



# Past & Future Services

and Integration with Emergency Responders

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# UKMO Public Weather Service

“The PWS provides a coherent range of weather information and weather-related warnings that enable the UK public to make informed decisions in their day-to-day activities, to optimise or mitigate against the impact of the weather, and to contribute to the protection of life, property and basic infrastructure.”



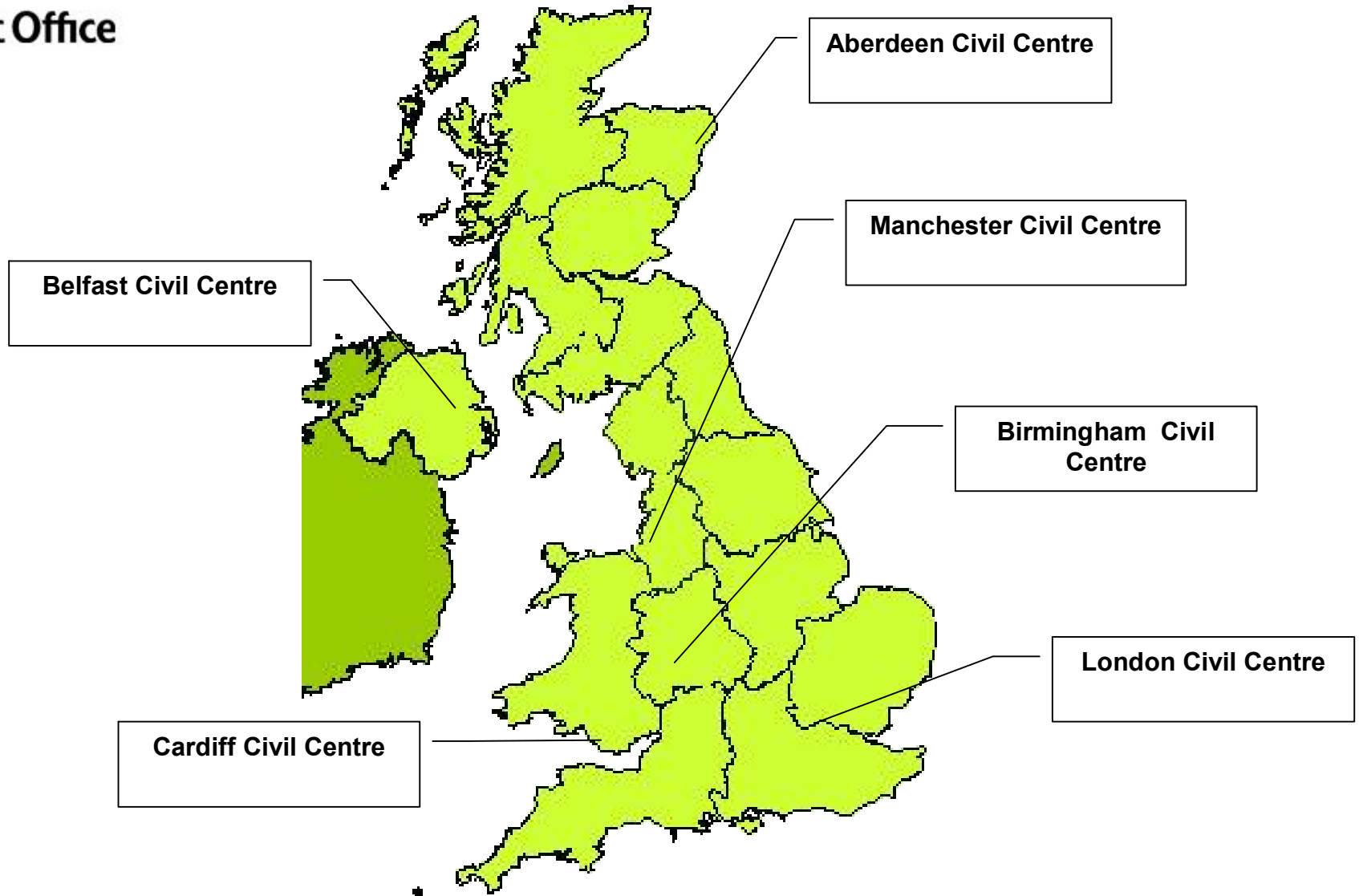
# PWS Outputs

- High impact weather forecasts
- Site-specific weather forecasts
- Pollution forecasts
- Seasonal forecasts
- UK Climatological records
- Meteorological library and archive





