

**To:** Kent Flood Risk & Water Management Committee – 2<sup>nd</sup> July 2025  
**From:** Rebecca Spore, Director of Infrastructure, Strategic and Corporate Services  
**Subject:** Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity.  
**Classification:** Unrestricted

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**Summary:** To update Kent Flood Risk & Water Management Committee on the current water situation, weather statistics, Environment Agency and Met Office Warnings, and flood response activity since the last meeting of the Committee on 5<sup>th</sup> of February 2025.

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## **1. Background**

- 1.1 This report is the latest of the regular updates to the Committee addressing the current water situation and recent severe weather and associated incident response activity in Kent.
- 1.2 The Environment Agency (EA) and Met Office send 24/7 regular alerts and warnings regarding severe weather to a list of recipients including the KCC Duty Emergency Planning Officer (DEPO), KCC Highways Senior Duty Officer and the Contact Point. Site-specific severe weather impacts are also notified to the DEPO by the emergency services and other resilience partners, with reports from the public received by Contact Point. KCC further initiates reporting using Severe Weather Impacts System (SWIMS) to capture multi-agency resources and costs arising from severe weather incidents.
- 1.3 Across the county, 85,500 residential and commercial addresses are recognised to be in areas at risk from fluvial (river) or tidal (coastal) flooding. Where possible, flood vulnerable properties are offered a Flood Warning Service by the EA. An early warning of flood risk to communities (including areas outside of floodplains) is delivered by Flood Guidance Statements, Severe Weather Warnings and the activation of a multi-agency Severe Weather Advisory Group (SWAG) by the Kent and Medway Resilience Forum (KMRF).

## **2. Kent water situation and weather statistics**

- 2.1 April was a dry month for much of England, with just 51% of **long term average (LTA)** rainfall being received for the country as a whole. **Soil moisture deficits (SMD)** continued to increase as expected at this time of year, however ongoing dry weather meant soils were drier than usual across most of England by the end of April.
- 2.2 Monthly **mean river flows** decreased at the majority of monitoring sites, and two-thirds of sites were classed as below normal or lower for the time of year. **Groundwater levels** declined at almost all of the monitoring sites, although the majority were still classed as normal or higher for the time of year. **Reservoir**

**stocks** decreased at most sites in April, and England as a whole, ended the month with reservoir at storage 84% full.

## 2.3 Rainfall:

2.3.1 During April, England received 28.3mm of rainfall which represents 51% of the LTA for the time of year. At a regional scale, rainfall was below normal in east and south-east England.

2.3.2 Total rainfall for hydrological areas across England for the current month (up to 30 April 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals.

2.3.3 The 12-month cumulative totals showed that most of England was classed as normal for the period, with patches of above normal and higher areas in south-east.

## 2.4 Soil moisture deficit:

2.4.1 In the central parts of south-east England, soils were much drier than would be expected at the end of April.

## 2.5 River flows:

2.5.1 Monthly mean river flows decreased at almost all of the Environment Agency's indicator sites in April.

2.5.2 The latest river flow data available from the Environment Agency, covering April and into May, highlighted that twelve sites (22%) had below normal flows for the time of year, most of which were in the south and east of England. The Great Stour at Horton Weir (near Canterbury) was classed as below normal for the time of year.

## 2.6 Ground water levels:

2.6.1 Groundwater levels for April decrease as aquifers began their usual seasonal decline. Groundwater levels at major aquifer index sites all decreased to the end of April.

## 2.7 Reservoir storage:

2.7.1 At the end of April, reservoir capacity decreased at two-thirds of the reservoirs and reservoir groups reported by the Environment Agency. Almost half of reservoirs were classed as normal for the time of year, including the majority of reservoirs in south-east and east England. By the end of April, total storage across England was 84% as overall stocks decreased by 5% since March.

## 2.8 Alerts

- 2.8.1 There were 5 Flood Alerts issued by the EA in the last quarter and 0 Flood Warnings. This is substantially decreased from the 29 flood alerts and 2 flood warnings in the corresponding period in 2024. Areas of alert can be viewed in **Appendix 1**, whilst a list of the correspondent areas and number of alert per area can be seen in **Appendix 2**.
- 2.8.2 During the previous quarter (Jan – Mar 2025), KCC received 46 Flood Alerts issued by the EA (of which 35 were fluvial, 11 coastal) and 6 Flood Warnings. This is decreased from the 94 Flood Alerts in the corresponding period in 2024.
- 2.8.3 The Met Office issued 7 Weather Alerts, 3 of which were Yellow Weather Warnings in May and June for thunderstorms, 2 Yellow Heat Health Alert, 1 Amber Warning for thunderstorms, and 1 Amber Heat Health Alert. This compares with 10 weather warnings for the same period last year.
- 2.8.4 During the previous quarter (Jan – Mar 2025), 21 Weather Alerts were issued by the Met Office (including updates), of which 19 were Yellow Weather Warnings (9 low impact and 10 medium impact). This compares with 25 weather warnings for the same period last year. A full list comparing the quarters can be found in **Appendix 3**.
- 2.8.5 The Thames Barrier was closed on three occasions since the last quarter, and for a total of 6 closures including the previous quarter, of which all of them were test closures, respectively:  
20<sup>th</sup> January  
17<sup>th</sup> February  
20<sup>th</sup> March  
17<sup>th</sup> April  
19<sup>th</sup> May  
16<sup>th</sup> June
- 2.8.6 The figure for the corresponding period last year was 10 (all operational). A table showcasing this data can be found in **Appendix 4**.

## 3. Recent Incident Responses relating to flooding / water supply

- 3.1 For the last quarter, DEPO have responded to 7 weather-related warnings, of which 3 were Yellow Warning for Thunderstorms, 2 Yellow Heat Health Alerts, 1 Amber Heat Health Alert, and 1 Amber Warning for Thunderstorms. There were also 5 Flood Alerts issued in this time. More details on weather warnings and analysis can be found in **Appendix 5**.
- 3.2 For the majority of weather warnings, the DEPO monitored the situation and no action was required other than liaising with the EA and Borough / District Councils.

- 3.3 On Friday 13<sup>th</sup> June, following the release of an Amber Warning for Thunderstorms, the DEPO activated a Severe Weather Advisory Group (SWAG) to share information, discuss impacts, and confirm the preparedness of responding agencies.
- 3.3.1 In the late evening, the DEPO was made aware of a thunderstorm and flash flooding in Dover, affecting properties in Folkestone Road, blown manholes, and the evacuation of residents. A primary school in Eastry was also affected by surface water flooding.
- 3.3.2 Kent Police activated command & control processes, and a Tactical Coordinating Group was called. The DEPO liaised with Dover District Council (DDC), KCC Highways and the other responding agencies (including Kent Police, KFRS) on site to coordinate and facilitate the response.
- 3.3.3 The DEPO also activated voluntary sector support for 23 evacuated residents, who were sheltered by DDC in a Rest Centre.
- 3.4 Following the release of an Amber Heat Health Alert released on Thursday 19<sup>th</sup> June, a SWAG meeting was called to discuss the situation.
- 3.4.1 Temperatures were forecasted to peak in the mid-30s, with increased demand on water supplies over the weekend putting pressure on multiple reservoirs with low or critical storage levels (the result of power fluctuations on the previous day).
- 3.4.2 Many borough and district councils have activated Severe Weather Emergency Protocols (SWEP) or alternative arrangements to support vulnerable people in the community.
- 3.4.3 On Friday 20<sup>th</sup> June, the SWAG requested the activation of multi-agency Tactical Co-ordinating Group (TCG) and Strategic Coordinating Group (SCG) meetings, chaired by KCC, to coordinate the response.
- 3.5 Table 1 – type and number of alerts received between the current quarter (April to June 2025), and previous quarter (January to March 2025).

