



Department
for Environment
Food & Rural Affairs

Property Flood Resilience

Reducing damage and reducing disruption



Forestry Commission
England



Environment
Agency

Context

- In England, around 5.5 million (1 in 6) homes are at risk of flooding. Injury, death, as well as damage to property, infrastructure and the environment can all result from flooding.
- Defra is the Lead Government Department for flood response. We take on this role in response to complex or wide area floods.
- The LGD role involves co-ordinating central government involvement and supporting on the ground action where needed.
- The Environment Agency responds to flooding from rivers and seas. Local authorities deal with surface water and groundwater flooding.

Annex – who does what?

Figure 2

Bodies involved in flood risk management



- National
- Regional
- Local

Note

1 County or unitary local authorities have been designated as lead local flood authorities.

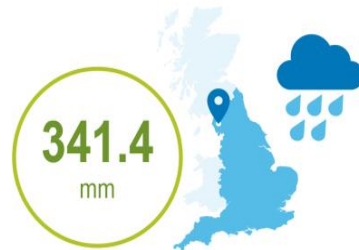
Source: Environment Agency

Winter floods 2015/16

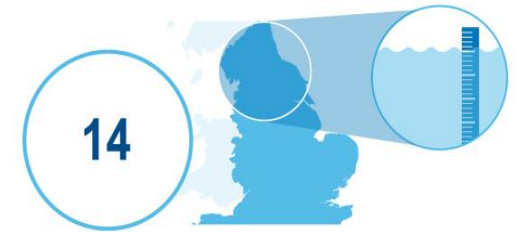
North of England floods: 5 December 2015 to 6 January 2016



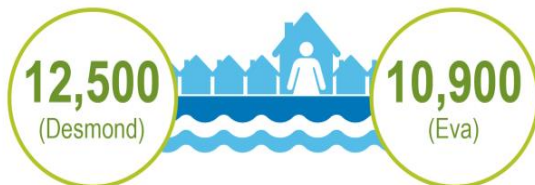
December was the wettest month ever recorded*



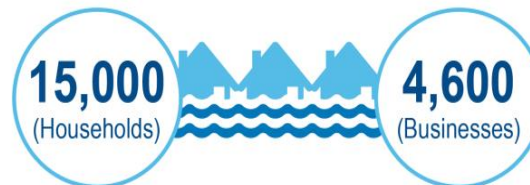
Highest 24 hour rainfall - Honister Pass, Cumbria