# Civil Centre Network pre 2006



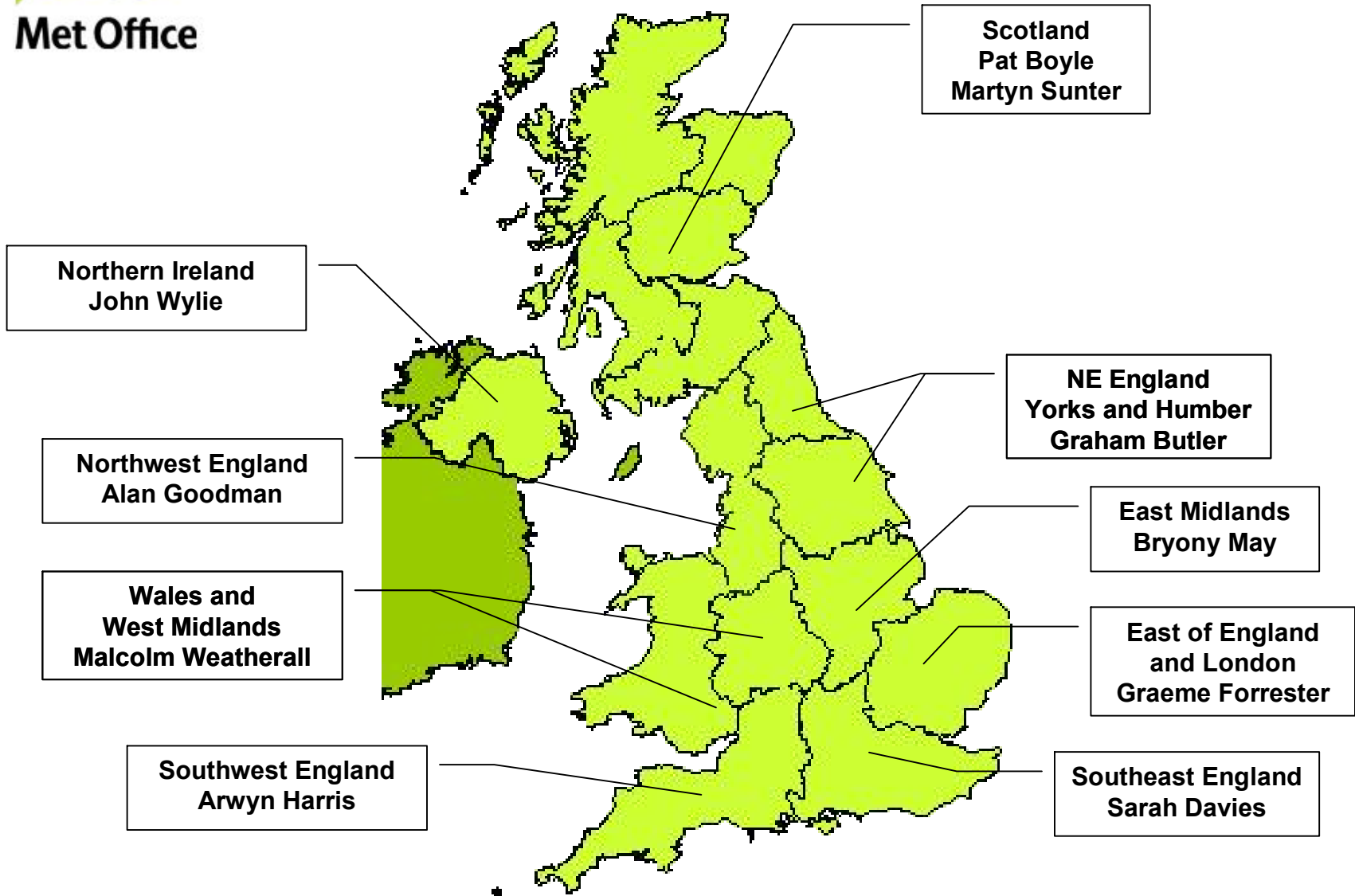


# Civil Contingencies Act (2004)

- Met Office:
  - no legislative responsibilities
  - specialist supplier to Cat 1 and Cat 2 responders
- Specific duty to warning and inform the public
  - National Severe Weather Warning Service
- Specialist advisor to emergency responders
  - high impact weather events
  - emergencies influenced by weather
  - 10 Regional PWS Advisors

