

## **Enhancing the evidence base for property flood resilience**

### **Installing the right combination of flood resilience measures at reinstatement could be more cost-beneficial than previously thought.**

The pilot study reviewed in detail a sample of 702 home insurance claims for flooding from two insurers over the years 2013 – 2019<sup>i</sup> to enhance the evidence base around key factors affecting cost and duration of flood damage claims.

#### **KEY FINDINGS**

- **Low-cost recoverable packages (designed to limit damage once water enters a home, such as resilient plaster and floors) could be appropriate for a large proportion of flooded homes. Packages that do not protect kitchens, windows and doors can be effective as these were not replaced in the majority of sampled claims.**
- **Low-cost passive resistance packages (designed to limit the water entering home, such as self-closing airbricks, non-return valves, sealing brickwork and flood doors) could also be considered for a large proportion of properties because depth of flooding is below 300mm in the majority of sampled claims.**
- **Damage from deep and prolonged flooding can cost nine times as much to repair compared to shallow, shorter-duration flooding. Therefore, higher cost measures may be cost-beneficial for severely flooded homes.**
- **A combination of recoverable and resistant measures can be considered for homes subject to deep and prolonged flooding because limiting water depth and duration (where possible) could avoid the high cost for future floods as well as reducing return to home time.**
- **Installing a resilient kitchen may be beneficial where a kitchen is being replaced after flooding, because kitchens cost more than previously thought, and families are more likely to be relocated if their kitchen needs replacing.**

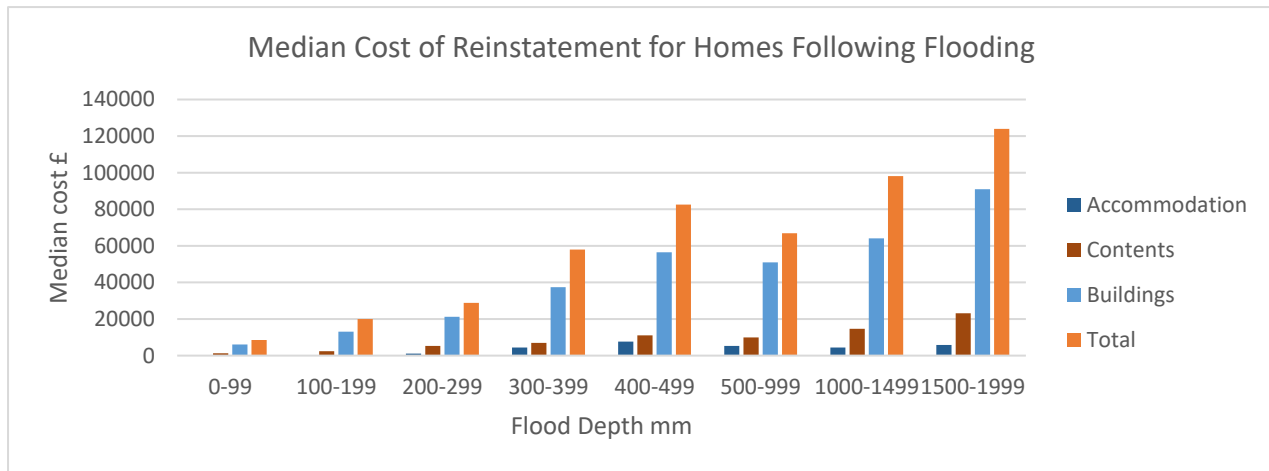
#### **More details of the findings**

The majority of claims (78%) in the sample were due to flood depths lower than 500mm and 66% had a flood duration of less than 24 hours. 58% had both low depth and short duration. However, there were sufficient claims from more severely flooded homes that it was sensible to calculate average claims for different depths and durations of flooding<sup>ii</sup>.

Damage from deeper flooding costs more and takes longer to repair. Floods above 300mm were six times more expensive than those below 300mm. Flood duration for floods deeper than 300mm doubled, and drying times increased by a third.

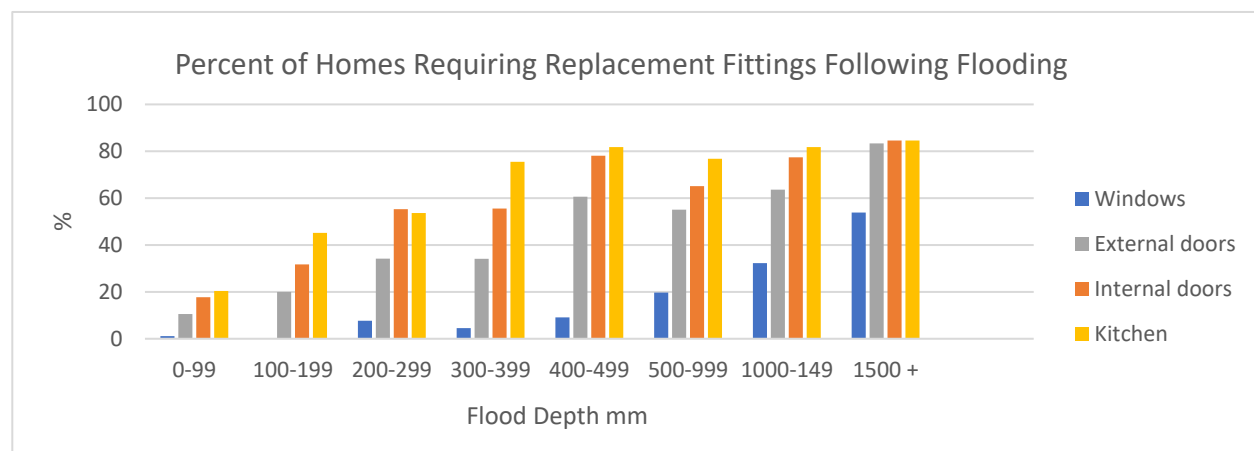
Damage from longer duration flooding also costs more and takes longer to repair. Floods lasting more than 24 hours cost on average 2.5 times more to repair than floods lasting less than a day. Claims for floods lasting more than 24 hours also took an extra 100 days to process on average (2/3 extra time).

River flooding claims in this sample cost three times as much as surface water flooding claims in part because river flooding is usually characterised by higher depth and duration.



Most homes were reinstated without specific mention of resilience. For the 31 claims where quotes were given, the median quote provided to claimants for packages of resilience measures was £5,200. These quotes included some recoverable, some resistant and some combined packages of measures. Average quotes for resistant and recoverable packages were the same.

This is the first set of data to include details of the incidence of replacement of kitchens, windows, internal and external doors. Windows were replaced in only 8% of claims, external doors in 28%, internal doors in 38%, and kitchens in 42% of claims. At low depths of flooding, the proportions of required replacements were much lower as shown in the graph below.



This is important because in previous estimates of the cost benefit of resilience it has been assumed that resilience packages would include all of these items.

On average, when kitchens are replaced, this accounts for about one quarter of the total building works. Further, replacement kitchens were found to cost twice as much, on average, as has been assumed in previous studies. This means that the benefit of making a kitchen more resilient when it is being reinstated is higher than previously thought.

<sup>i</sup> Sample is not representative of all claims and the average cost of claims is high in this sample because of the severity of the floods over the period studied.

<sup>ii</sup> Costs are not adjusted for inflation. Median values are presented unless stated otherwise.

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