



# **Flood Resilience Community Pathfinder Evaluation**

**Community based approaches –  
early learning from the  
Flood Resilience Community  
Pathfinders**

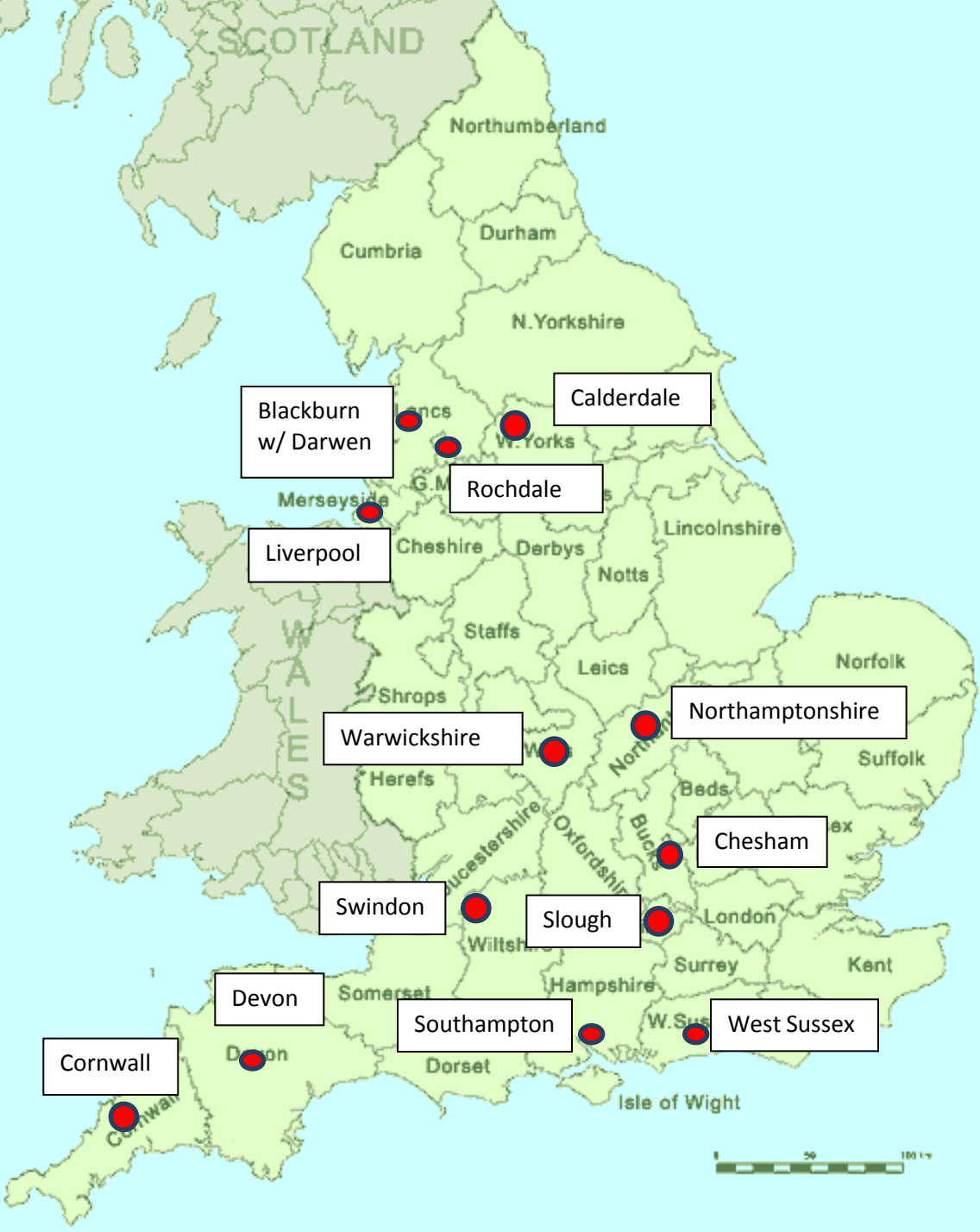
**Clare Twigger-Ross and Paula Orr**

# Outline

- The Community Flood Resilience Pathfinders
- What is community resilience?
- How do you build resilience to flooding?
- What the Pathfinders are doing
- Evaluation:
  - Looking for changes in resilience
  - Measuring changes in resilience

# The Pathfinders

- 13 Pathfinders
- Local Authority-led
- Range of scales:
  - Max: county
  - Min: 39 properties
- All communities at risk, but not all have experienced flooding



