

# Exercise Watermark

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Department for Environment  
Food and Rural Affairs

Supported by



Civil Contingencies Secretariat

# Background: The Pitt Review



Supporting community action, testing professional response

## Recommendation 49

“A national flooding exercise should take place at the earliest opportunity in order to test the new arrangements which central government departments are putting into place to deal with flooding and **infrastructure emergencies**”

# Exercise Snapshot



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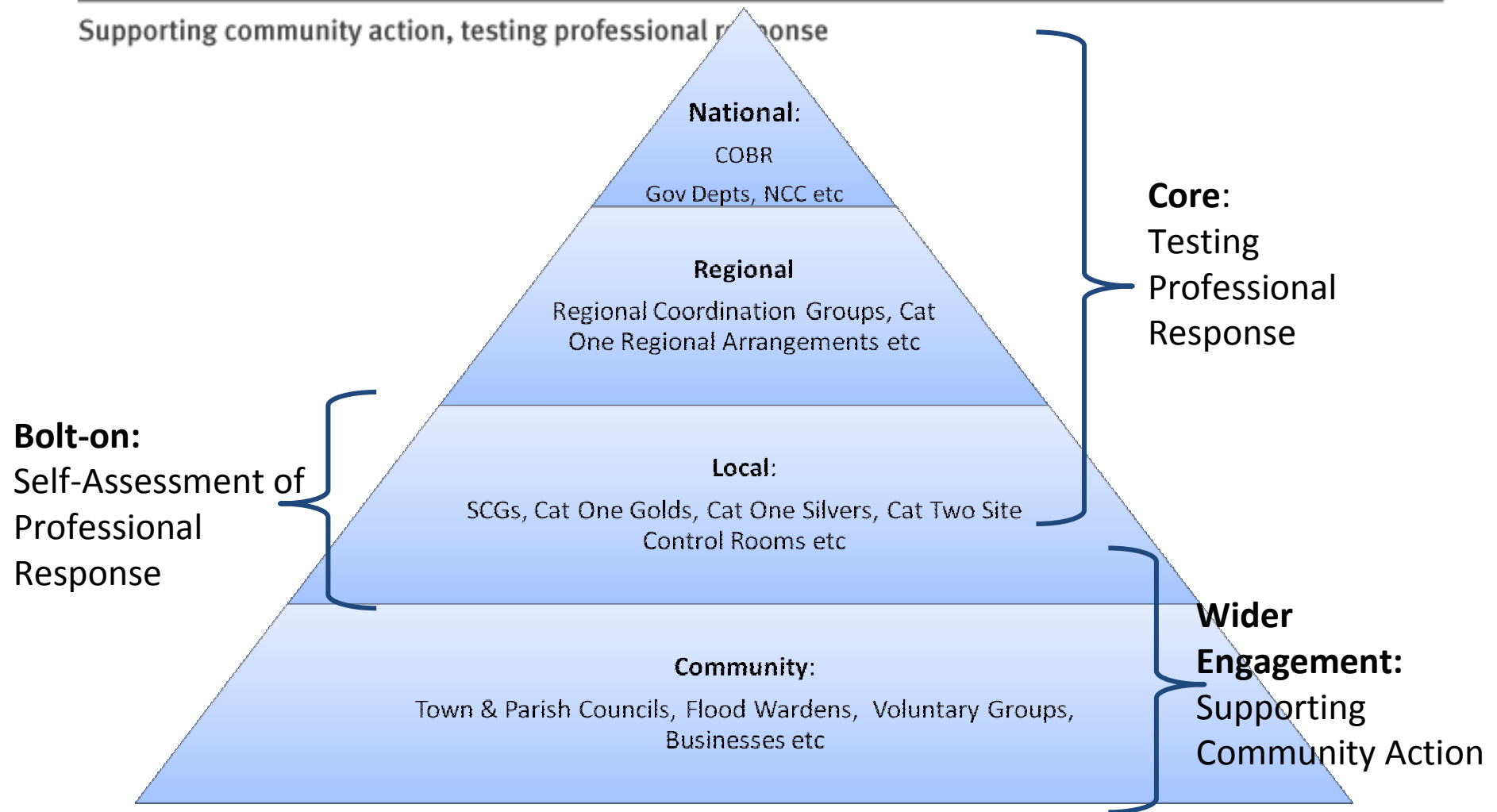
Watermark included:

- » A **'core'** component as well as **Bolt-on** and **Plug and Play** exercises to provide flexibility and enable a wide spectrum of involvement
- » **over 300** organisations from government departments through to local community groups, with **thousands** of individual participants
- » a range of flooding scenarios staged over four days
- » **testing** local and regional flood emergency response plans or individual organisational response arrangements.