Catchments experienced their highest ever river flow



Properties protected during storms Desmond and Eva



Properties flooded**



Communities visited by flood support officers



Severe Flood Warnings issued



Metres of temporary barriers used to protect communities



Flood defence assets needing repair

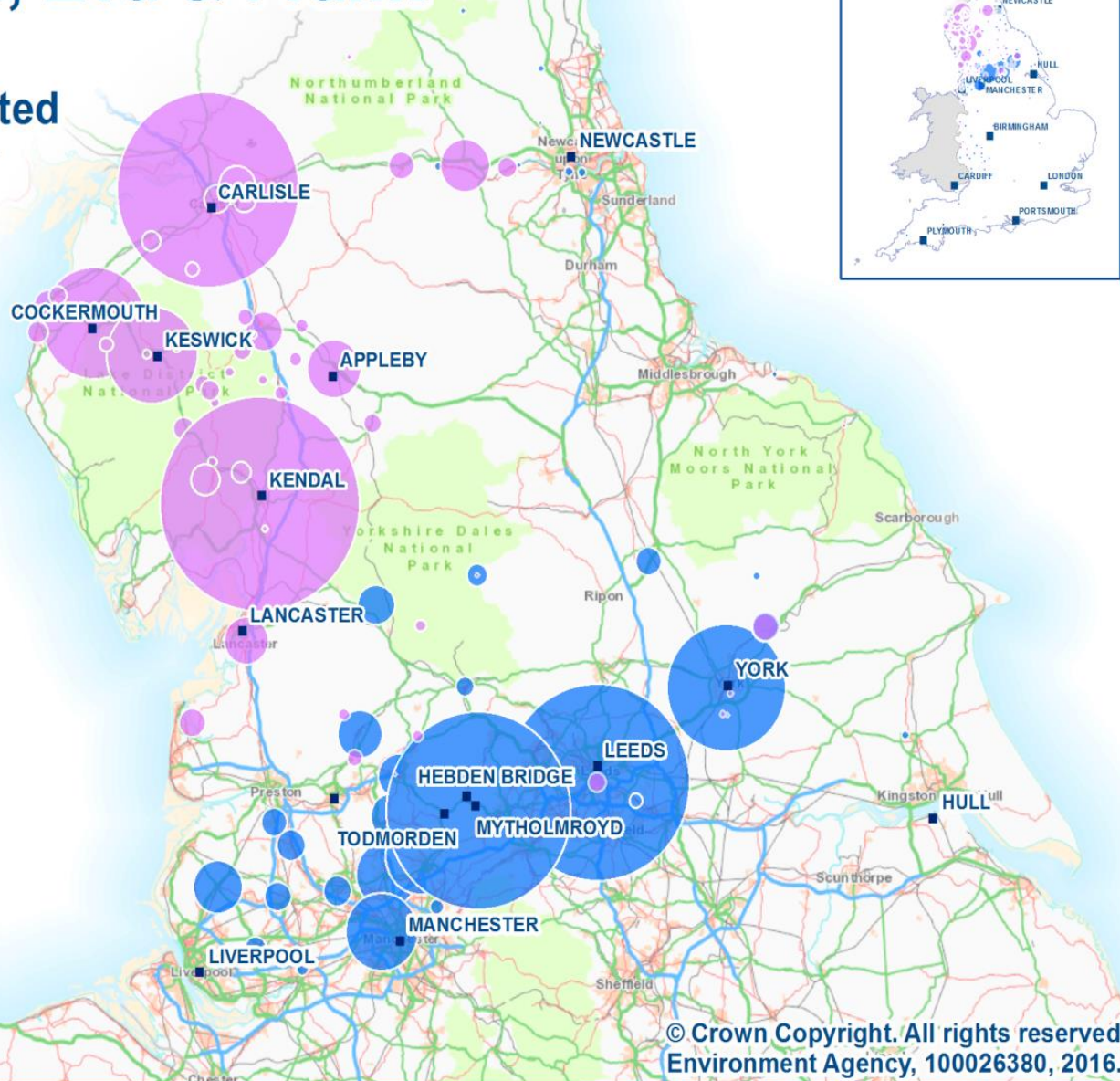
*Met Office data **Department for Communities and Local Government data