Alert type	Alerts Apr – Jun 2025	Received from	Alerts Jan – Mar 2025
Yellow weather	5	Met Office	19
Amber weather	2	Met Office	1
Red weather	0	n/a	0
Water outages	1	South East Water	5
Flood alerts	5	Environment Agency	46
Flood warnings	0	n/a	6
Severe flood warnings	0	n/a	0
Flood responses	1	Kent Police	5

Alert type	Alerts Apr – Jun 2025	Received from	Alerts Jan – Mar 2025
Flood Guidance Statement	0	n/a	1

#### **4. Met Office statistics**

- 4.1 Full details on the weather statistics for Kent can be found in **Appendix 6**, along with the 3 month outlook for June – August.

#### **5. Future reporting**

- 5.1 The report provided to this committee is comprised of information from KCC, the Environment Agency, and the Met Office.
- 5.2 KCC Resilience and Emergency Planning Service is best placed to report on the information from within the Authority relating to severe weather, flooding, and water supply incidents that KCC has responded to. However, there are benefits from building relationships and engaging with both the Environment Agency and the Met Office. Both agencies are best placed to provide analysis and context for their own data.
- 5.3 It is recommended that the Environment Agency and the Met Office are invited to attend future meetings to report on their own data whilst the Resilience and Emergency Planning Service will report separately on incident response and KCC preparedness for severe weather, flooding, and water supply incidents.

#### **6. Recommendations**

- 6.1 Members to note the warnings received since the last meeting of the Committee; contribute to further planning, and comply with response policy and practice through oversight and debate.
- 6.2 Members to agree invite the Environment Agency and the Met Office to present at future meetings.
- 6.3 Members to agree that the Resilience & Emergency Planning Service focusses on presenting data relating to KCC's response and KCC preparedness for severe weather, flooding, and water supply incidents.

## **7. Contact Details**

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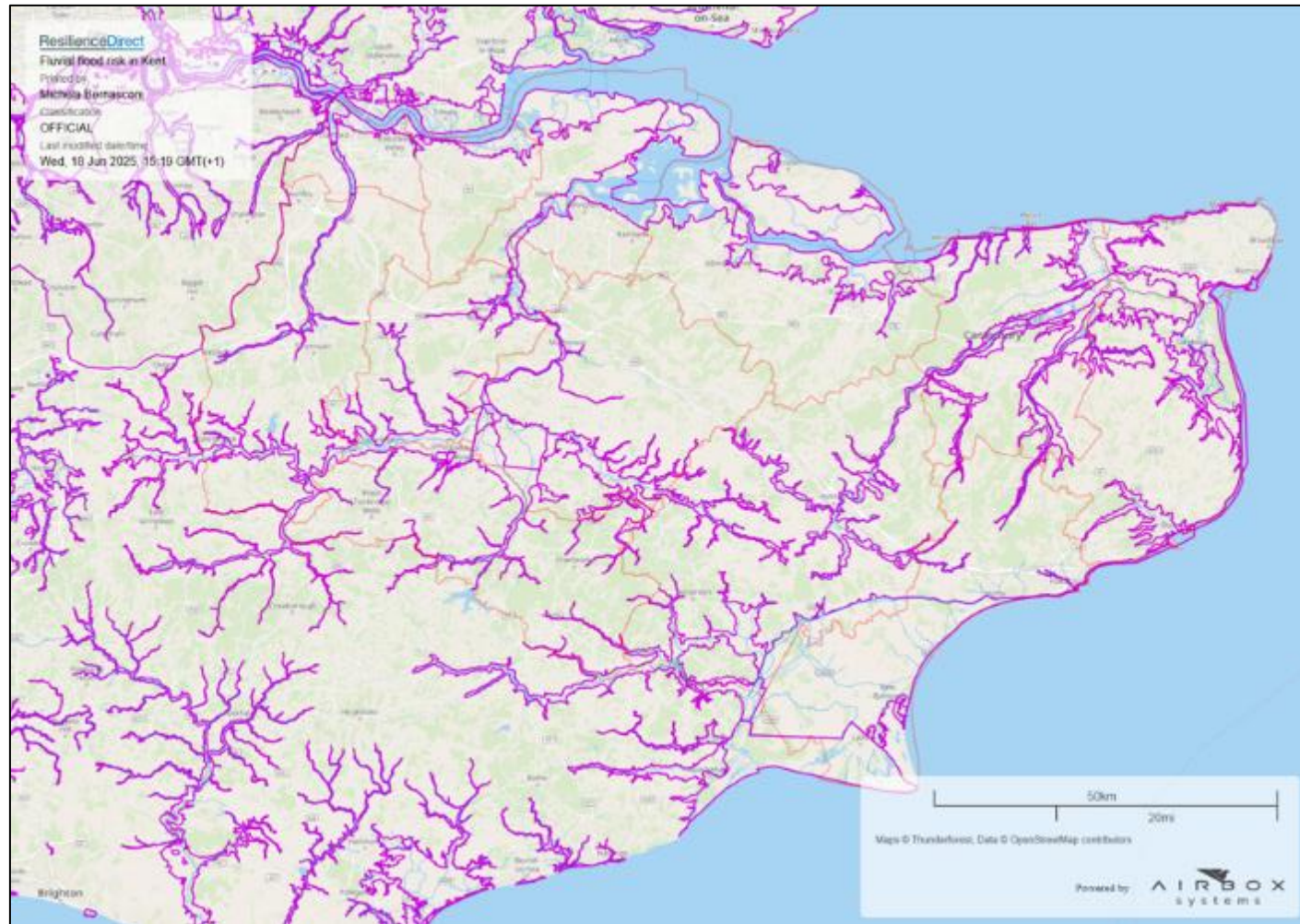
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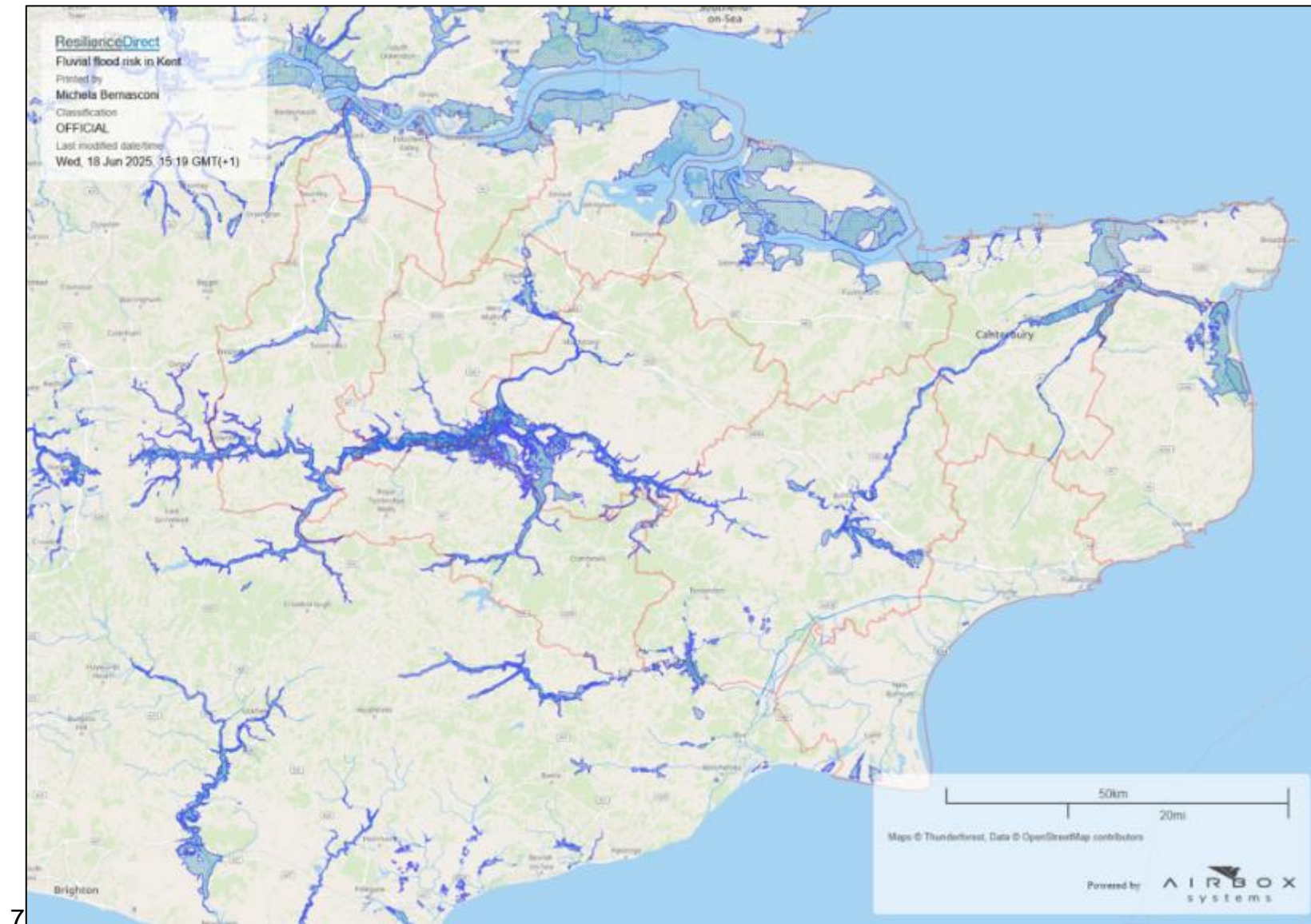
# Appendix 1:

## 1.1 Kent Flood alert areas





### 1.1.1 Kent recorded flood outlines





### 1.1.2 Environment Agency Flood Zone: flood zones 2 & 3



### 1.1.3 Areas at risk of flooding (defended)

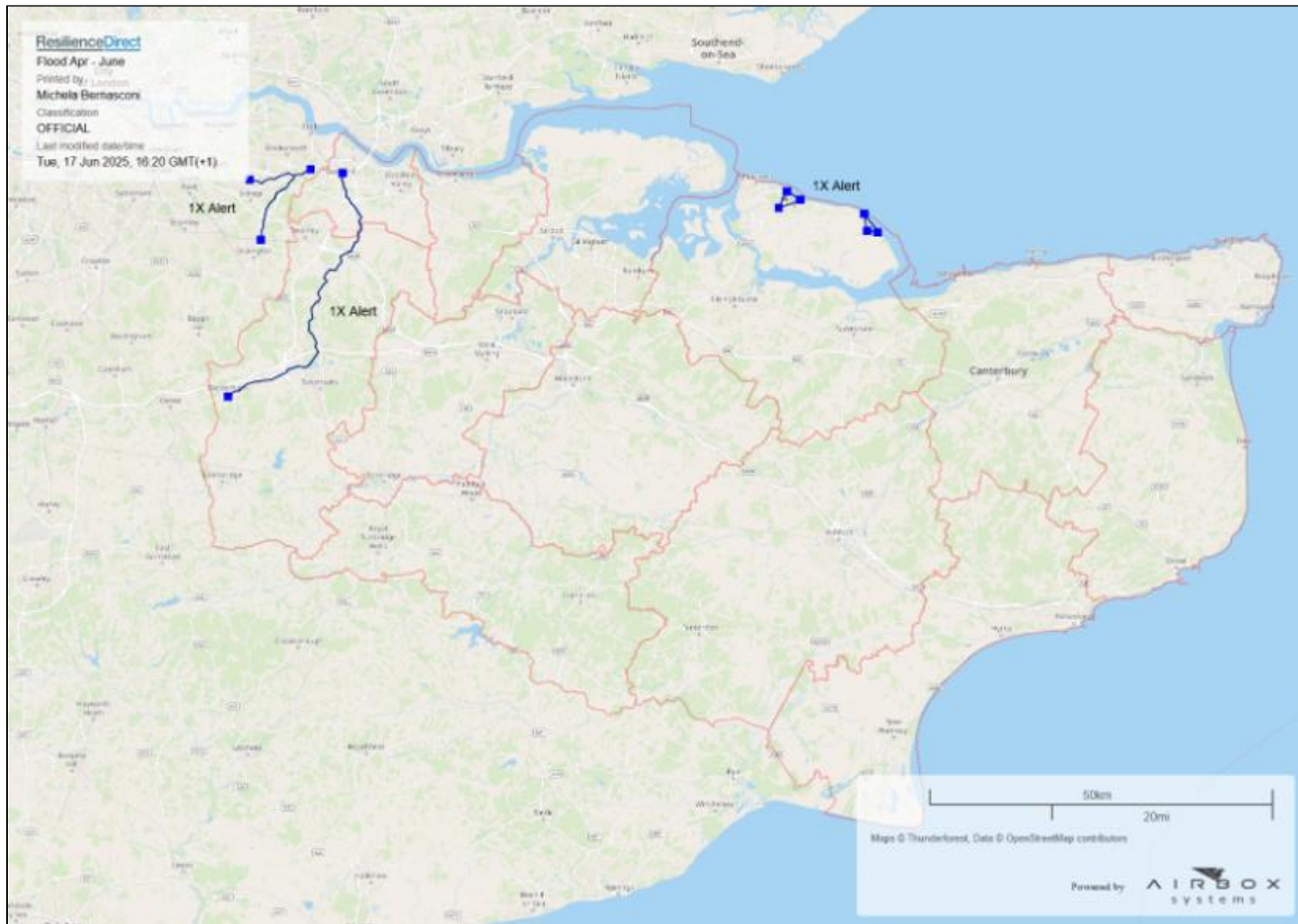




### 1.1.4 Areas at risk of flooding (undefended)



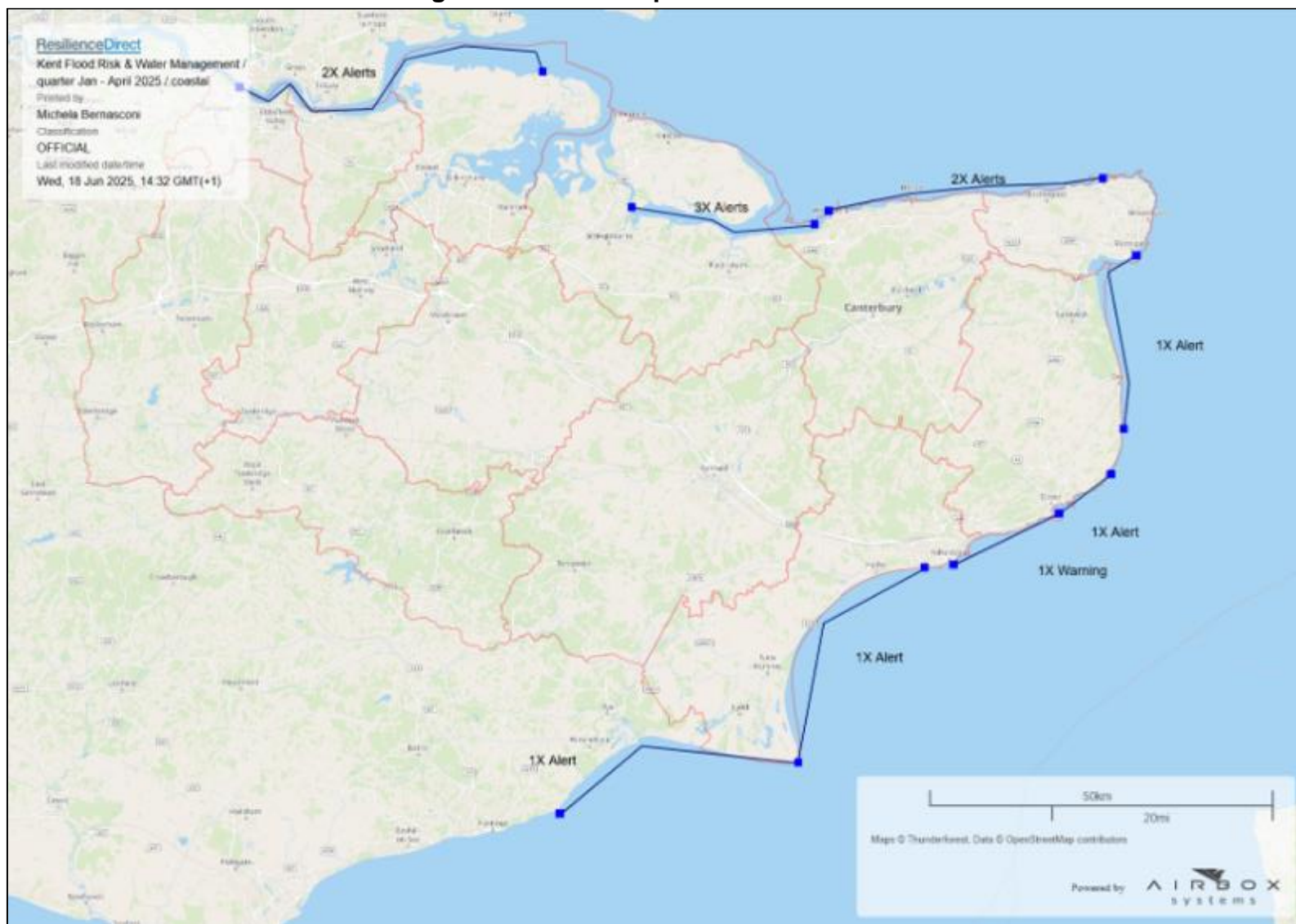
## 1.2 Current quarter (April – June 2025) visual map display of alerts and warnings