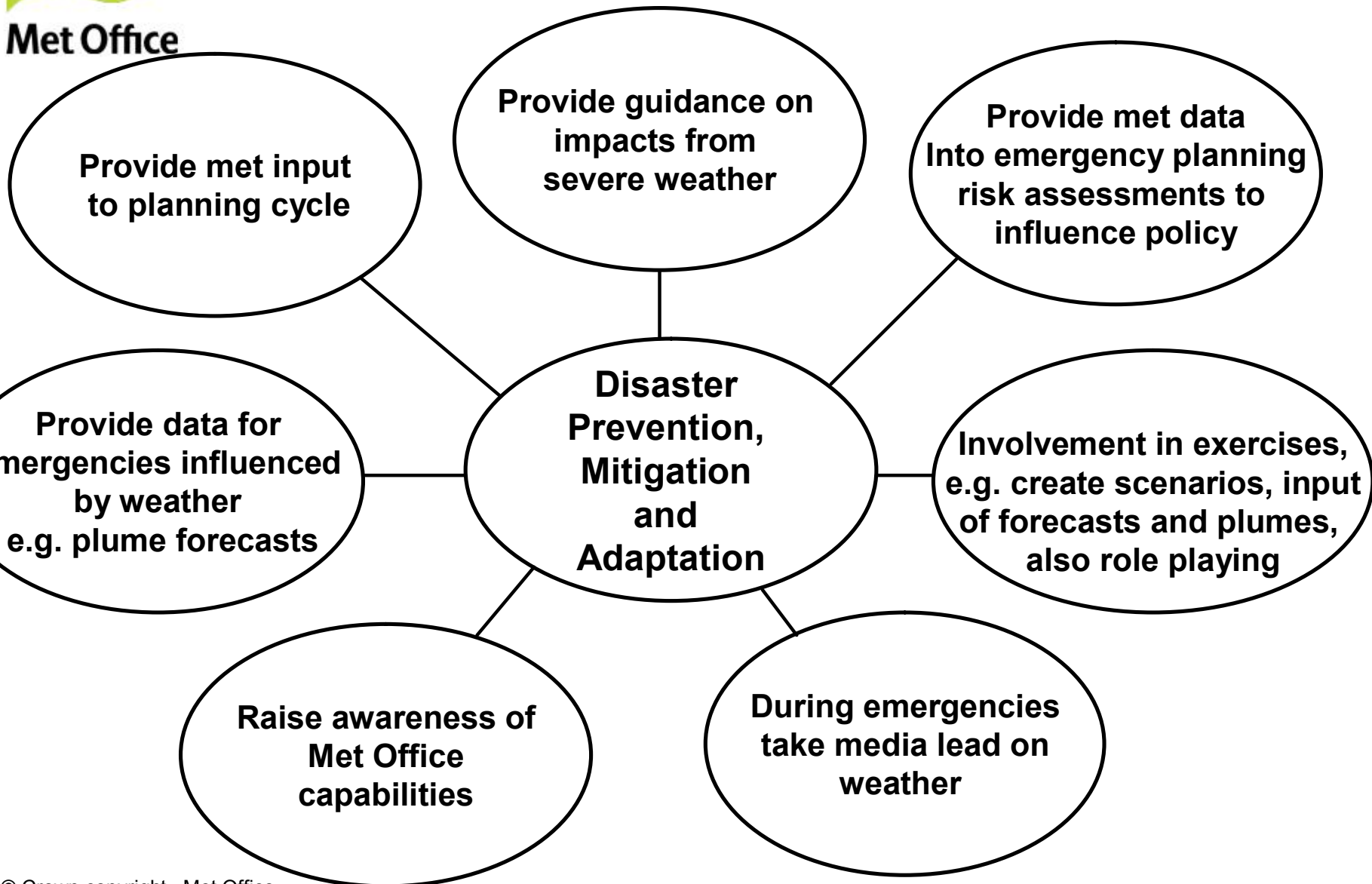


# Regional PWS Advisors





# Input at National and Local Level



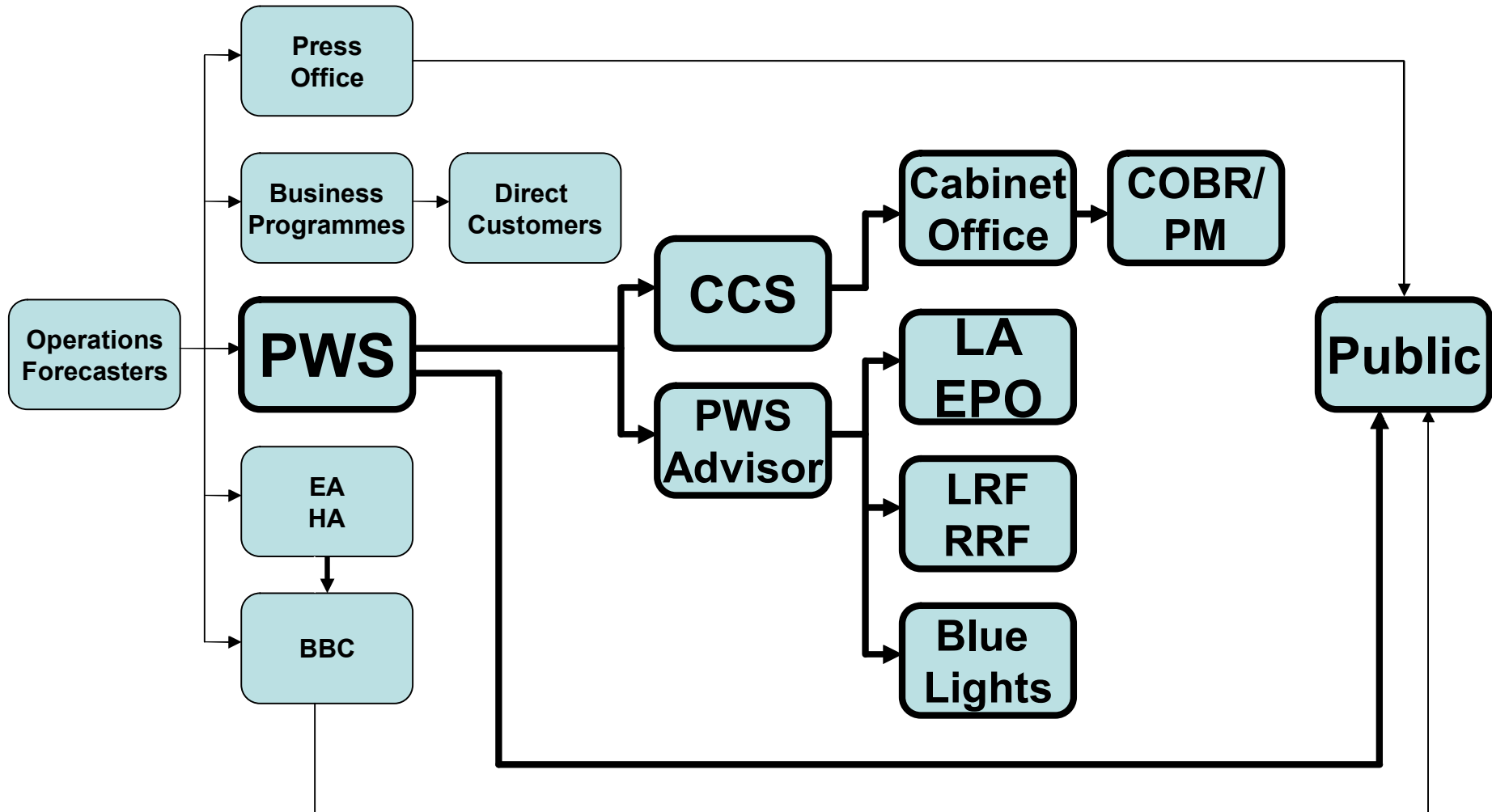








# PWS engagement during emergencies





# National Severe Weather Warnings Service

- Sent to ~850 organisations
- Over 2,500 delivery points, including...
  - Blue Lights (Police, Fire and Ambulance)
  - Central, regional and local government
  - NHS
  - Utilities
  - Media



Cascaded through individual organisations



Met Office

# National Severe Weather Warning Service

## Current Service

- Early Warnings
  - Issued several days in advance
  - >60% risk of widespread disruption
  - Often accompanied by Met Office News Release
- Flash Warnings
  - Issued several hours in advance
  - > 80% chance of weather exceeding critical threshold
    - Severe gales
    - Heavy rain (may give localised flooding)
    - Heavy snow and icy roads
    - Thunderstorms and lightning
    - Heat and sun
    - Dense fog

