



R&D Technical Summary W5C-013/3/1/TS

Reducing the impacts of flooding – Extemporary measures for local flood protection

Background to R&D project

The Easter Floods of 1998 and Autumn Floods of 2000 highlighted the need for better use of local flood protection measures to mitigate flood damage to property, rather than the reliance only on traditional flood defences. The objective of this project was to identify quick and practical methods of improving the resistance of houses to flooding using readily available materials. The project was commissioned in collaboration with Construction Industry Research and Information Association (CIRIA) and the Association of British Insurers (ABI).

Results of R&D project

The study considered the key impacts on buildings through a literature review, consultation with those affected by flooding and the examination of case studies. The main routes of floodwater ingress into buildings are described and possible extemporary solutions identified. The study also examined possible materials available in and around a building and how they might be utilized. It considered what measures should be a priority and what may be safely and realistically applied within the likely time available. As part of this review, factors such as likely flood height and duration, along with peoples' physical capabilities have also been addressed.

This information was reported in the CIRIA Special Publication and key points were summarised in the booklet.

R&D Outputs and their Use

The booklet is aimed at homeowners and residents. It provides practical advice in simple measures they can take to reduce the damage of floodwater to their home and its contents. Further detail is given on three ways of creating a temporary barrier to floodwater (sandbags; solid floors; wrapping a property) and on home improvements (such as solid flooring and water-resistant finishes).

The CIRIA Special Publication covers the technical information drawn together by the project and is intended principally for professionals (e.g. insurers, developers, manufacturers) and householders seeking detailed technical information. It provides details of techniques that may be used to reduce the impacts of flooding using readily available materials and skills. Chapters cover a literature review, impacts of flooding, extemporary measures and prioritisation of actions. A major list of references is provided.

This R&D Technical Summary relates to R&D Project W5C-013/3 and the following R&D output:

- **CIRIA Special Publication SP155: Reducing the impact of flooding – Extemporary measures** (ISBN: 0 86017 806 4). (Environment Agency R&D Technical Report W5C-013/3/TR) Published by CIRIA 2001.
- **CIRIA/ Environment Agency: Damage limitation – How to make your home flood resistant** Environment Agency reference: English version 1201/BG1U, Welsh version 1201/BG1Y, Published 2001

Publication Status: Internal: Released to Regions External: Released to Public Domain

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Internally, paper copies of this R&D Technical Report are available on loan from Regional Information Centres. The report can also be downloaded free of charge from the CIRIA website at: www.ciria.org.uk/flooding. There are also links to the CIRIA website and report from the joint Environment Agency/DEFRA R&D Outputs webpages at: www.environment-agency.gov.uk/subjects/flood/. Additionally copies of the CIRIA Special Publication SP155 are available for purchase in hard copy for £12 from CIRIA, 6 Storey's Gate, Westminster, London, SW1P 3AU.

Within the Environment Agency the 'Damage limitation' booklet is available from Regional PR offices. Public access to the booklet 'Damage limitation' is available through the Environment Agency's *Floodline* (Tel: 0845 988 1188) and through the Floodline webpage which can be accessed at www.environment-agency.gov.uk/subjects/flood

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