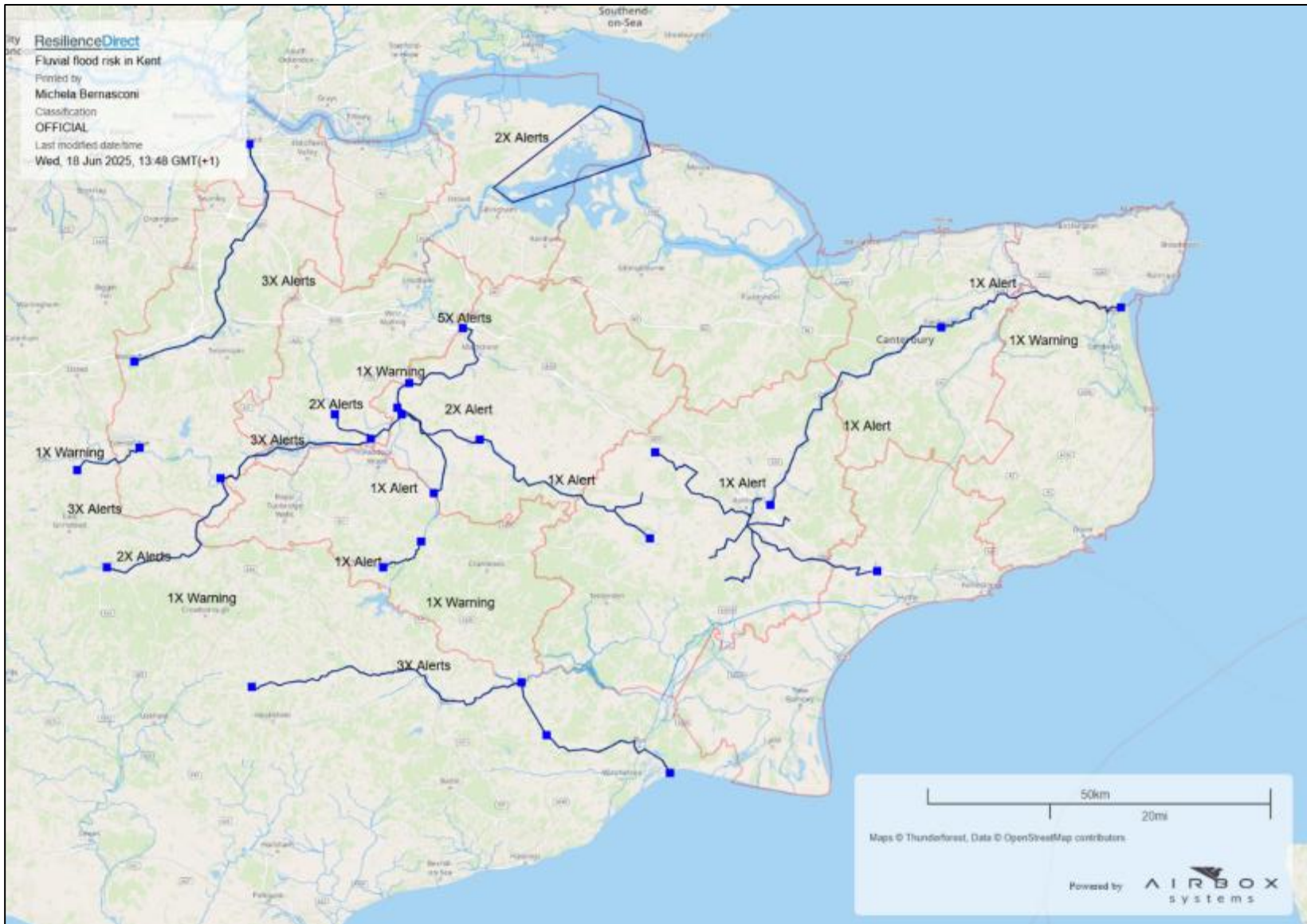


### 1.3 Previous quarter (January – March 2025) visual map display of alerts and warnings

#### 1.3.1 Coastal flood alerts / warnings in Kent for the period Jan – Mar 2025



### 1.3.2 Fluvial flood alerts / warnings in Kent for the period Jan – Mar 2025





## Appendix 2: EA flood alerts and warnings

There were 3 flooding alert areas to be identified for this quarter, and 2 Kent wide alerts.

Warning area	Flood alerts Apr – Jun 2025	Flood warnings Apr – Jun 2025	Flood alerts & warnings Jan – Mar 2025
Fluvial			
Upper River Stour			1
Lower River Stour			1
Tidal River Stour			1 1 warning
River Darent			3
River Cray & Shuttle			
River Rother			3
Tidal Rother			1
River Beult			3
River Teise and Lesser Teise			2 1 warning
River Bourne			2
Rivers Eden and Eden Brook			3 1 warning
Tidal Medway, Medway estuary			2
Lower River Medway			5
Upper River Medway			2 1 warning
Middle River Medway			3
River Medway, Teise & Beult at Yalding			1 warning

Warning area	Flood alerts Apr – Jun 2025	Flood warnings Apr – Jun 2025	Flood alerts & warnings Jan – Mar 2025
Tidal Thames (From Dartford Creek to Thames Barrier)	1		3
Rivers of the Isle of Sheppey			
Kent			
<b>TOTAL</b>	<b>5</b>	<b>0</b>	<b>35 alerts, 5 warnings</b>
<b>COASTAL</b>			
Isle of Sheppey and Coast from Kemsley to Seasalter			3
Coast from Ramsgate to Kingsdown			1
Coast from St Margaret's at Cliffe to Sandgate			1 1 warning
Coast from Dartford to Allhallows			2
Coast from Whitstable to Margate			2
Coast from Sandgate to Dungeness			1
Coast from Fairlight to Dungeness (including tidal Rother)			1
Coast from Littlestone Golf Course to Dungeness			
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>11 alerts, 1 warnings</b>

