas having a floating wood floor, of suitable material resilience and thickness, produces dramatically improved results.