Properties flooded in Winter 2015/16 flood events

Storms Desmond, Eva & Frank

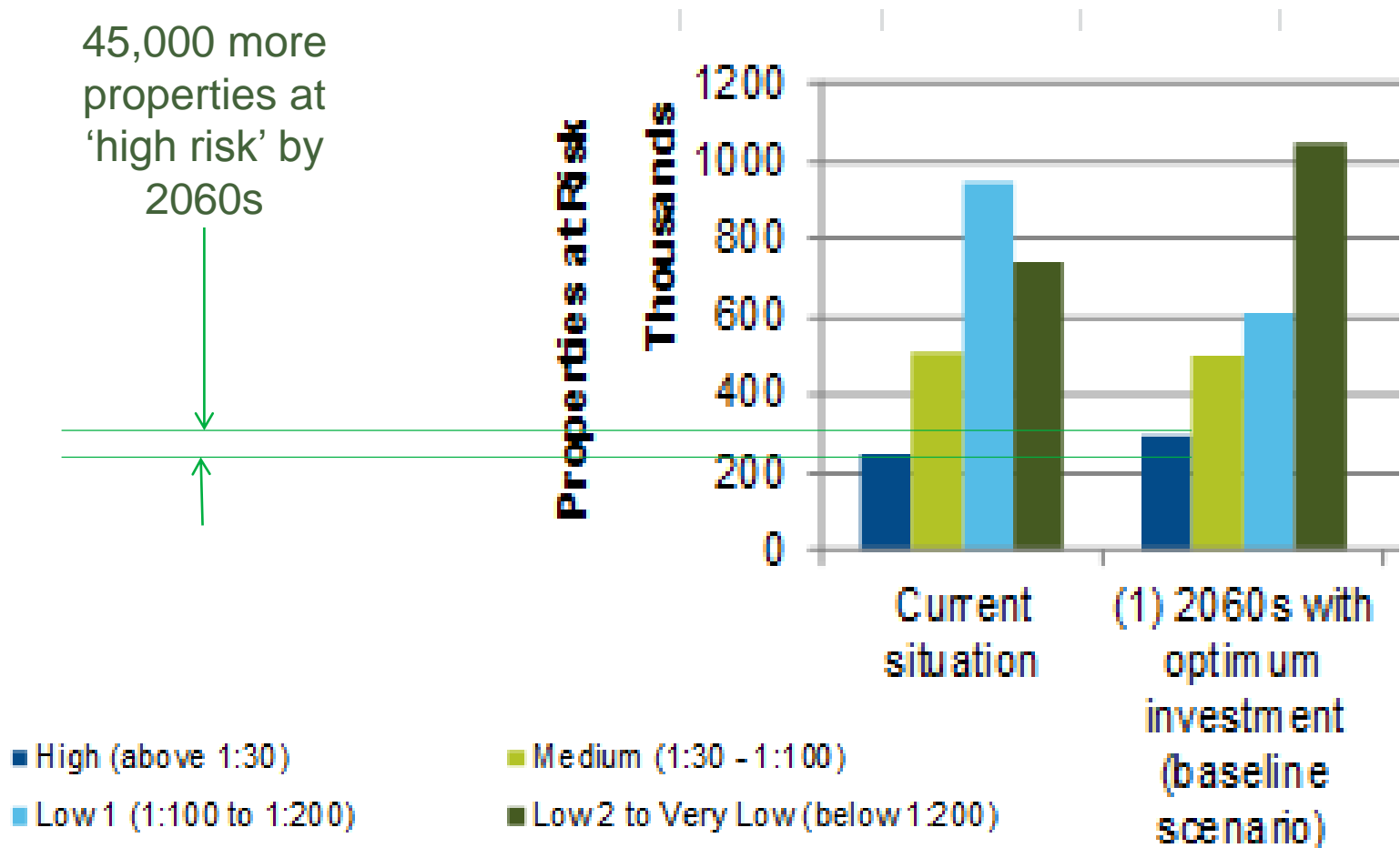
Approximate numbers of properties flooded as reported to the Environment Agency

-  Properties Flooded Storm Desmond
4 - 22 Dec 2015
-  Properties Flooded Storm Eva / Frank
25 Dec 2015 - 7 Jan 2016



Adaptation Challenge

Long Term Investment Strategy - Residual Flood Risk in the 2060s





Department
for Environment
Food & Rural Affairs

Reducing Risk for Property owners

What we do beyond building flood
defences

We have spent over £3 billion on improving flood defences, and capped the cost of flood insurance. We will now go further, building 1,400 new flood defence schemes, to protect 300,000 homes.



£2.3_{bn}

Government investment in new flood defence schemes between 2015-2021. Supplemented by around £600m of funding from partners



300,000 homes

Homes to be better protected by 2021, through now over 1,500 flood defence schemes



£1_{bn}

Spending on flood defence maintenance in this Parliament



£1.3_{bn}

Expected cost of insurance claims from December 2015 floods

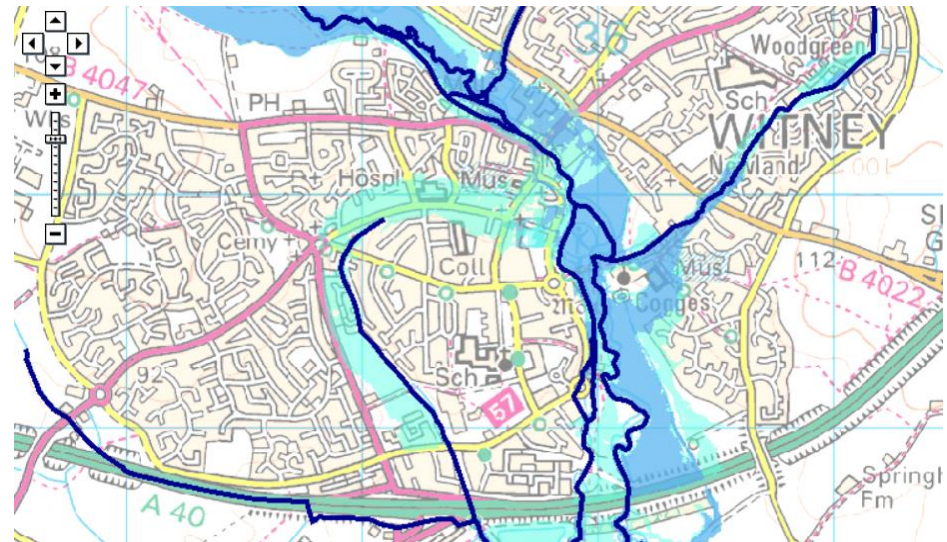


350,000

Households at high risk of flooding able to access affordable insurance through Flood Re

