Flood Insurance
The Past ,The Present and The Future

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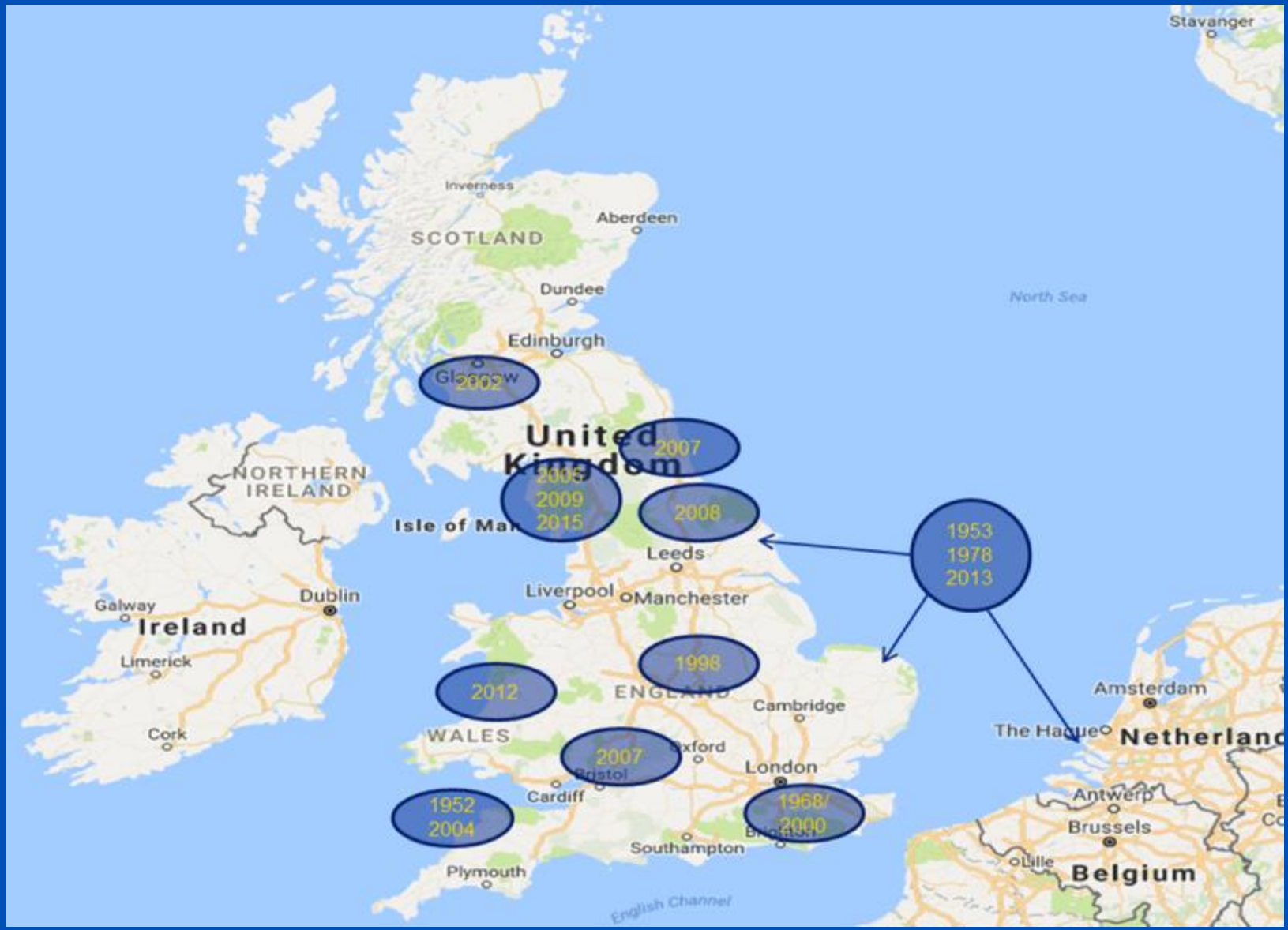
Learning Objectives

- Appreciate the history of flood insurance and how the market has developed over time
- Have an understanding of the factors that are influencing flood risk and the impact of these
- Gain an awareness of the ways in which flood risk can be reduced both at both individual property level and more widely
- Appreciate the challenges we face in delivering sustainability and resilience to flood risk

Major Flood events 1940- 1990

Major Flood events 1940- 2015



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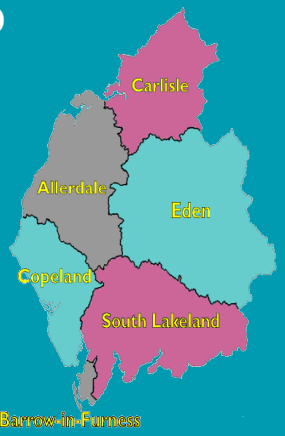
The scale of the floods

How severe was Storm Desmond?