# The Watermark 'Brand'



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# Watermark Launch Hawley Lakes, Nov 2010

exercise  
**Watermark** 5  
4

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# Exercise Aim



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To conduct a wide ranging and publicly engaging exercise that tests the arrangements across England and Wales to respond to all aspects of severe, wide-area flooding.

# National Objectives

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- » Test the response to a wide-area flooding emergency from **COBR down to multi-agency gold** level
- » Test **National Flood Rescue** arrangements
- » Test **plan activation** arrangements
- » Test **communication arrangements** at all levels
- » Test **media management** at all levels
- » Test **business continuity** of essential service providers and critical infrastructure operators
- » Test **mutual aid** across LRF, regional and DA boundaries
- » Test **mass evacuation** and sheltering arrangements
- » Test implementation of **other relevant Pitt recommendations**



# The weather ....

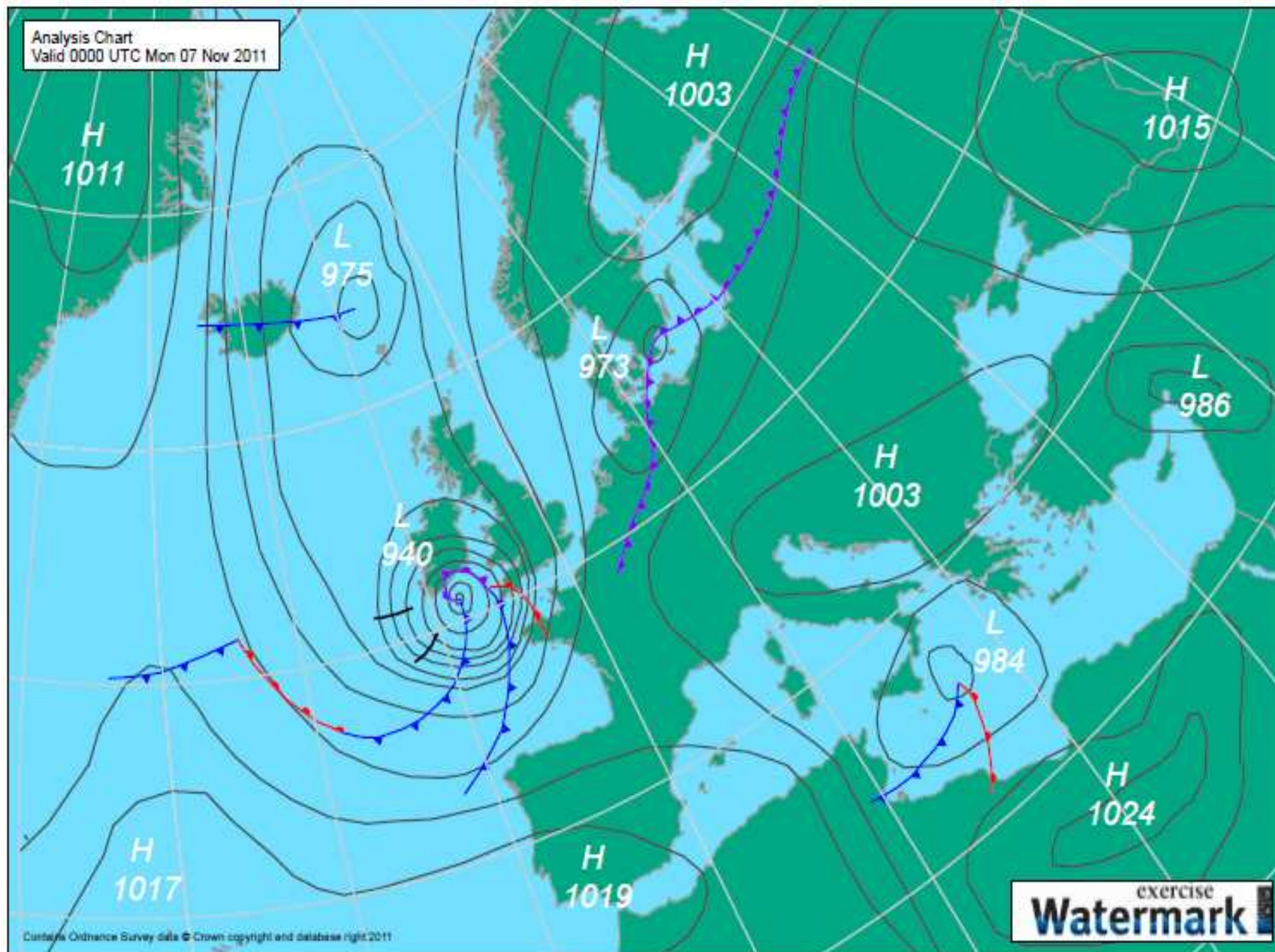
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- A very disappointing wet summer and early autumn across the country with rainfall well above average.
- Ground is now virtually saturated.
- River catchments are filled to near capacity.
- A wet weekend has been followed by further periods of heavy rain this morning, with more rain expected through Monday and Tuesday.
- Computer predictions are for a significant storm surge down the east coast later this week.