# Pathfinder scheme objectives

- Enhance flood risk management and preparedness in ways which **quantifiably improve the community's overall resilience**
- Demonstrably **improve the community's financial resilience in relation to flooding**
- Deliver **sustained improvements** which have the **potential to be applied in other areas**



# What does resilience mean in relation to flood risk management?

- *“Disaster Resilience is the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses - such as earthquakes, drought or violent conflict - without compromising their long-term prospects”. (DFID, 2011 p. 6)*

## 1. Context

e.g. social group, region, institution

## 2. Disturbance

e.g. natural hazard, conflict, insecurity, food shortage, high fuel prices

## 3. Capacity to deal with disturbance

## 4. Reaction to disturbance

e.g. survive, cope, recover, learn, transform

System  
or  
Process

Shocks

Stresses

Exposure

Sensitivity

Adaptive  
capacity

Bounce back  
better

Bounce back

Recover but  
worse than  
before

Collapse

Resilience of  
what?

Resilience to  
what?

# Types of flood resilience

- Reactive resilience:
  - Resistance
  - Bounce-back
- Proactive resilience:
  - Adaptation
  - Transformation



# How can you build resilience to flooding?

- Part of wider resilience
- *“The defining and thus taken-for-granted characteristic of resilient communities is the ability to reduce, prevent and cope with the flood risk. Resilient communities have improved their capacity in each phase of the flood management cycle.....They are knowledgeable and aware of the risk, are well-prepared and respond better when a flood occurs, and recover more quickly from disasters” (Schelfaut et al, 2011)*
- Some work has been done on risk awareness and action in the context of resilience: examples of engagement with communities around flood risk knowledge, histories and modelling

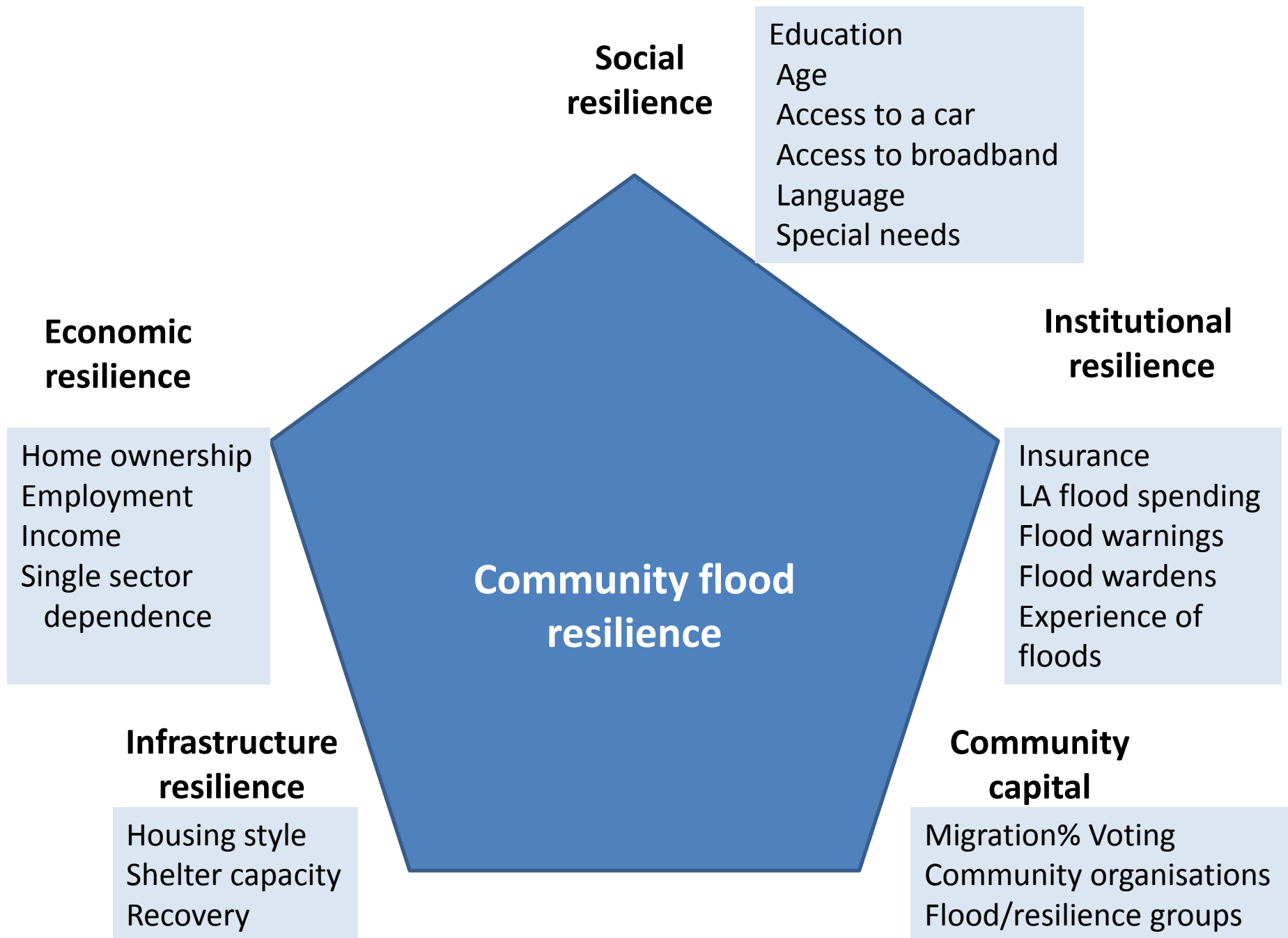
# What are the Pathfinders doing?