847 billion

litres of rainfall over Cumbria

Enough to cover all of Cumbria with 12cm of water



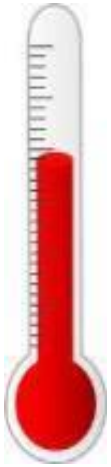
Enough to fill Wembley Stadium almost

212 times over

How extreme was December 2015 for Cumbria?

More than 200% of average December rainfall for NW

Warmest UK December since 1910
8˚ average is more typical for April or May



New UK record of highest rainfall in 24 hours

Risk and severity is increasing…

2007

2009


Same devastation…


2014


2015

How has the Insurance Industry Responded ?

- **Insurance Industry has played a leading role with public authorities in identifying how risks can be managed**
- **Statement of Principles**
- **Flood Re**
- **Development and use of flood modelling tools**
- **Research and Development of Risk Management Solutions**

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How has the Insurance Industry Responded ?

- **Introduced in 2002 in response to the 2000 floods**
- **Applied to domestic properties and small businesses**
- **Commitment from insurers to continue to provide flood cover where**

- **Property was defended to a minimum standard**

  or

- **Where the property would be defended to this level within the next 5 years**

- **Commitments from Government including**
  - **Significant funding for flood defences**
  - **Review of the Planning process**
  - **Provision of flood risk data via the Environment Agency**

- **Expired in 2013 and replaced with an interim solution whilst Flood Re was created**

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23 Years left !

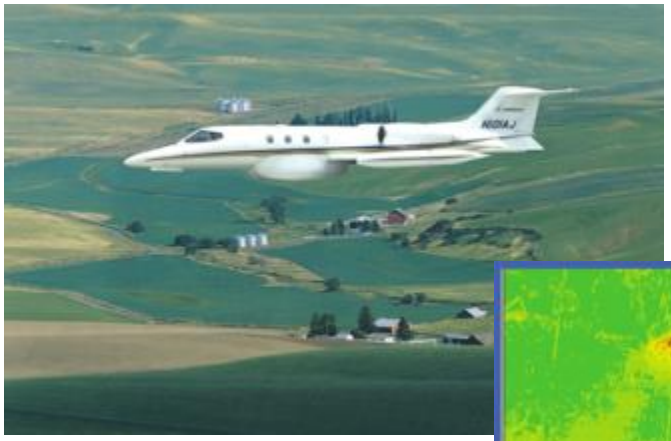
- Enables flood cover to be provided to households at highest risk of flooding
- Increases availability and choice for customers
- Allows insurers to pass the flood risk to Flood Re at a fixed cost
- Premium based on the property's council tax band.
- Flood Re's activities are subsidised by a levy on insurers of £180m
- 350,000 could benefit from Flood Re
- Domestic properties built post 2009 and businesses excluded
- Over then next 23 years the market needs to transition to time risk based pricing

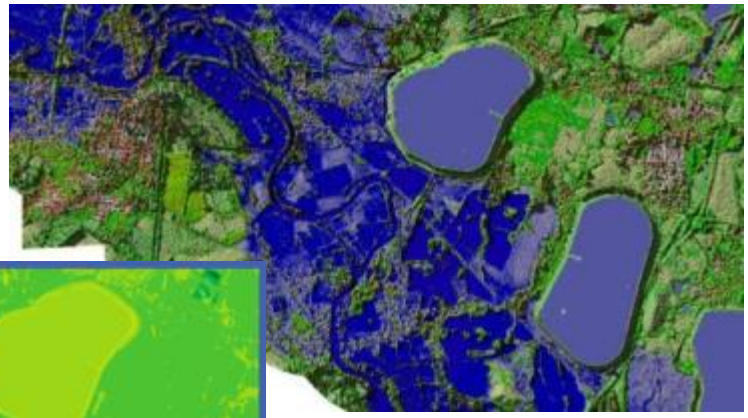
The emotional impact

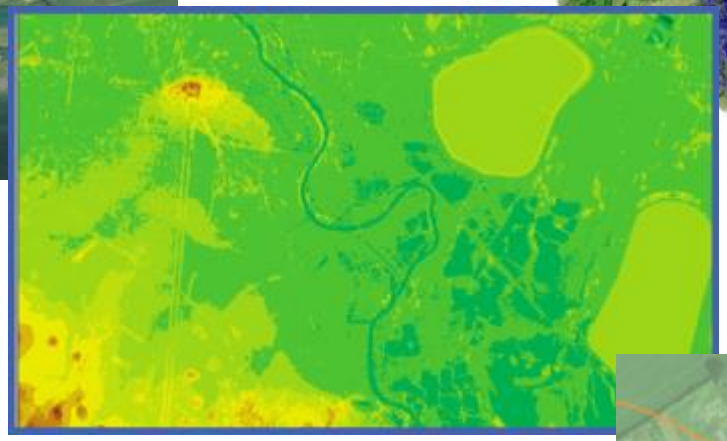
Residents of Cockermouth console each other as flood waters begin to recede revealing the damage

