Letting it in

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Water can?t always be kept out of buildings in the event of a flood, but repairable approaches offer a way forward. Jessica Lamond considers recent research on such strategies

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Although people at risk from flooding would prefer to keep water out of their buildings this is not always practical or cost-effective, and the ease of doing so will depend on the type of flooding and the way the building is constructed, among other factors.

Flood-repairable approaches, also referred to as recoverable approaches, water-entry approaches or resilience, take this into account, and attempt to limit damage or speed up recovery in the event that water enters a property.

The approaches can be designed to keep water away from vulnerable elements ? for instance, electrics ? or to incorporate waterproof or water-resistant materials. Alternatively, materials that can get wet but that retain their integrity and dry quickly can be chosen.

The advent of flood-barrier technology made it possible to think about excluding water; repairable approaches have therefore been regarded as a last resort, and more expensive than buying a couple of door guards or smart airbricks, which seal themselves when flooded to prevent water from entering.

However, there is a growing recognition that water-entry strategies might need to be considered more often, as gates are overtopped and groundwater seeps through and beneath supposedly water-resistant technology. In addition, when reinstatement or any other work is being carried out on a property, cost-neutral or low-cost modifications could be included as part of the scheme.

Resilience research

In July 2016, a Department for Environment, Food and Rural Affairs (DEFRA) research project examined the technical, social and behavioural aspects of supporting low-cost, flood-repairable approaches. It identified more than 130 different measures to improve resilience, including:

- the use of tiling and loose rugs instead of fitted carpets;
- raising of sockets and other electrics with isolation of vulnerable circuits;
- cement render or lime plaster for walls;
- painting or varnishing wood, or using good-quality, flood-resilient hardwood;
- closed-cell insulation rather than loose fill in cavities;
- simple technological fixes, such as rising hinges on internal doors and cabinets that allow easy removal when a flood warning is received;
- use of removable drawers in kitchens; and
- membranes that allow reoccupation even before the building fabric is totally dried

out.

Although many of these are well within the expertise of a property owner or occupier to implement, the expertise of the surveyor can ensure that the measures are consistent with building type, and that they comply with regulations.

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Consultation with professionals and with flooded households revealed some of the common barriers that prevent such changes being made during flood reinstatement. Prominent among these barriers are stipulations of ?no betterment? by insurance providers, and the lack of a mandate for surveyors to recommend and implement measures.

Initiatives such as the recent repair and renew grants and the advent of Flood Re could start to shift these barriers. Inevitably, this will require a change in practice: improved protocols and incentives are needed, which include clarifying the autonomy of different actors in the repair process and their responsibility for recommending adoption of repairable measures.

Checklist

To explore methods that will help surveyors giving advice during the reinstatement process, the DEFRA project designed and trialled a simple checklist. When used during the discussions around repair strategy in the aftermath of the 2015?16 winter floods, this enabled consideration of flood-repairable measures.

While a few of the households accepted the recommendations, many did not because other barriers were still present. Resilience to flooding is a difficult concept to grasp because it requires an acceptance that water might enter a property, whether a home or a business, and changes in the living space that might feel abnormal.

There are also concerns about the appearance and effectiveness of recommended measures. Improved confidence in appropriate approaches could perhaps be fostered by providing households and small businesses with exemplars and factsheets.

The research highlighted that other windows of opportunity, outside the recovery period, could also be targeted to support the uptake of low-cost flood-repairable approaches. Insurance renewal and property transfer represent opportunities to raise awareness of measures at very low cost with minimal training of professionals, and may directly prompt action.

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Further information

- Related competencies include Design and specification , Insurance , Sustainability

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