

Good Building Guide

Sound insulation in dwellings

Part 3: Material change of use (conversions)

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This three-part Good Building Guide provides practical guidance for designers, construction managers, construction operatives and property developers on understanding the requirements of national building regulations concerning the provision of sound insulation in dwellings.

The aim of Part 3 is to give practical advice and outline guidance on appropriate constructions that will provide a reasonable level of sound insulation between dwellings formed by a material change of use (conversions). Where new dwellings are formed in a building as a result of a material change of use, they are subject to routine pre-completion testing to ensure that they comply with the minimum performance targets in the appropriate national building regulations and any site-specific requirements.

The regulatory requirements and more general information are provided in Part 1 of this Good Building Guide^[1]. Part 2 explains how to provide a reasonable level of sound insulation between new dwellings^[2].

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 our health and wellbeing as well as influencing our enjoyment of buildings. People have different attitudes to noise; they may not be aware that the noise they are making can be heard by their neighbour and is 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 is affected by changes in the way we live, more stringently applied regulations have been introduced to control the transfer of neighbour noise:



Figure 1: Material change of use of a non-domestic building to a residential apartment block

- England Approved Document E (AD E), 2003 (amended 2004, 2010 and 2015)^[3]
- Wales Approved Document E (AD E), 2003 (amended 2004 and 2010)^[4]
- Scotland Technical Handbook, Section 5, 2013^[5]
- Northern Ireland Technical Booklet G, 2012^[6]

Enhanced specifications (such as BREEAM UK domestic refurbishment^[7]) have also been introduced.

When considering sound insulation, it is the construction of the walls and floors that separate dwellings (separating walls and separating floors) that is most important. Consideration of the sound insulation of internal partitions was discussed in Part 1 of this *Good Building Guide*^[1]. Incorrect design of walls and