SOCIAL	ECONOMIC	INSTITUTIONAL	INFRASTRUCTURE	COMMUNITY CAPITAL
Targeting residents in areas of multiple deprivation	Work with insurers to reduce premiums	Flood Champions / Flood watch activities	Property-level protection	Healthy Homes initiative (GPs, health service, private landlords)
Mapping & identifying need	Insurance advice	Flood action groups /Flood forum	Surface water management measures	Social media
Information in different languages	Flood plans for businesses	Individual / community flood plans	River stewardship / upland land management	Film festivals
		Flood risk information (websites, flood fairs, etc)	Flood action trigger & warning systems (rainfall gauges, sirens)	

# How can resilience be measured?

- Difficult given complexity and newness of concept
- **Cutter et al (2010) and (2013) use indicators for resilience and social vulnerability**





# Social Resilience: Connectivity

Pathfinder	Area of Influence	Proportion of households with a car (%)	Proportion of households with broadband (%)
<b>Blackburn with Darwen</b>	Blackburn with Darwen (district)	69.5	70.1
<b>Buckinghamshire</b>	Chesham (ward)	90.8	80.8
<b>Calderdale</b>	Calderdale (district)	72.7	69.3
<b>Cornwall</b>	Cornwall (county)	82.3	71.7
<b>Devon</b>	Devon (county)	82.0	73.9
<b>Liverpool</b>	Belle Vale (ward)	53.4	63.8
<b>Northamptonshire</b>	Northamptonshire (county)	81.1	77.7
<b>Rochdale</b>	Rochdale (district)	68.6	68.8
<b>Slough</b>	Slough (district)	75.6	76.5
<b>Southampton</b>	Southampton (LSOAs)	68.1	73.4
<b>Swindon</b>	Swindon East Locality (wards)	73.7	79.1
<b>Warwickshire</b>	Warwickshire (county)	82.4	76.5
<b>West Sussex</b>	West Sussex (county)	82.2	78.5
<b>Pathfinder Average</b>		<b>75.6</b>	<b>73.9</b>
<b>National Average (England)</b>		<b>74.3</b>	<b>71.8</b>

Pathfinder	Area of Influence	Home ownership (% of households)	Population employed (%)	Economically active (%)	% in top 10% most deprived in terms of income	% in top 20% most deprived in terms of income
Blackburn with Darwen	Blackburn with Darwen (district)	64.2	55.7	64.2	31	44
Buckinghamshire	Chesham (ward)	87.6	63.9	68.6	n/a	n/a
Calderdale	Calderdale (district)	66.6	62.9	70.5	12	22
Cornwall	Cornwall (county)	68.8	60.6	66.7	3	9
Devon	Devon (county)	74.0	63.0	69.0	0	4
Liverpool	Belle Vale (ward)	47.4	50.5	60.4	n/a	n/a
Northamptonshire	Northamptonshire (county)	67.8	66.6	73.6	4	12
Rochdale	Rochdale (district)	61.8	57.5	66.1	29	39
Slough	Slough (district)	52.7	64.1	73.5	1	15
Southampton	Southampton (LSOAs)	43.3	60.9	70.5	0	0
Swindon	Swindon East Locality (wards)	62.9	62.8	70.8	n/a	n/a
Warwickshire	Warwickshire (county)	70.0	65.5	71.8	2	6
West Sussex	West Sussex (county)	70.6	66.0	72.1	1	3
Pathfinder Average		64.4	61.5	69.1	8.3	15.4
National Average (England )			62.1	69.9	-	-

# Aspects to bear in mind

- Importance of baseline measurement
- Measuring change at the household and community levels
- Inherent and emergent capacities
- Change over time is slow
- Need to measure processes as well as capacities

# Further information and contact details

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