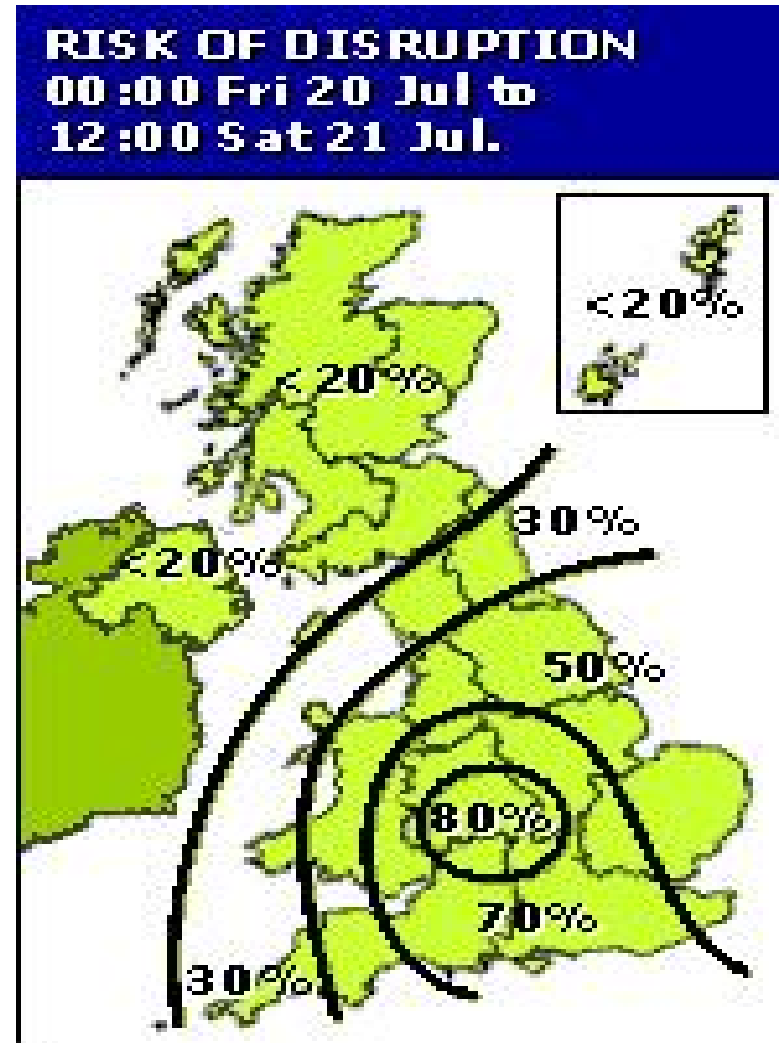




# Early warning issued on Thursday 19<sup>th</sup> July

Localised downpours on Thursday will be covered by flash warnings. Concern then focuses on a prolonged period of heavy and thundery rain affecting southern parts of England and Wales on Friday, then moving into more northern areas overnight and into Saturday. Rainfall totals of 20-40mm are expected quite widely but there is **potential for 75-100mm in places**. At this stage, there is still some doubt about where the highest totals will occur but **southern and central areas of England and Wales are most at risk**. The heavy rain could lead to **flooding in some areas and cause disruption to outdoor events and transport networks**.

Issued by the Met Office at 10:06 on Thursday, 19th July 2007





# NSWWS enhancements from 2007/2008

## In line with Meteoalarm

- Routine Severe Weather Advisory
- Enhanced web display
  - “traffic light” alert
- Differentiate between **severe** and **extreme** weather





# Traffic Light Matrix

## Headline Message to Public

<b>NO SEVERE WEATHER IS EXPECTED</b>	<b>BE AWARE</b>	<b>BE PREPARED</b>	<b>TAKE ACTION</b>
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# Impacts indicated on UKMO web

## Before the storm

- Secure loose objects such as ladders, garden furniture or anything else that could be blown into windows and other glazing and break them.
- Close and securely fasten doors and windows, particularly those on the windward side of the house, and especially large doors such as those on garages.