Analysis Chart  
Valid 0000 UTC Mon 07 Nov 2011



# Flood Guidance Statement

## 20:00 06 Nov 2011

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### FLOODFORECASTINGCENTRE

a working partnership between



#### Flood Guidance Statement 20:00hrs 06 November 2011

Our assessment of daily flood risk for England and Wales is below.



20:00 - 23:59hrs Sunday 06 November 2011	00:00 - 23:59hrs Monday 07 November 2011	00:00 - 23:59hrs Tuesday 08 November 2011	00:00 - 23:59hrs Wednesday 09 November 2011	00:00 - 23:59hrs Thursday 10 November 2011
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#### Headline

No significant change from the statements produced at 10:30 and 15:00. Very wet spell expected to cause medium and high risk of flooding on Monday and Tuesday.

#### General Overview of Flood Risk

The low risk of river flooding continues for Wales and the West Midlands until Tuesday, where the forecast rainfall increases this to a medium risk.

Catchments in the Thames Valley, Surrey, Berkshire, Buckinghamshire and Oxfordshire still continue to be at a low flood risk, and as the rain accumulations increase and river levels rise, the risk of river flooding in these areas increases to a medium risk for Monday and Tuesday.

Heavy showers forecast for Monday and Tuesday in the South West will result in a low risk of surface water flooding.

There is a high risk of surface water flooding in London and West Yorkshire on Monday.

Tides are beginning to build and there is a low risk of tidal flooding down the east coast from Thursday.

#### Warnings and Alerts in force in England and Wales at 20:00hrs

Flood - [Click here for the Exercise Watermark Flood Warnings in Force](#)

Severe Weather - [Click here for the Exercise Watermark Weather](#)

#### Best Judgement

#### River Flood Risk

Wales and the West Midlands remain at a low flood risk. The forecast rainfall which is falling on wet catchments is causing rivers to rise. On Monday and Tuesday the risk of river flooding increasing to a medium risk to the areas shaded in amber in the maps above.

#### Surfacewater Flood Risk

Heavy and intense localised storms in West Yorkshire and London result in a high risk of surface water flooding on Tuesday.

Further heavy rainfall on Monday and Tuesday in the South West will lead to a low risk of surface water flooding.

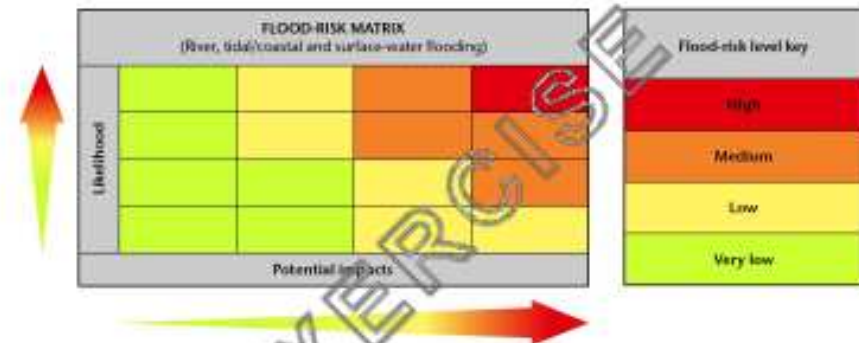
#### Coastal/Tidal Flood Risk

Tides are beginning to rise in the forecast period. There remains a low risk of tidal flooding along the Kent coast, and from Thursday tide levels lead to a low flood risk along the east coast.

