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Good Building Guide

Domestic floors

Part 1: Construction, insulation and damp proofing

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This Good Building Guide (Parts 1–5) considers the construction of new and replacement domestic floors and their repair.

Part 1 describes ground floor construction in new buildings and in refurbishment work where floors are being replaced. It is concerned mainly with domestic buildings, but some recommendations apply equally to other types of building. Parts 2–5[1, 2, 3, 4] explain how to assess different types of floor construction for replacement or repair, and how to repair them.

This guide is of interest to designers, building surveyors and builders. This update to Part 1 replaces the guidance published in 1997.

Introduction

This Good Building Guide describes the types of ground floors commonly used in domestic properties: ground-supported concrete slab floors, suspended concrete floors (including beam and block) and suspended timber floors. It provides information on how to construct each type of floor and gives advice on the positioning of damp-proof membranes (DPMs) and thermal insulation. In particular, it gives details of:

- damp proofing
- vapour-control layers
- drying times for concrete bases and screeds
- positions for thermal insulation.

This guide does not deal with:

- structural requirements
- specific values or thicknesses of thermal insulation (because they depend on individual designs)
- requirements for the exclusion of radon and methane[5]
- heated screeds.

The reader is advised to consult a chartered surveyor, structural engineer or similarly qualified person if any of the above requirements are specified.

Figure 1: A domestic reinforced in situ concrete floor slab being poured

Ground-supported concrete slabs

Traditionally the most common type of construction for house floors in England and Wales, and still widely used on smaller projects, is a concrete slab, not less than 100 mm thick, laid directly on the ground. The concrete slab can be:

- reinforced or unreinforced
- directly finished to receive flooring
- topped with a bonded, unbonded or floating screed
- covered by wood-based sheets, such as chipboard or plywood
- covered by a flooring bedded directly to it, such as ceramic tiles.

Thermal insulation

Insulation can be incorporated within the floor. It can be glass fibre or foamed or expanded plastic sheets of appropriate compressive strength. Insulation can be positioned:

- above the structure
- below the structure
- at the edge of the structure.