- Park vehicles in a garage, if available; otherwise keep them clear of buildings, trees, walls and fences.
- Close and secure loft trapdoors with bolts, particularly if roof pitch is less than 30°.
- If the house is fitted with storm shutters over the windows then ensure that these are closed and fastened.
- If chimney stacks are tall and in poor condition, move beds away from areas directly below them.

## During the storm

- Stay indoors as much as possible.
- If you do go out, try not to walk or shelter close to buildings and trees.
- Keep away from the sheltered side of boundary walls and fences — if these structures fail, they will collapse on this side.
- Do not go outside to repair damage while the storm is in progress.
- If possible, enter and leave your house through doors in the sheltered side, closing them behind you.
- Open internal doors only as needed, and close them behind you.
- Take care when driving on exposed routes such as bridges, or high open roads, delay your journey or find alternative routes if possible.
- Slow down and be aware of side winds, particular care should be taken if you are towing or are a high sided vehicle.
- Do not drive unless your journey is really necessary.

## After the storm

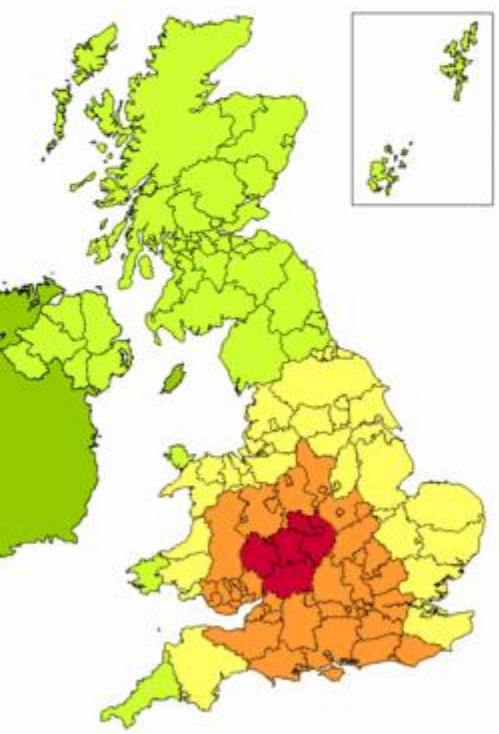
- Be careful not to touch any electrical/telephone cables that have been blown down or are still hanging.
- Do not walk too close to walls, buildings and trees as they could have been weakened.
- Make sure that any vulnerable neighbours or relatives are safe and help them make arrangements for any repairs.