Flood re is hugely helpful but it doesn’t cover everyone and doesn’t stop the massive emotional, physical, cultural, environmental and economic damage

Flood Mapping







- Postcode level assessment
- Existing maps inadequate to accurately assess flooding
- Accurate position of each domestic and commercial building
- Ability to consider both defended and undefended risk
- Precise location / footprint of the building key

Flood Resistance & Resilience

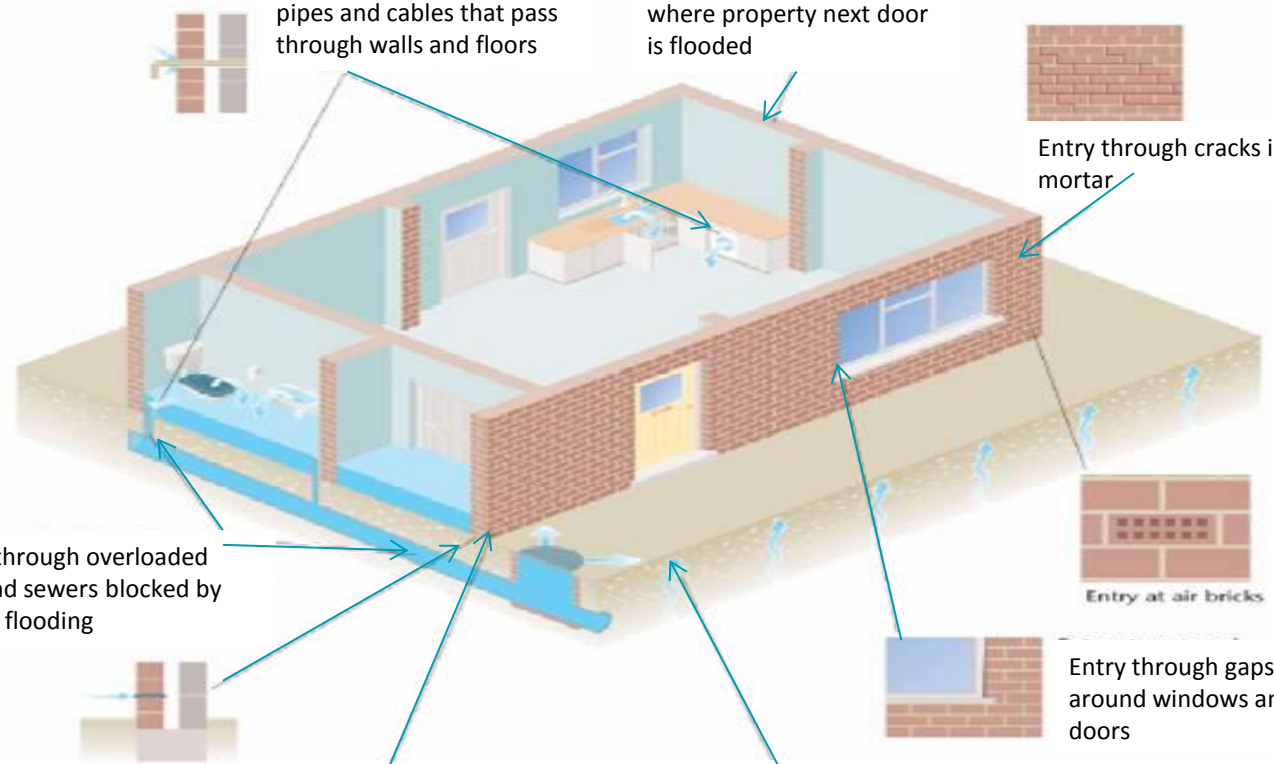
- Resistance – Preventing Flood water entering the property
- Resilience – Mitigating the damage caused if flood water enter the property

1. Assess the source of flooding
2. Understand how the water will enter the property
3. Consider appropriate protections / actions

Flood – Source of Flooding

- Rivers
- Canals
- Culverts
- Lakes
- Storm Surge
- Surface Water Run off
- Drainage / Sewers
- Backing up of sewers
- Reservoirs
- Dams