National Flood Resilience Review

- Tested our understanding of the fluvial and coastal flood risk in England;
- Assessed the resilience of key local infrastructure, like electricity substations;
- Identified actions to strengthen our resilience to flooding;
- The evidence and analysis from the review will inform the longer term (post-2021) strategy on flood risk alleviation.



Flood Re

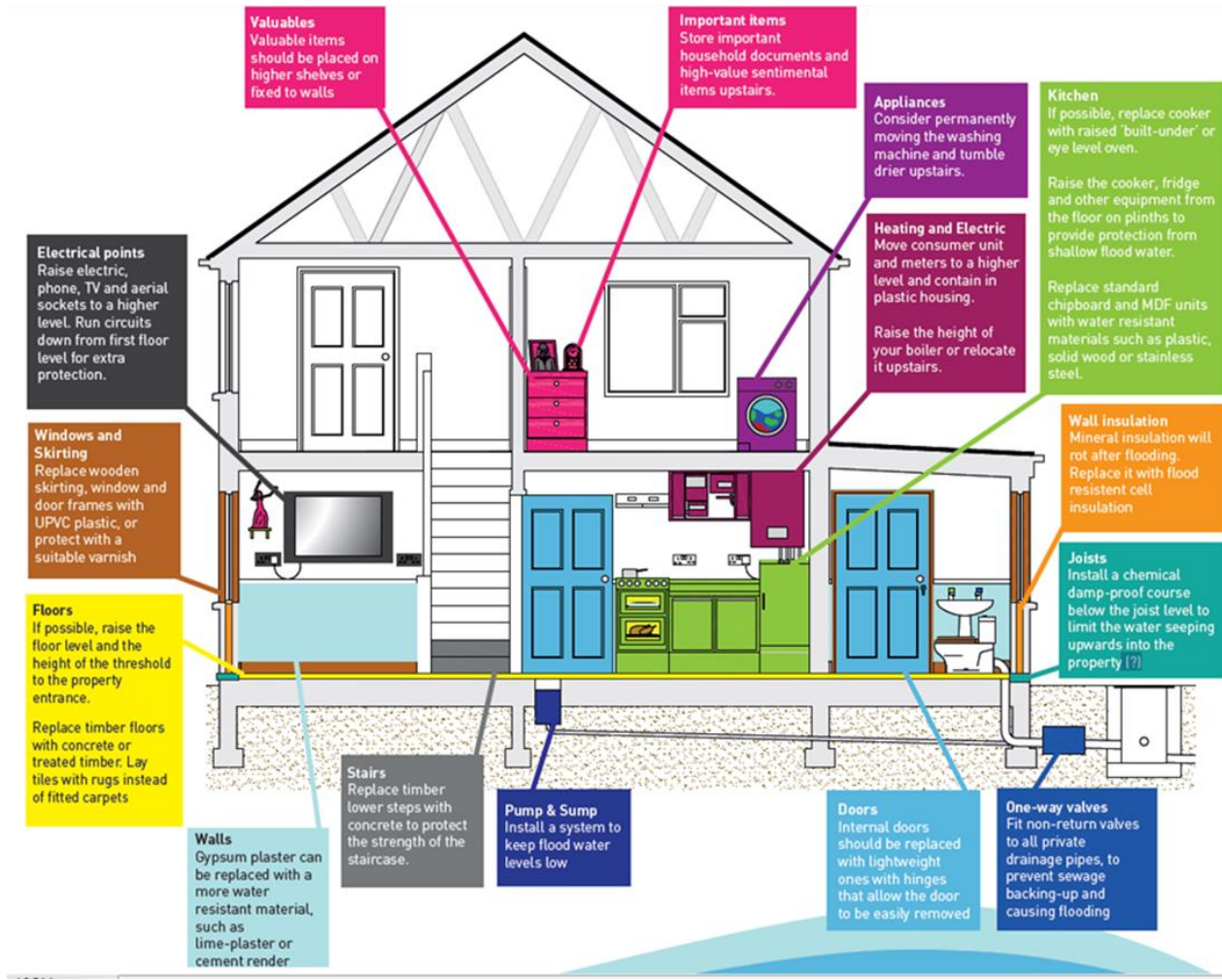


- Flood Re **launched 4 April**. Around 350,000 households could benefit
- An **industry owned and managed**, not for profit, reinsurer. **36 insurers** currently offering Flood Re backed products
- **Premiums start at £210 based on council tax band**, Scheme charges **excesses at £250**
- It **pools the risk of flood claims and uses a levy to subsidise flood insurance** for the 1-2% of households at highest risk of flooding. It targets the subsidy at lower income households
- It **covers domestic properties** and policies only. **Properties built after 1 January 2009 are excluded. Commercial policies are excluded** (it is not applicable to businesses, landlords, leaseholders)
- It is a **transitional measure**, designed to smooth the path to risk reflective prices over 25 years (i.e. avoid sudden price/availability shocks)

Property Level Flood Resilience

- Property Level Resilience (PLR) aims to make people and their property less vulnerable to physical and mental impacts of flooding.
- Actions that can be taken include installing flood doors; flood barriers; air brick covers, pointing or waterproofing brickwork, install non-return valves and moving vulnerable features such as sockets above floor level.
- Properties need a package of measures, some of which prevent water entering a house and others that minimise the impact should water enter the house, speeding up the recovery process.
- Sometimes the water should be let in. For floods over 60cm depth, or of prolonged duration, attempting to keep the water out can cause serious structural damage, owing to the unequal water pressures either side of the walls

Property Flood Resilience



Property Level Resilience is a vital part of this toolkit.

Government Schemes are developed where engineered community schemes are neither cost-effective nor practical for technical reasons.

The approach is also used to deal with residual risk in community schemes, extending the risk reduction benefits from such investments

What does Property Level Resilience look like

2013 Flooding East Peckham Kent

- Flood gates and flood boards slowed the water entry sufficiently to allow furniture to be raised on bricks
- Floors and exterior walls sealed - water did ooze through the floor but was swept into a sump containing a submersible pump. Located in the living room.
- A gully inside the house took water from a drain near the front door straight to the sump.