## 2.1 Rainfall

Figure 1 - Rainfall in England for April and comparison to 3, 6 and 12 months

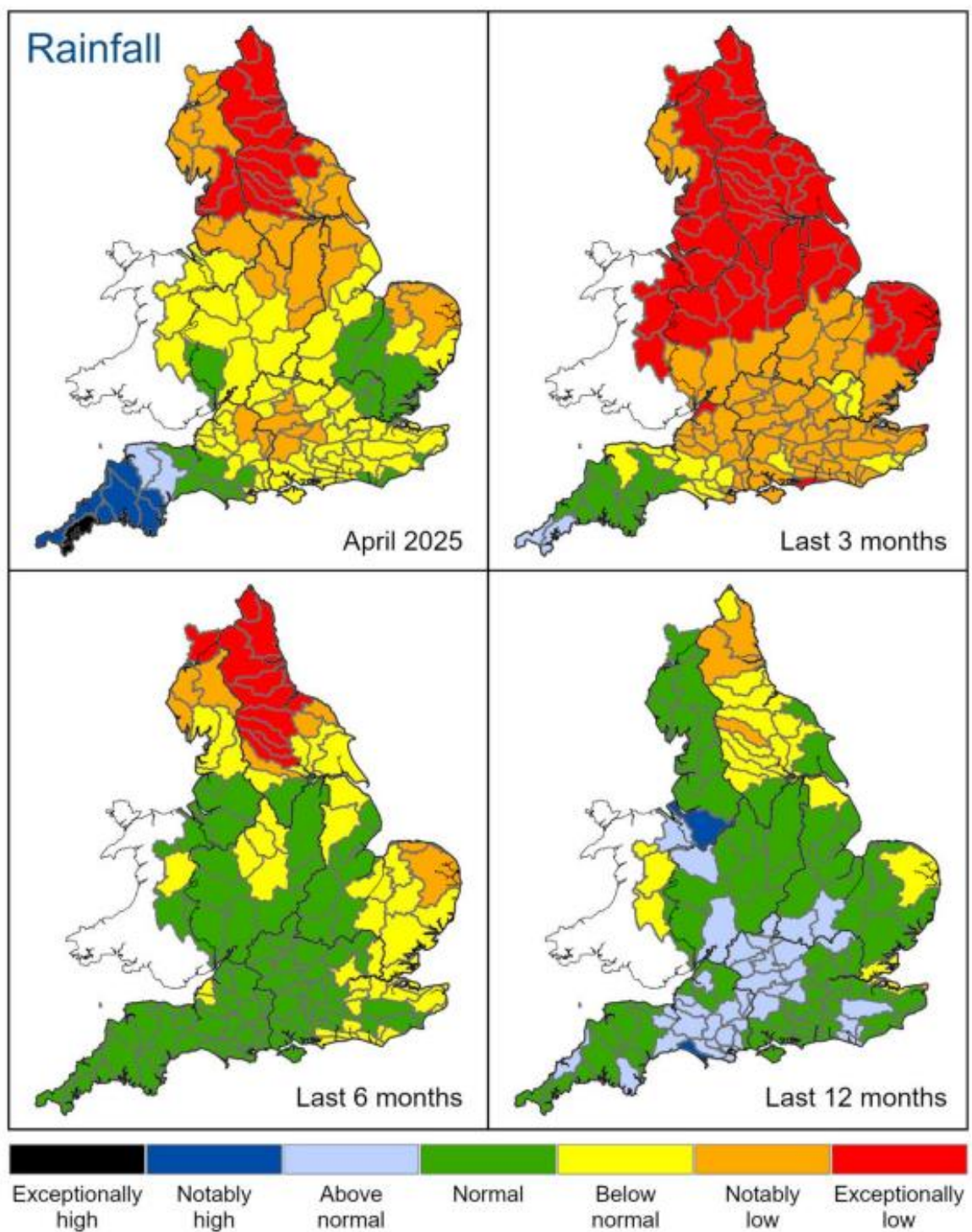
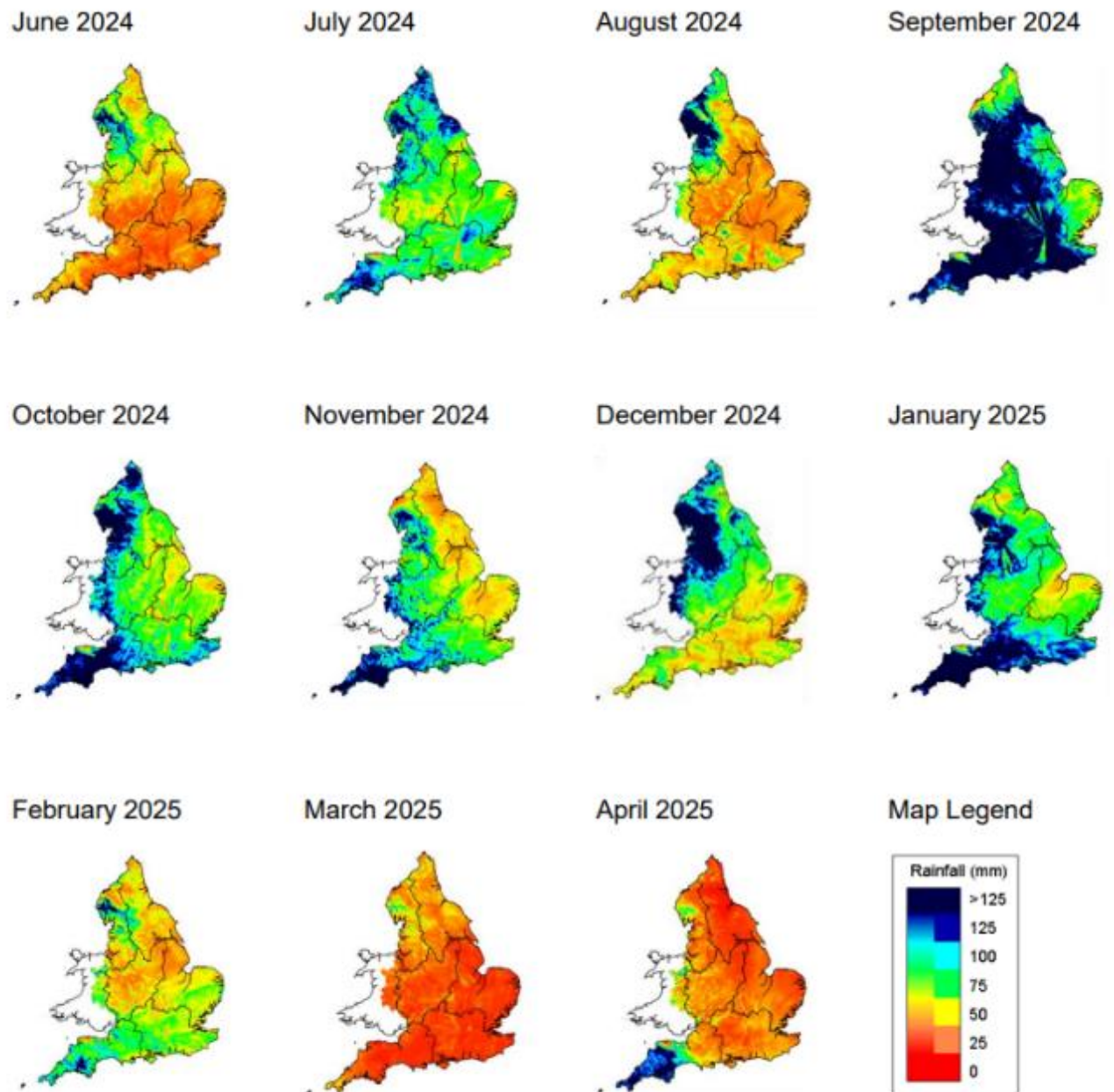


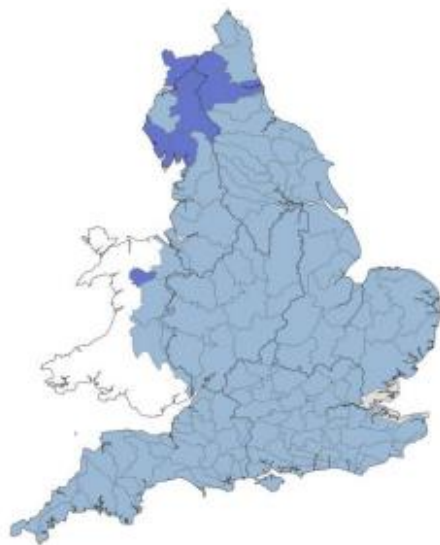
Figure 2 Monthly rainfall across England and Wales for the past 11 months.



