Sound Insulation Methods

In recent years many proprietary sound insulation systems have been marketed. All the systems are essentially similar in technology.

Floors

Floor treatments have an absorption layer laid on the existing floor, with high density boarding on top creating the new floor. The depth of the absorption layer and boarding usually governs the amount of sound insulation provided.

Special edge treatments create a seal between the new floor and the skirting boards.

Some systems recommend the installation of mineral wool fibre in the void between the joists (i.e. between your neighbours ceiling and your existing floor). The systems are generally 15mm to 50mm thick so room height will be lost.

To reduce flanking transmission it is recommended that the whole floor of the property is treated. Door clearances will need to be checked and sockets may need to be repositioned.

Please read our leaflet on Noise Associated with Laminate Flooring if you are considering installing such flooring.

Ceilings

Sound insulation systems to treat ceilings are usually about 115mm deep so generally require a relatively high ceiling height to make them viable. They provide a new ceiling acoustically independent of the existing one with an absorption layer in between.

It is important that no holes are made in the new ceiling that would compromise its acoustic integrity.

Walls

A new wall, acoustically independent of the existing one is provided. It is usual for the system to be about 60mm deep, so the reduction in room width will be a consideration. Wall sockets should be surface mounted as not to affect the new walls acoustic integrity.

Instead of proprietary systems it is possible to construct DIY sound insulation systems. These rely on the same principles of constructing a new floor, ceiling or wall acoustically independent of the existing one but using traditional building techniques. While DIY systems are generally cheaper, proprietary systems benefit from having a known acoustic performance (provided manufacturer's installation instructions are followed). For DIY installations you should have a basic understanding of noise control and be meticulous in your work to ensure optimum performance is achieved from the materials.

Sound insulation works can be costly and disruptive. The type of system installed will often be a compromise between cost, height/space restrictions and the degree of insulation required. Before commissioning works you will need to have a realistic approach to the cost/benefit of installation, balanced against the degree of disturbance you are experiencing from your neighbours.