

Good Building Guide

Sound insulation in dwellings

Part 1: An introduction

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This Good Building Guide provides practical guidance for designers, construction managers and operatives, and property developers on understanding the requirements of national building regulations concerning the provision of sound insulation in dwellings. Part 1 explains the importance of providing good sound insulation between and within homes. It describes:

- the problems associated with neighbour noise
- how to satisfy the current regulatory requirements in England and Wales
- methods of measuring sound transmission in dwellings.

Considering the requirements relating to sound insulation at an early stage of any development reduces the likelihood of costly remediation measures and delays at completion.

Parts 2 and 3 give advice on providing the correct level of sound insulation when constructing new dwellings and converting a building into multiple dwellings.

The noise problem

Unwelcome noise in homes, specifically sound transmission between homes, is a major problem in the UK which requires serious consideration from both architects and builders. Noise nuisance can be a serious cause of stress and, if not remedied, can affect health and wellbeing as well as influencing people's enjoyment of buildings. People have different attitudes to noise; building occupants may be unaware that the noise they are making can be heard by their neighbours and regarded as a nuisance.

These problems can be solved by encouraging neighbours to modify their behaviour or by improving the level of sound insulation. As the noise climate within our homes mirrors



Figure 1: Terraced houses are required to control sound transmission between adjacent properties and within each property

changes in the way we live, more stringently applied national building regulations⁽¹⁻⁴⁾ and enhanced specifications (eg the Code for Sustainable Homes (CSH)⁽⁵⁾) have been introduced to control the transfer of neighbour noise.

Incorrect design of walls and floors, use of the wrong materials and poor workmanship can result in increased sound transmission, non-compliance with national building regulations and increased complaints from occupants. Failure to comply with the regulatory requirements leads to increased costs due to remediation works, delays to handover, continued involvement after practical completion and potential increases in future building warranty premiums.

Part 1 of this Good Building Guide, together with **Parts 2** and **3**, offers practical guidance on providing the correct level of sound insulation when constructing new dwellings or converting a building into multiple dwellings.