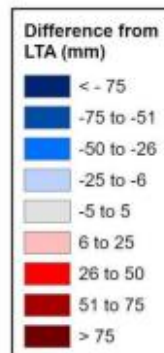
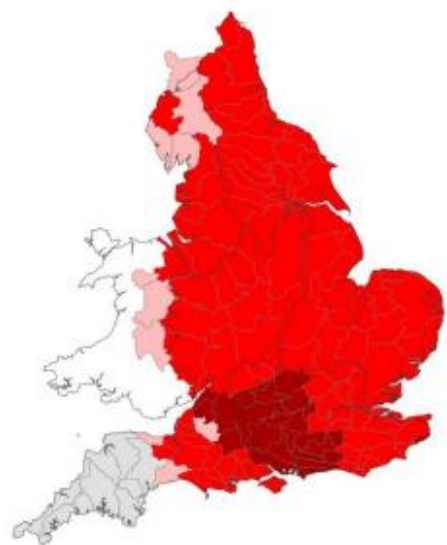
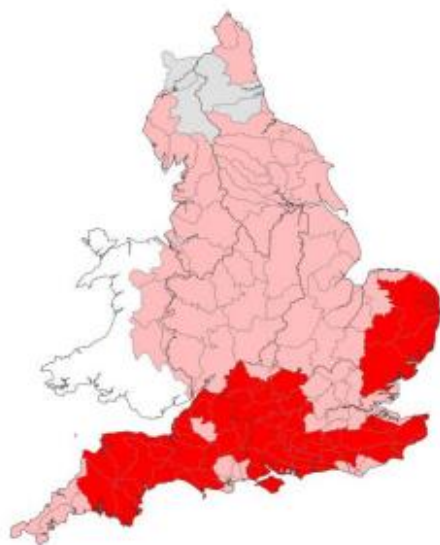
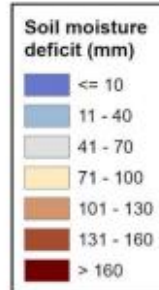
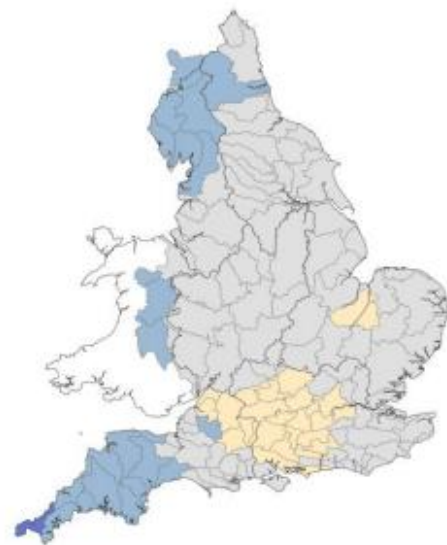
## 2.2 Soil moisture deficit

Figure 3 Soil moisture deficits for weeks ending, 02 April 2025 (left panel) and 30 April 2025 (right panel).

End of March 2025



End of April 2025



(Source: Met Office. Crown copyright, 2025). Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

The top row shows actual soil moisture deficits (mm) and bottom row shows the difference (mm) of the actual from the 1961 to 1990 long term average soil moisture deficits. Calculated from MORECS data for real land use



## 2.3 River flow

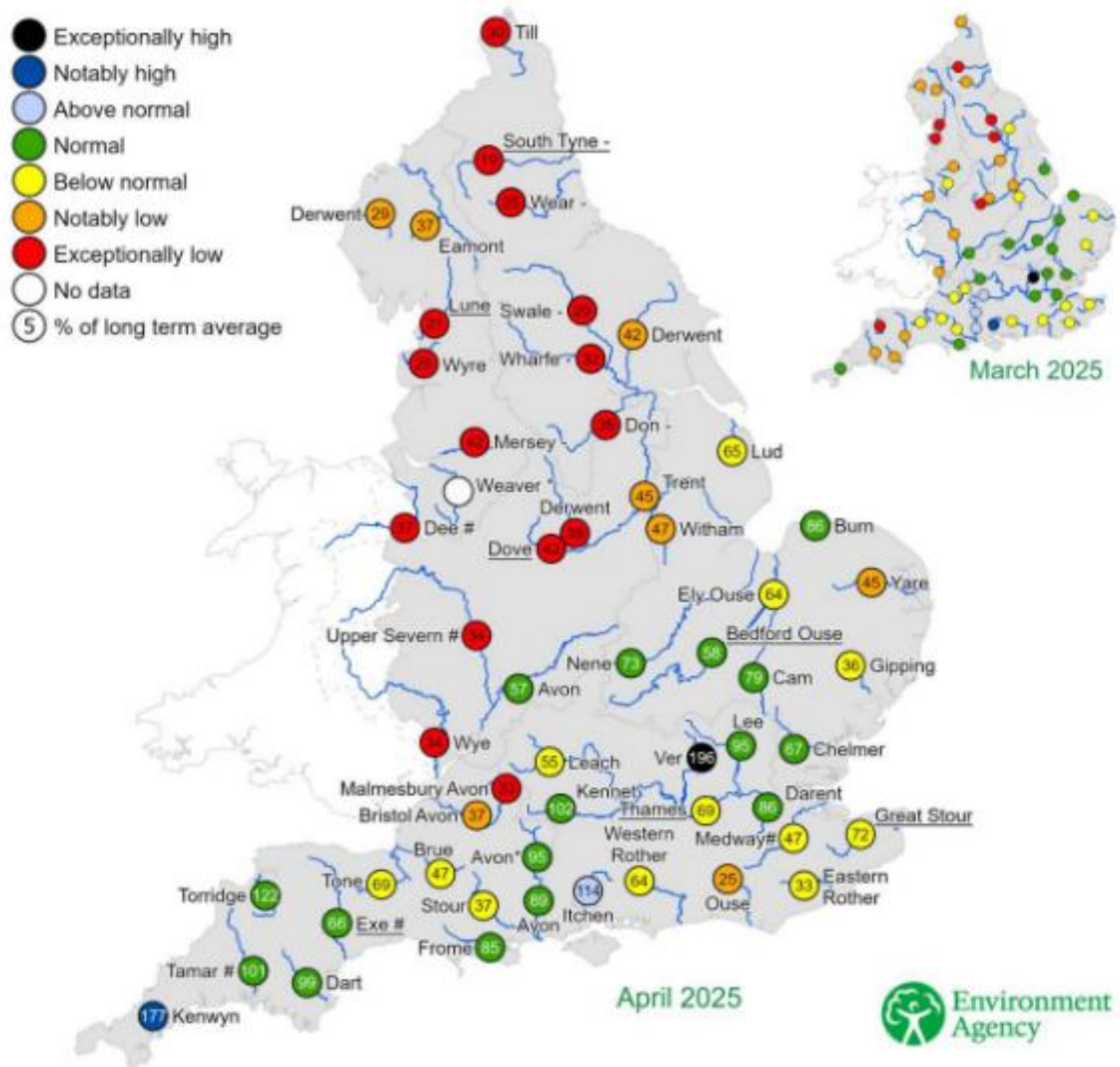
Figure 4 - Monthly mean river flow for indicator sites for March 2025 and April 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic March and April monthly means.

