

The Case for Resilient Repair

is it a “no regrets” solution?

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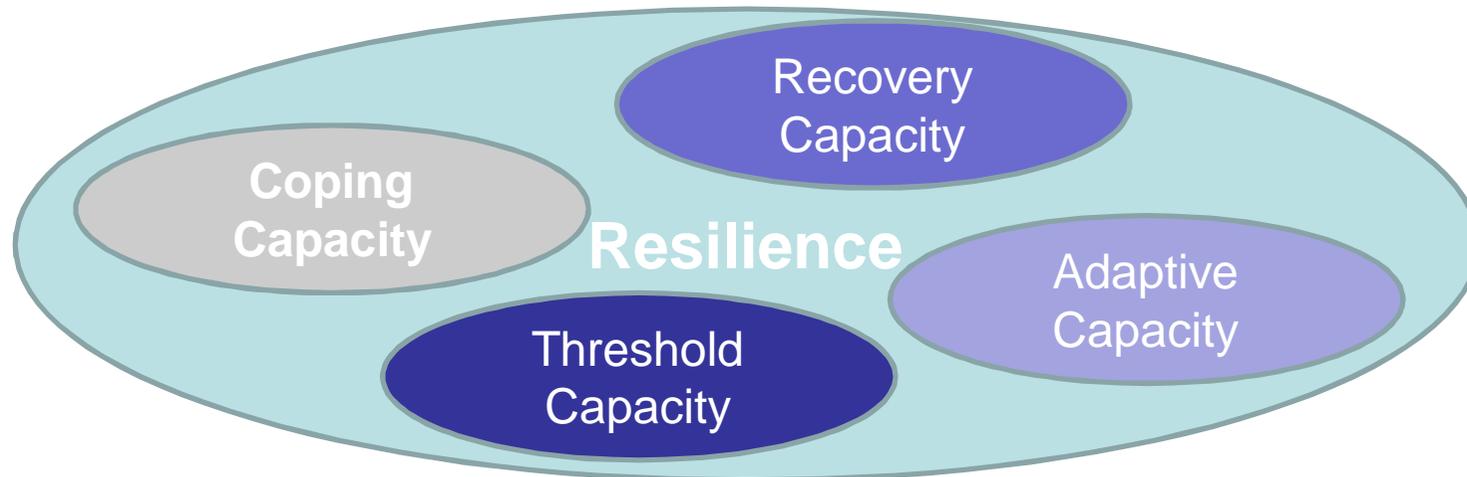
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Content

- What is resilient repair?
- Concepts of resilience and “no regrets”
- Evidence from new research
- Implications in the light of current events

Concepts of Resilience

Resilient repair fits the concepts of “resilience”



Resilience encompasses the four capacities

Resilience also involves the ability to transform and improve on the past

Concepts of “No Regrets”

- Zero cost
- Low cost
- High benefit cost ratio
- Cost benefit does not depend on future scenario
- Fails gracefully

Does resilient repair fit the concept of “no regrets?”

Low cost measures

- Cement sand render
- Raising electrical socket above flood line
- Raising gas meter above flood line
- Plastic skirting
- Air brick cover
- Non return valve

New research on costs and benefits

- Using data from the 2007 summer flood event
- Survey of homeowners
- Real damage data
- Realistic costing of resilience package
- Detailed breakdown of benefits

New research on costs and benefits

- **Cost**

- **Flood resilient package**

- Cement sand render
- Concrete floor
- Electrics socket well above likely flood level
- Plastic / stainless steel kitchen units
- Floor tile finishes
- UPVC cladding instead of plasterboard

- **Benefit**

- **Tangible Benefits**

- Reduce damage/claim
- Reduce extra expenses such as increase phone bills

- **Intangible Benefits**

- Reduction in flood related health problems
- Reduction / elimination of stress
- Reduction in worrying about future flooding

Findings

- Intangible impacts highly significant to people
- Stress of the flood event itself highest rank
- Long term financial worries rank highly too
- Intangible benefit estimated as £653 per household per year
- The additional cost of resilient reinstatement ranges from £12k to £29k
- Higher cost benefit than previously reported (40/50 year)

Findings

A major outcome of the study has been the development of a new **decision support look up table** to help in making decision on the cost benefit of measures