Next Statement Due: 10:30hrs Monday 07 November 2011

Contact Details: Flood Forecasting Centre Duty Hydrologist. 0300 12345 01

All Times are Local

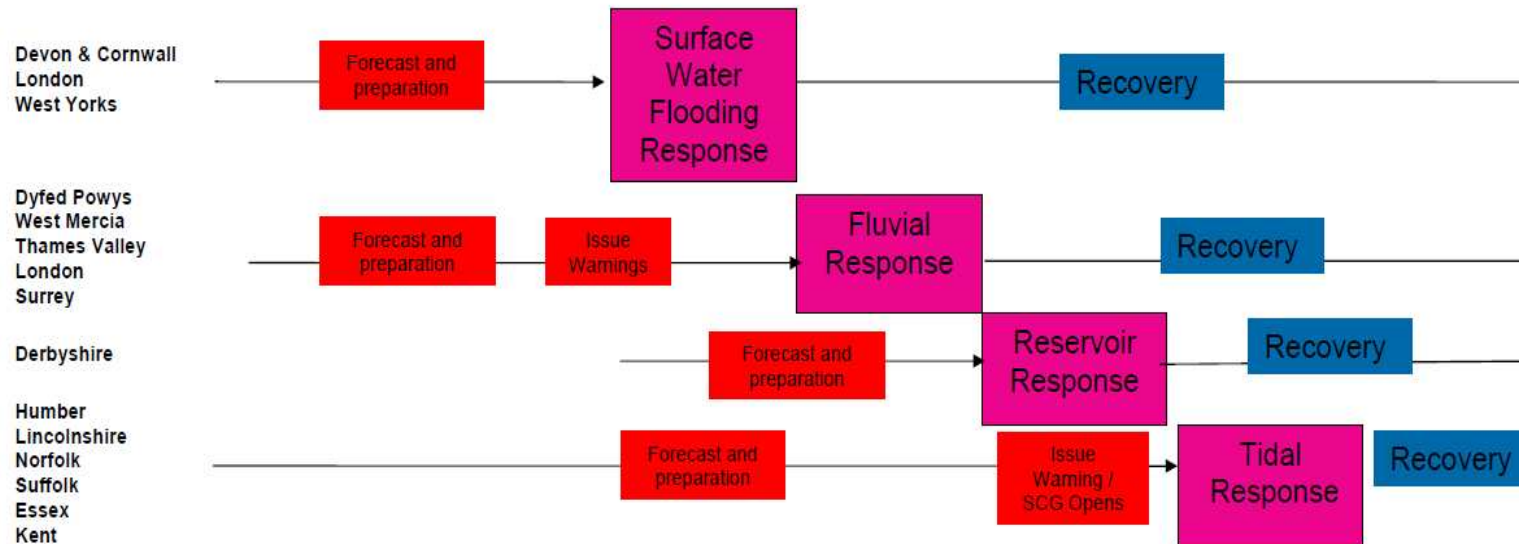
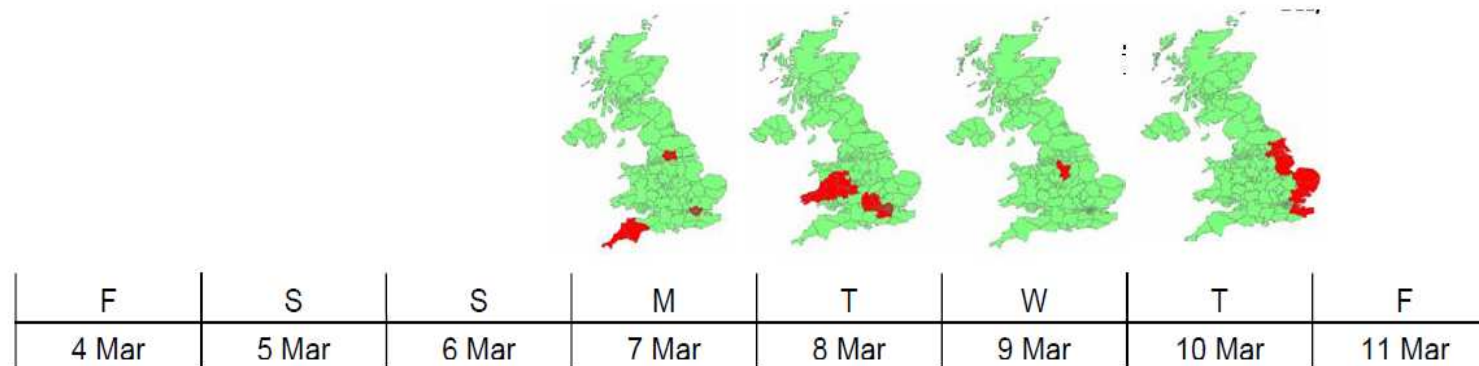


For the detailed version of the Flood Risk Matrix [click here](#)



# Main events sequence

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# UK Practiced Response to:



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- Over **200,000** properties flooded
- **½ million people flooded** out of homes
- **400,000** people self-evacuated
- **135,000** people requiring assisted evacuation
- Over **17,000 people needing water rescue**
- **18,000 people sheltering** above flood waters
- Over **3,000 casualties**
- **391 fatalities**

# EXCON

exercise  
**Watermark** 

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# Sharing and implementing learning



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- Individual Agency Reports
- Local Multi Agency Reports
- Draft Post Exercise Watermark Report
- **Post Exercise Conference – 7<sup>th</sup> July**
- Consultation Period
- Final Watermark Report
- Recommendation implementation action plans

# Initial Lessons Learned



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- Met targets set out by Defra and WAG
- Flood warnings and Flood Guidance Statements
- Communication improvements
- Co-ordination and prioritisation of resources
- National Planning assumptions
- Validated emergency plans
- Secondary impacts of flooding
- UK resilience awareness -raised, tested & improved



[www.exercisewatermark.co.uk](http://www.exercisewatermark.co.uk)