

# The December 2013 storm in England :the value of learning from the past

**Craig Woolhouse**

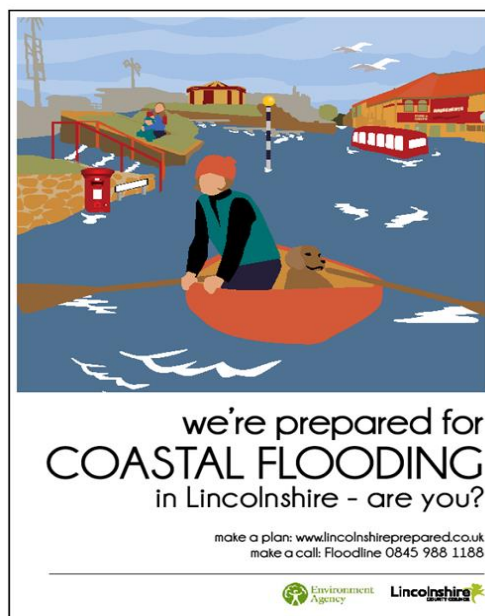
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## Outline

- ➔ January 1953
- ➔ Governance and policy
- ➔ December 2013
- ➔ Lessons for the future



# 1953 Waverley Review

“...307 dead...”

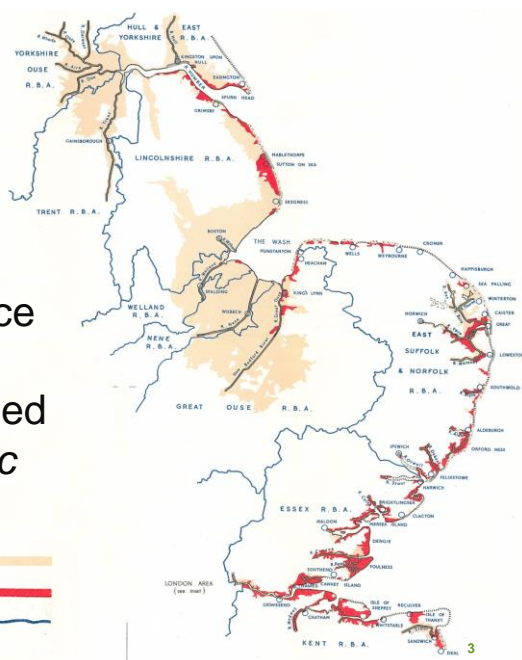
## Learning from 1953:

- Deficit of research and evidence
- Defences for London
- Forecasting and warning needed
- Investment *based on economic benefits and not standards*

LAND BELOW HIGH TIDE LEVEL.....

LAND FLOODED FEB. 1953.....

RIVER BOARD AREA BOUNDARIES.....



## Policy framework in England

### ➤ Civil Contingencies Act 2004

- assess; prepare and plan; respond and recover
- central co-ordination and local delivery
- Police, Fire and Ambulance Services, Local Government, Environment Agency

### ➤ Flood and Water Management Act 2010

- Environment Agency : coast and river
- Lead Local Flood Authorities: surface water
- Build, maintain and operate flood defences
- Monitor, forecast and warn

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## 15 years of experience

1998 Easter	4500 properties
2000 Winter	10000 properties
2004 Boscastle	
2005 Carlisle	2500 properties
2007 Summer	55300 properties
2009 Cumbria	1800 properties
2010 Cornwall	
2012 England	7900 properties

**2013 East Coast** 2700 properties



## 60<sup>th</sup> Commemoration of 1953 Flood

*...history as a prompt for future preparations...*

- ➔ National threat (H19)
- ➔ Work started in 2011
- ➔ East Coast Framework
- ➔ Joint workshops in 2013
- ➔ Government Coastal Guide



# Central & Local Planning

## Coastal Flood Group

- ➔ Advise Ministers on high level strategy choices to response and recovery
- ➔ Determine Central Government operation in response and recovery
- ➔ Seek advice from the East Coast Flood Group and other stakeholders

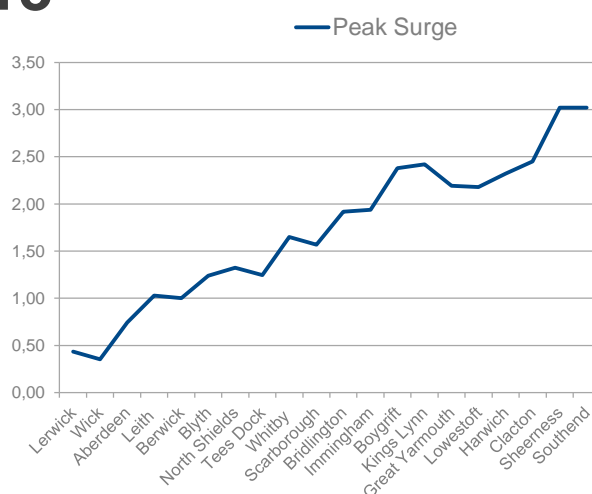
## East Coast Flood Group

- ➔ Raise the profile of the East Coast flood risks
- ➔ Identify gaps in current planning arrangements and knowledge
- ➔ Co-ordinate and share knowledge, information and learning and learning amongst the Local Resilience Forums on common activities such as evacuation and warnings