How water enters a property



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Flood Protection

- BSI Kitemark Scheme for flood protection Performance based product
- Performance based product standard independently tested.
- Known as PAS 1188
- 3 parts to the standard:
  - Part 1: Building apertures
  - Part 2: Temporary or demountable types
  - Part 3: Building skirt systems

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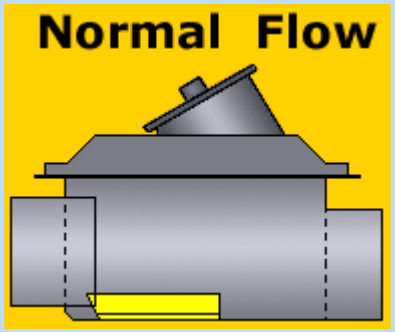
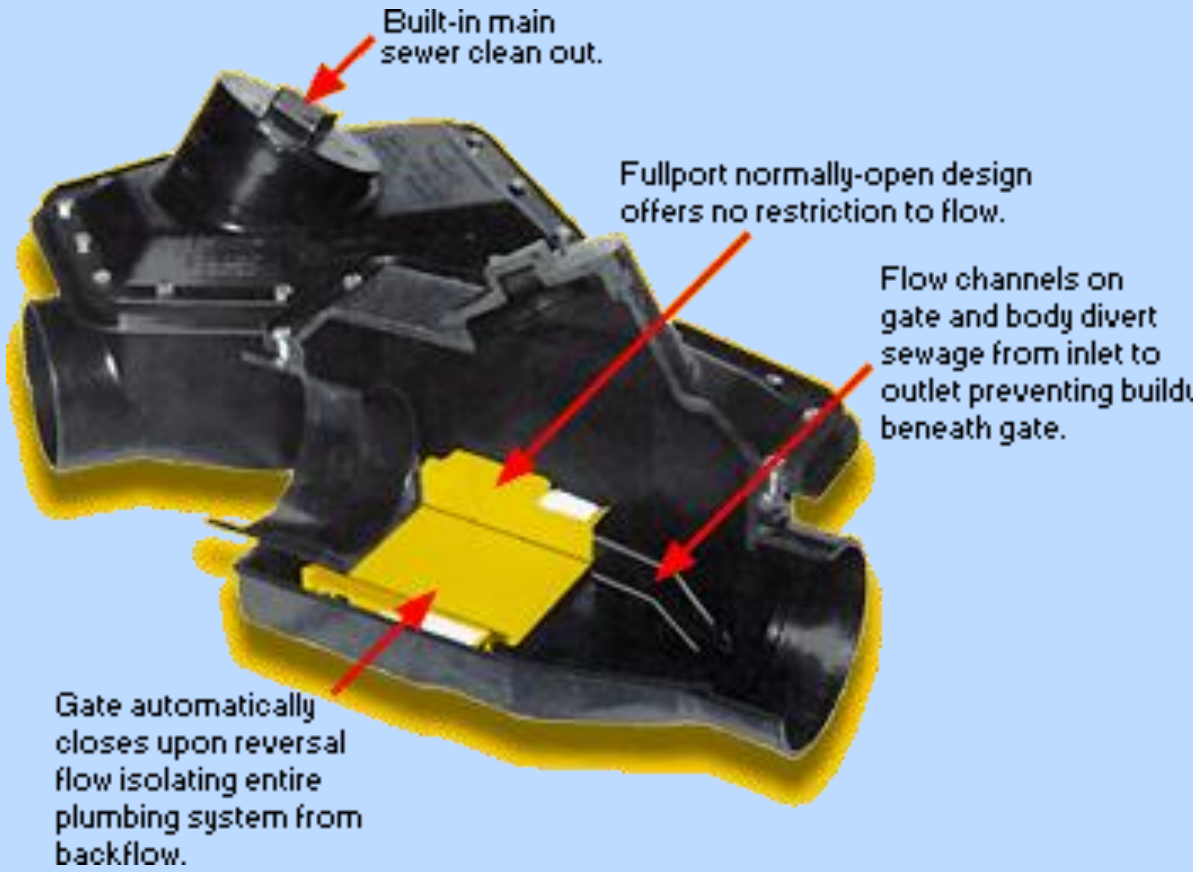
Flood Protection – Building Apertures

Flood Protection – Temporary / Demountable Flood Barriers

Flood Protection – Building Skirting Systems

Flood Protection – Sewer Flooding





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Typical Costs of Flood Resilience