Kent sites below normal flow:

- Great Stour
- Medway

Kent sites at normal flow:

- Darent



(Source: Environment Agency). Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

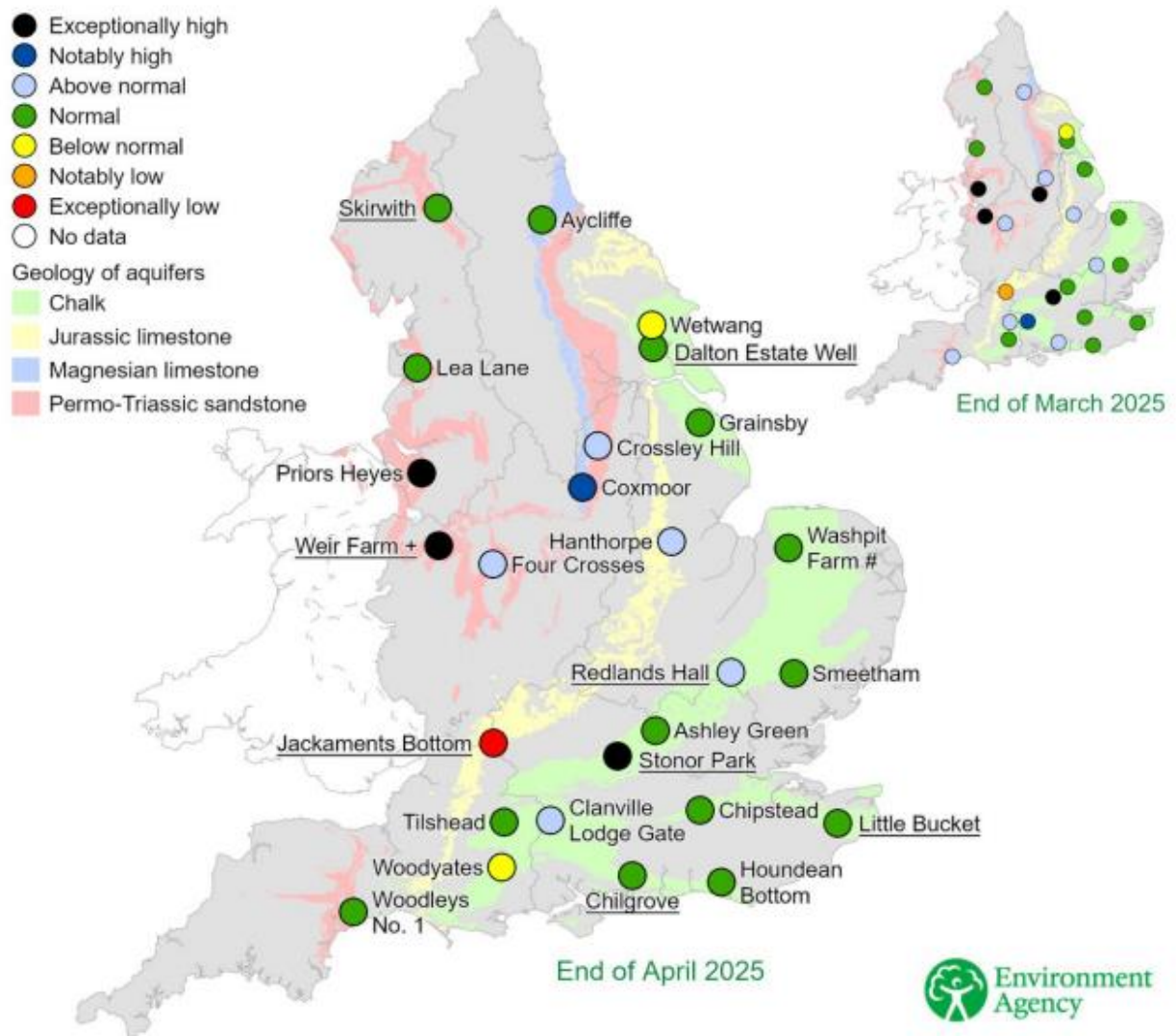


## 2.4 Groundwater levels

Figure 5 Groundwater levels for indicator sites at the end of March 2025 and April 2025, classed relative to an analysis of respective historic March and April levels.

Kent sites at normal levels:

- Little Bucket

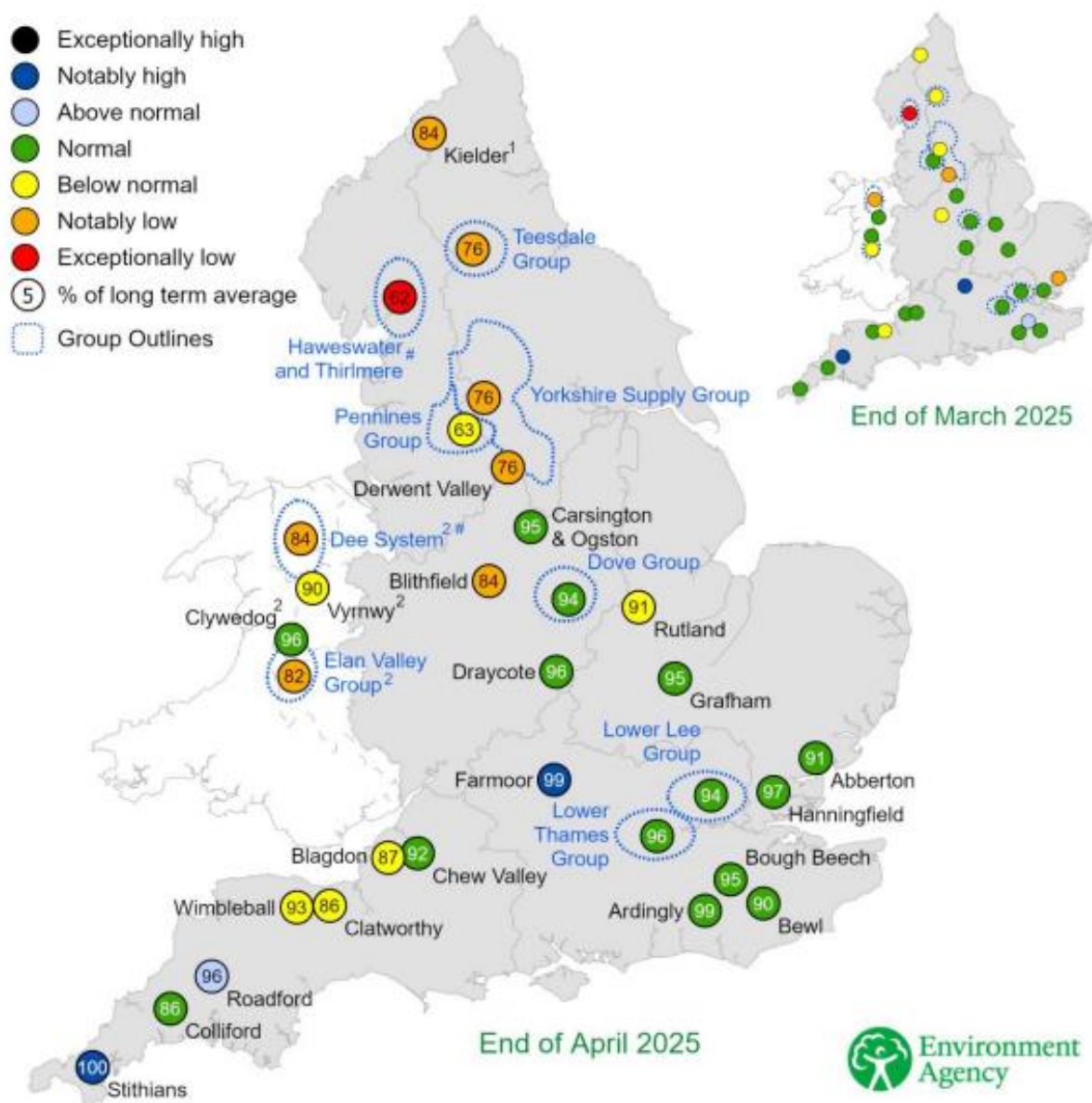


## 2.5 Reservoirs

Figure 6 Reservoir stocks at key individual and groups of reservoirs at the end of March 2025 and April 2025 as a percentage of total capacity and classed relative to an analysis of historic March and April values respectively