## 5-6 December 2013

### ➔ Statistics

- ➔ highest sea levels on record at Class "A" gauges at Liverpool and all locations on the east coast of England
- ➔ Dover sea level of 4.76 m AOD was 40 cm higher than next highest level in a 90 year record
- ➔ Co-incidence of surge with high tides noteworthy *but waves were unremarkable*





**Hemsby  
Norfolk**  
6 December 2013



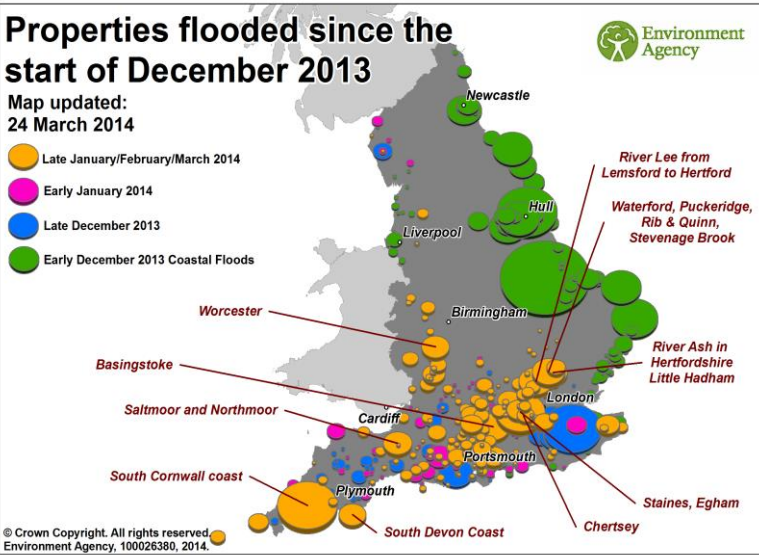
**Boston  
Lincolnshire**  
7 December 2013

**Keadby on Trent  
Lincolnshire**  
5 December 2013



**Humber Southbank – 6 Dec 2013 09:54 GMT**

# Value of assets



	Number of properties flooded	Number of properties protected
Late Jan/ Feb 2014	2,370	207,000
New Year 2014	720	240,000
Christmas 2013	1,400	80,000
Early Dec 2013 coastal surge	2,700	800,000



# Headlines

- 1953 learning proved its worth
- Early forecasting effective
- Thames Barrier closed against highest tide since it opened
- 2013 East Coast Flood Group built relationships and understanding

	January 1953	December 2013
Major Breaches	Over 120	6
Properties flooded	24,000	2,700
Deaths	307	0
Agricultural Land	65,000 hectares	6,800 hectares
People evacuated	32,000	18,000
	No formal warnings	71 severe flood warnings sent directly to all homes at risk



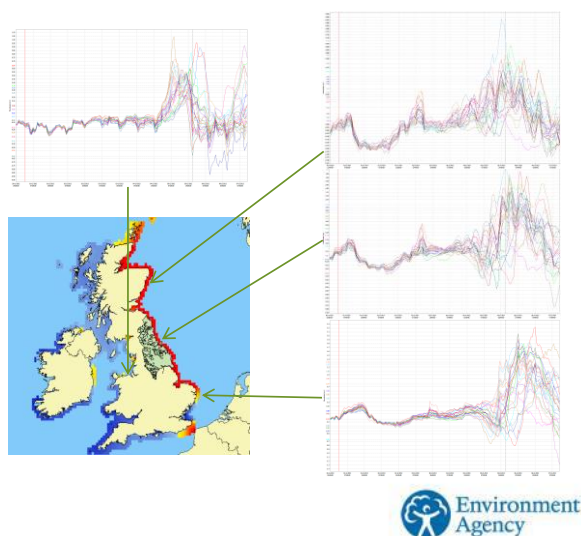
## Recovery

- ➔ 322 projects
- ➔ £50 m total value
- ➔ 199 complete at start of September – all due by end October 2014
- ➔ Six high value projects between £2 and £5 m each including Greetham Creek



## Learning points – forecasting

- ➔ **Extreme events provide great data !**
  - ➔ Forecasting lead times excellent
  - ➔ Some atmospheric responses still a challenge
  - ➔ Estuaries – variable success



## Learning points – response

### ➔ Central Government

- ➔ Wide area co-ordination and communications
- ➔ Trigger point decisions
- ➔ Prioritisation of scarce national assets
- ➔ CNI inter-dependencies
- ➔ Evacuation - shelter arrangements

### ➔ Local Resilience Forums

- ➔ Linking forecasts and impact mapping to evacuations
- ➔ Evacuation planning and processes
- ➔ Community engagement

UNCLASSIFIED



## Learning points - communications

### ➔ Flood Warnings Direct

- ➔ Over 160 000 direct messages & social media

### ➔ Narrative of event is essential

- ➔ For the media, public, politicians and responders
- ➔ Context is critical
- ➔ Infographics, social and traditional media

 The logo for CRIP (Commonly Recognised Information Picture), consisting of the letters "CRIP" in white on a dark blue rectangular background.
 **CRIP**
**Severe Weather February 2014**

COMMONLY RECOGNISED INFORMATION PICTURE

## Our role

*“Save lives and livelihoods”*



**Thank you**

**Craig Woolhouse**

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