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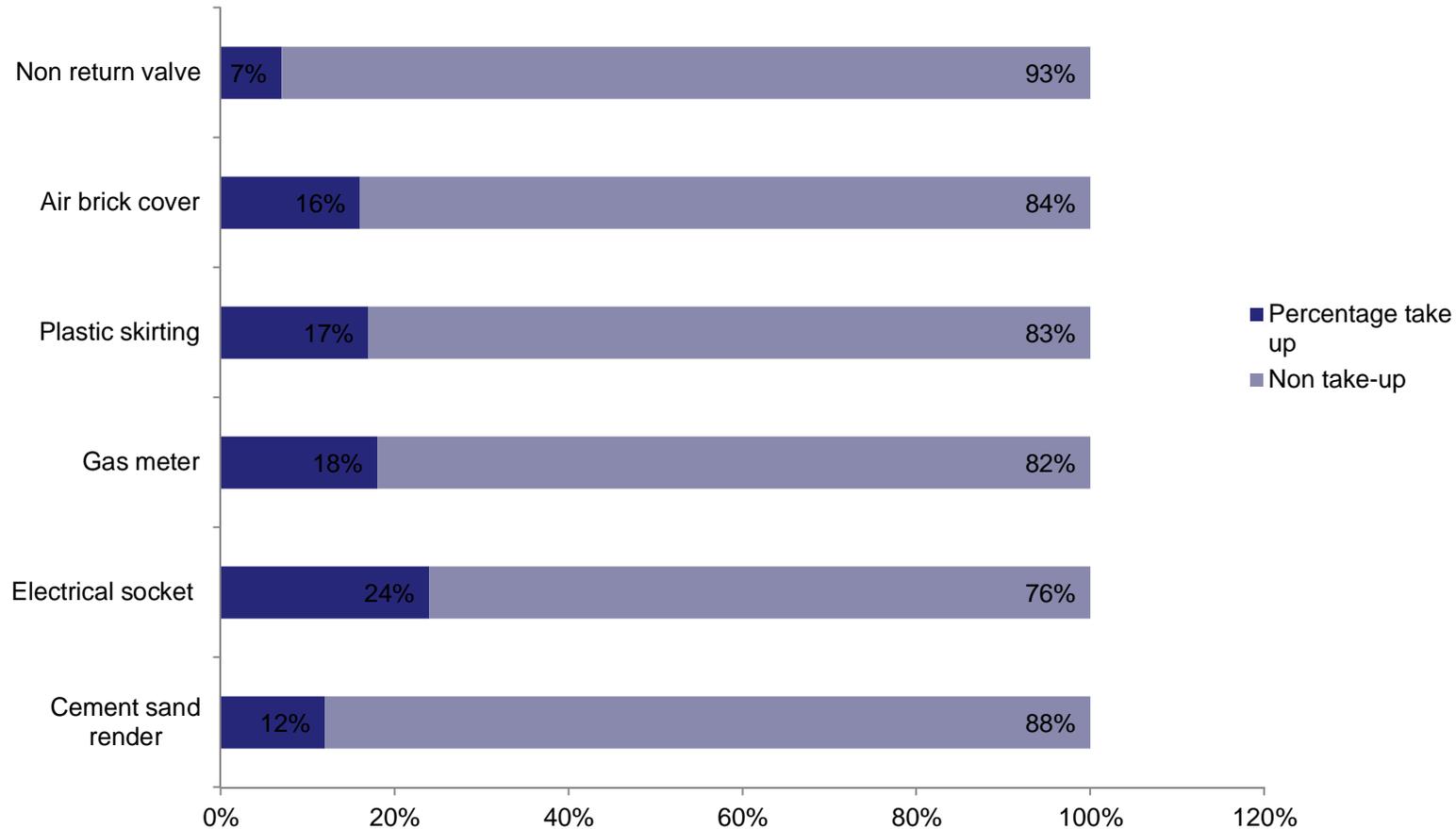
Findings: Resilient measures

Floor construction	Flood return period (Flood probability (p))	Detached					Semi-detached				
		Flood depths (mm)					Flood depths (mm)				
		0-150	151-300	301-500	501-1000	Over 1000	0-150	151-300	301-500	501-1000	Over 1000
Concrete solid floor	5 year (0.20)	6.4	5.9	6.1	6.4	6.6	6.8	7.0	7.8	8.7	9.9
	10 year (0.10)	3.4	3.2	3.2	3.3	3.4	3.6	3.4	3.4	3.2	3.5
	20 year (0.05)	2.0	1.8	1.8	1.8	1.8	2.1	1.9	1.9	1.8	1.9
	25 year (0.04)	1.7	1.5	1.5	1.5	1.5	1.8	1.6	1.6	1.5	1.6
	40 year (0.025)	1.3	1.1	1.1	1.0	1.1	1.3	1.2	1.2	1.1	1.1
	50 year (0.02)	1.1	1.0	0.9	0.9	0.9	1.1	1.0	1.0	0.9	1.0
Suspended Timber floor	5 year (0.20)	6.4	5.6	6.1	6.3	6.5	6.7	5.8	6.0	6.0	6.0
	10 year (0.10)	3.4	3.0	3.2	3.3	3.4	3.6	3.1	3.2	3.1	3.2
	20 year (0.05)	2.0	1.7	1.8	1.8	1.8	2.0	1.7	1.8	1.7	1.7
	25 year (0.04)	1.7	1.4	1.5	1.5	1.5	1.7	1.5	1.5	1.4	1.4
	40 year (0.025)	1.2	1.0	1.0	1.0	1.0	1.2	1.1	1.1	1.0	1.0
	50 year (0.02)	1.1	0.9	0.9	0.9	0.9	1.1	0.9	0.9	0.9	0.9

Is it a no regrets solution

- Is resilient repair a “no regrets” solution?
- It would appear so
- BUT.....

Take up of Protection measures



The problem of perspectives

- Who benefits and who pays
- Competitive pressures on insurers
- Lack of information
- Uncertainty of payback
- Timing issues
- Worry about stigma

Does flood re represent an opportunity to force resilient reinstatement?

- Who benefits and who pays
- Competitive pressures on insurers
- Lack of information
- Uncertainty of payback
- Timing issues
- Worry about stigma

Summary

- Resilient reinstatement has a lot of the features of “no regrets” on a societal level
- New research has shed new light on intangible impacts
- New research suggests resilient reinstatement even more cost beneficial
- Flood re could be an opportunity
- Still more work needed around information