Kent sites at normal levels:

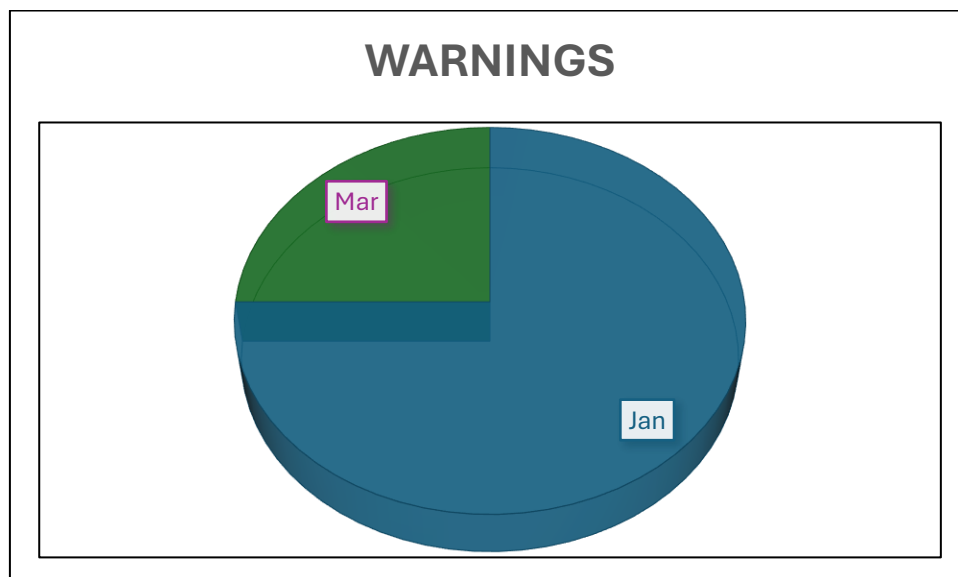
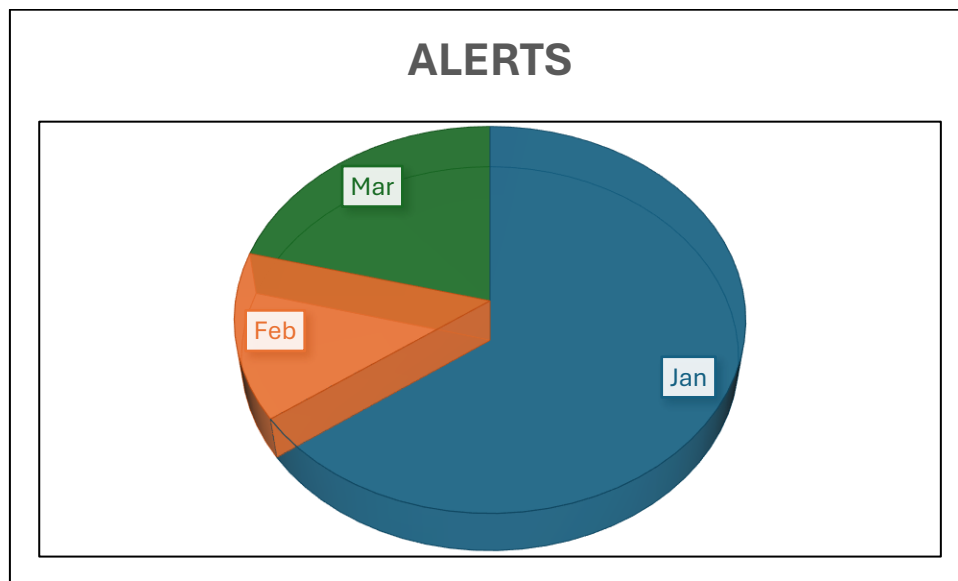
- Bewl
- Ardingly
- Bough Beech



## Appendix 3: EA Flood Alerts and Warnings Quarter comparison

Time period	Coastal alerts	Coastal warning	Total Coastal	River Alerts	River Warnings	River Total	Kent wide	Overall total
Current quarter (Apr – Jun 2025)	0	0	0	3	0	3	2	5
Jan – Mar 2025	11	1	12	32	5	37	3	52
Oct – Dec 2024	15		15	29		29		44
Jul – Sep 2024	1		1	14	3	17		18
Apr – Jun 2024	18	1	19	10	1	11		30
Jan – Mar 2024	5		5	84	5	89		94
Previous year (1 <sup>st</sup> Jan – 31 <sup>st</sup> Dec 2024)	79	2	81	144	9	153		234
Jan – Dec 2023	39		39	74	2	76		115
Jan – Dec 2022	41	1	42	68	11	79		121

**Appendix 3.1: EA Flood Alerts and Warnings – proportion of notifications for the previous quarter (Jan – Mar 2025)**



**Appendix 4: Thames Barrier Closures**

	Current quarter (Apr – Jun 2025)	Previous year for current quarter (Apr-Jun 2024)	Previous quarter (Jan – Mar 2025)	Previous year for previous quarter (Jan-Mar 2024)
Operational closures	0	10	0	5
Test closures	3	0	3	12

## Appendix 5: Met Office Weather Warnings current quarter (Apr-Jun 2025)

Weather	Number of warnings	Number of events
<b>Current quarter Apr – Jun 2025</b>		
Thunderstorm	4	4
Rain	0	0
Fog	0	0
Ice	0	0
Wind	0	0
Heath Health	3	3
<b>Previous quarter Jan – Mar 2025</b>		
Thunderstorm	0	0
Rain	3	3
Fog	1	1
Ice	4	4
Wind	3	3



## Kent Warnings – April to June 2025\*

1 Warnings issued (including updates): 2 Yellows, 0 Amber, 0 Red

- 1 Low Impact, 1 Medium Impact, 0 High Impact

Weather Element	Number of Warnings	No of Different Events	Dates covered by Events
Thunderstorm	2	2	May: 12 <sup>th</sup> June: 7 <sup>th</sup>

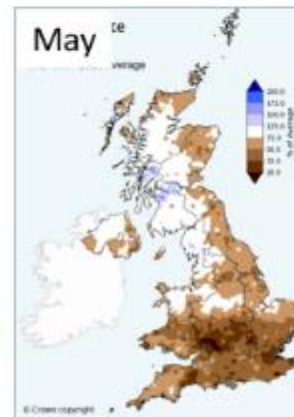
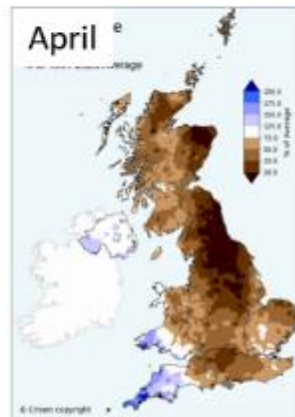
\*Up to and including 10<sup>th</sup> June



## Kent Statistics – April to June 2025

Month	Rain	Mean Max Temp
April	64%	+2.2 C
May	35%	+1.8 C
June (1st to 9th)	45%	-1.4 C
Spring (March to May)	38%	+2.0 C

Compared to 1991-2020 long Term Average



### Spring 2025 - Kent

- 4<sup>th</sup> driest on record (going back to 1836)
- 2<sup>nd</sup> sunniest on record (going back to 1910)
- 4<sup>th</sup> warmest on record (going back to 1832)





# 3-month Outlook – June to August

<https://www.metoffice.gov.uk/services/government/contingency-planners/index>

## Temperature



## Precipitation



## Wind



## Summary

- The chance of a hot summer is higher than normal
- This brings an increased risk of heatwaves and heat-related impacts
- The chances of a wet or a dry summer are evenly balanced