- Despite 18 inches of floodwater outside, the Property Level Protection measures kept most of the water away, with only an inch inside.
- Neighbours helped clean up and sweep water from house



Bonfield Review

Recommendations

- Further exploration of whether Building Regulations can be better used to encourage flood resistant and resilient construction, with a focus on methods that speed their recovery from flooding.
- A programme of work undertaken by Flood Re to understand how householders and insurers can be supported and potentially incentivised.
- Real world practices to prepare for future flood events, including insurance industries and other professionals involved in recovery,
- Rigorous independent standards with proper certification processes, that enjoy support across the industry,
- An independently run on-line information portal and data warehouse
- Partnership between insurers, surveyors, the legal profession, materials producers and the government, to encourage and enable the take up of flood resilient measures

Low Cost Resilient Adaptation

- Low cost approaches can be used to minimise some of the damage from floodwaters entering the home and increasing their uptake could save money for households, small businesses and their insurers.
- Low cost approaches can be taken individually or as part of a package of measures. Often they are effective on their own and so present very low financial barriers to implementation.
- Aesthetic considerations were highlighted as important and unattractive, however some of the measures were seen to be enhancements.
- The review found 139 measures that could be regarded as flood repairable, over half of these being 'low cost' or 'low additional cost'
- Four packages of measures were costed. Three of the four packages evaluated could result in a pay back after just one subsequent flood.

Our vision...

- The Government's will provide tools, data, accounting frameworks and values for natural capital to help everyone make consistent and robust environmental decisions. The Roundtable would like to see:
- **After a year** - a better national understanding of what property level resilience is, amongst individuals, communities and businesses
- **After two years** – significant progress towards developing the systems and practices within the insurance, building and finance sectors that normalise the uptake of property level resilience within existing activity
- **After 3 to 5 years** – a situation where those at high flood risk have the knowledge, capability and means to adapt their properties in ways that limit the physical damage of flooding on homes and businesses, speeding up their recovery
- **After 5 years** – an environment where it is standard practice for properties at high flood risk to have been made resilient

Water and Flood Risk Management



Robbie Craig

020 80 26 39 63

Robbie.craig@defra.gsi.gov.uk