# UK: severe weather warnings Issued Thu 19<sup>th</sup> July for Fri 20<sup>th</sup> July

Rainfall	Pressure	Cloud	Warnings
Weather	Wind	Temperature	UV
Latest/recent		Forecast	
Thu	Fri	Sat	Sun
			Mon

ALL WARNINGS: Fri 20 Jul



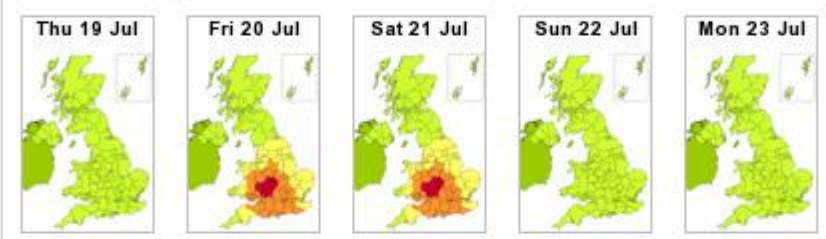
Updated: 1647 on Fri 31 Aug 2007

REGION select a region

ZOOM OUT

## Weather warnings overview

Early warnings have been issued for the UK



Map regions coloured show where severe weather warnings have been issued.

## Flash warnings of severe weather

These are issued when the Met Office has 80% or greater confidence that severe weather is expected in the next few hours. If warnings have been issued, click on the region affected to see more detail.

Region affected	Warning type	Valid from	Valid to
No flash warnings have been issued for the UK.			

## Early warnings of severe weather

These are issued when the Met Office has 60% or greater confidence that severe weather is expected in the next few days.

Risk of disruption	Warning	Valid from	Valid to
80% <a href="#">South West England</a>	<b>Heavy Rain</b>  Localised downpours on Thursday will be covered by flash warnings. Concern then focuses on a prolonged period of heavy and thundery rain affecting southern parts of England and Wales on Friday, then moving into more northern areas overnight and	0000 Fri 20	1200 Sat 21
80% <a href="#">West Midlands</a>			
70% <a href="#">East of England</a>			

## Weather

- UK

- Forecast

- UK forecast
- Weather warnings
- Heat-health watch
- Surface pressure charts
- UK autumn forecast
- Mountain area forecast
- Severe weather advice

## + Latest/recent past

- + Climate
- + Europe
- + World
- + Marine
- + Aviation

## RSS feeds

- Weather warnings feed
- RSS feeds help

## World weather impacts

**Canadian heat**  
31 Aug 2007  
Officials in the Canadian province of Ontario have issued a smog warning for the area because of...[more]

Archive



# Feedback from 180 Emergency Responders

Do you feel the proposed Advisory is a positive step forward: 86%

Would you plan for you organisation to access the Advisory on a daily basis: 87%

Do you agree that Early Warnings should include confidence  $\geq 60\%$  only: 93%

Will you adjust your emergency plans to differentiate between severe and extreme events: 53%

Will the traffic light system add value to your decision making process: 89%

Would you be willing to assist in live user testing during the coming winter: 77%



# Possible enhancements 2008 onwards

- Trial tornado alert as requested by emergency responders and UK Gov.
- Working with partner organisations to integrate impacts into warnings.
- Possible outcome following Government Review of flooding - provide “one stop shop” for warnings





# Questions & answers