Indicative list of possible measures		
Property level-measures	**Description of Measure / Type of Flood Risk?**	**Indicative cost range £s**
Professional Survey of Premises to Identify Flood Risks (can be undertaken prior to RRG application to identify most appropriate measures and up to £500 of costs applied for retrospectively).	Professional survey undertaken to identify property flood risk, and identify appropriate resilience and / or resistance measures.	Up to £500 including VAT
Airbrick Cover.	Watertight cover for airbricks.	20-40
Self-closing airbrick.	Replacement airbrick that automatically closes to prevent flooding.	50-90
Sewerage Bung.	Inflatable device to insert in U-bend of toilet to prevent sewage backflow.	30-50
Toilet Pan Seal.	Seal to prevent sewage backflow.	60-80
Non-return valves 12mm overflow pipe	Valve prevents backflow through overflow pipe.	70-110
Non-return valves 110mm soil waste pipe.	Prevents backflow through soil waste pipe.	550-650
Non-return valves 40mm utility waste pipe.	Valve prevents backflow through waste pipe.	80-120
Silicone gel around openings for cables.	Prevents flooding through openings for cables to access properties.	80-120
Water resistant repair mortar.	Water resistant mortar used to repair walls and improve future resistance.	80-120
Re-pointing external walls with water resistant mortar.	Improve water resistance through using water resistant mortar to re-point walls.	150-250
Waterproof external walls.	Membrane fitted to make external walls water resistant?	200-400
Replace sand-cement screeds on solid concrete slabs (with dense screed).	Dense water resistant screed to replace sand cement screed.	670-740
Replace mineral insulation within walls with closed cell insulation.	Replacement of wall insulation with water resistant insulation.	720-800
Replace gypsum plaster with water resistant material, such as lime.	Replace existing plaster to water resistant material in property.	4,280-4,740
Sump Pump.	A pump used to remove water that has accumulated in a water collecting sump basin.	400-600
Demountable Door Guards.	Guard fitted to doors to resist flooding.	500-900
Automatic Door Guards.	Door guards that automatically close to prevent flooding.	1,000-2,000
Demountable Window Guards.	Guard fitted to window to resist flooding.	500-900
Replace ovens with raised, built-under type.	Raising oven off floor above flood level.	700-780
Replace chipboard kitchen/bathroom units with plastic units.	Fit plastic kitchen and/ or bathroom units to minimise water damage.	5,000-5,520
Move electrics well above likely flood level.	Re-wiring of electrics (such as socket points) above flood level.	760-840
Mount boilers on wall.	Raise boiler above flood level.	1,080-1,200
Move service meters above likely flood level.	Raise service meters above flood level.	1,620-1,800
Replace chipboard flooring with treated timber floorboards.	Replace floor (including joists) to make water resistant.	920-1020
Replace floor including joists with treated timber to make it water resilient.	Replace floor including joists with treated timber to make it water resilient.	3,490-3,850
Install chemical damp-proof course below joist level.	Install damp proof course to resist groundwater flooding.	6,250-6,910
Replace timber floor with solid concrete.	Replace wooden flooring with concrete.	8,210-9,070

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Sources of Information

- **Environment Agency** www.environment-agency.gov.uk
- **ABI Website –-** *https://www.abi.org.uk/Insurance-and-savings/Topics-and-issues/Flooding/Assessing-your-flood-risk*
- **Construction Industry Research and Information Association web-site** - ***http://www.ciria.org.uk/flooding/***
- **British Standards Institution** web-site *http://www.bsigroup.com/en-GB/our-services/product-certification/industry-sector-schemes/construction/flood-protection-and-waterproofing-materials/* - provides information on flood protection products
- **Flood Protection Association** *http://wwhttp://www.fadsdirectory.com/flood-protection-associationw.floodprotection.co.uk/* - provides lists of flood protection companies and related information
- **Association of Drainage Authorities website** - *http://www.ada.org.uk/*
- **Planning Policy Statement (PPS25)** www.communities.gov.uk/planningandbuilding/planning/
- **Flood Re** http://www.floodre.co.uk/
- **Homecheck web-site** www.homecheck.co.uk - also displays EA Floodplain & other environmental information in the form of maps

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Challenges for the Future

1. Climate Change
2. Continued investment in hard and soft flood defences
3. National Flood Resilience
4. Integrated Catchment level flood solutions
5. Building regulations need to support the resilience agenda
6. Education and Communication of Flood Risk
7. Greater co-ordination of adverse weather communications
8. Encourage more resilient and resistant repairs with instant and easy access reclaimable grants
9. Improved agency co-ordination during a major event
10. An overarching long term flood risk management strategy is needed

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Noah's Flood Resilient Solution …..


Any Questions ?

Thank you

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