Monthly water situation report: East Anglia

1 Summary – June 2025

June was a dry month for East Anglia, receiving between 44% and 86% of the long term average rainfall. Most rain fell in the first week of the month, allowing soil moisture deficits to briefly recover to notably high levels before returning to extremely high levels by the end of the month. River flows continue to recede with only the Rivers Rhee and Ivel maintaining normal rates, and all other rivers ranging from below normal to extremely low flows. Groundwater levels also continue to recede, most ranging between normal and notably low levels. Therfield Rectory is the exception which remains notably high, sustaining the high flows of the Rhee and Ivel. All public water supply reservoirs are above 75% supply capacity.

1.1 Rainfall

Rainfall this past month ranged from 44 to 86% of the long term average [LTA] for the month, over 60% of the regional average occurring between the 3rd and the 7th of the month. The eastern catchments of East Suffolk and Broadland Rivers were the wettest, receiving normal amounts of rainfall for the time of year while all other catchments received below normal rainfall. The cumulative 3 months and 6 month totals are notably or significantly low across all catchments. 12 month cumulative totals range from normal in western catchments to notably low in the south and northeast.

1.2 Soil moisture deficit and recharge

After decreasing briefly at the beginning of the month with the rainfall, soil moisture deficits [SMD] have continued to rise through June 2025. Most regions have an SMD of 101-130mm while Central Area Fenland and South Essex catchments are above 130mm. The SMD for East Essex is 6-25mm greater than the LTA for the month, and all other catchments are 26-50mm higher. While the brief decrease lowered regional average SMD to notably high, the average returned to exceptionally high, ending the month at 120.8mm.

1.3 River flows

River flows were varied across East Anglia during June, ranging between 15 and 82% of the LTA. With high groundwater levels around Therfield, both the Ivel and Rhee remain at normal flows with most other rivers now at below normal or notably low rates. The Waveney, Little

Ouse, Ely Ouse and Colne are all exceptionally low, but the Ely Ouse stands out for being 15% of the LTA while the other rivers sharing its banding range from 34% to 39%.

1.4 Groundwater levels

Groundwater levels continue to decline with the dry weather of recent months, receiving little recharge. More than half of our groundwater monitoring sites are now reading below normal or notably low levels for the time of year. Sites with normal levels are mostly found at the south of the chalk unit, and Therfield Rectory which is notably high for the time of year in the southwest.

1.5 Reservoir stocks

At the end of June all reservoir stocks were below their operational curves to the time of year. All were above 80% capacity with the exception of Hanningfield which is at 78.9% capacity.

1.6 Forward look

1.6.1 Probabilistic ensemble projections for river flows at key sites

River flow forecasts for September reflect the dry month we have just experienced, with an almost certain probability of exceptionally low. Flows are expected to recover by winter, with a high probability of above normal flows this December.

1.6.2 Probabilistic ensemble projections for groundwater levels in key aquifers

As with river flows, the groundwater forecast for September reflects the current situation with most groundwater levels in the normal to below normal range. There is a good probability that Therfield will have fallen from notably high to above normal levels. The forecast for March 2026 shows a slight chance of above normal flows, but a higher probability of below normal or lower levels for all sites except Therfield, which has a high probability of normal levels.

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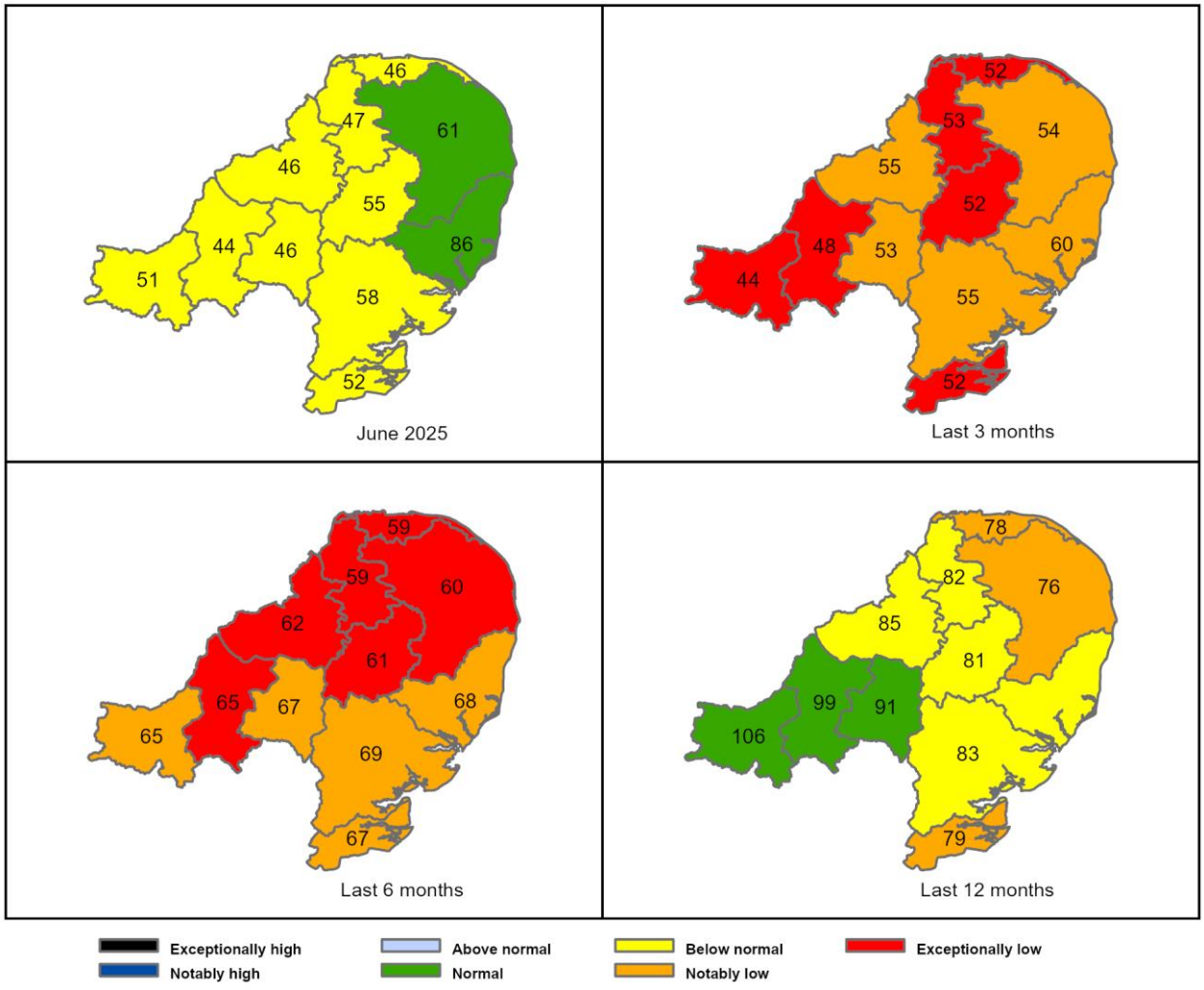
2 Rainfall

2.1 Rainfall map

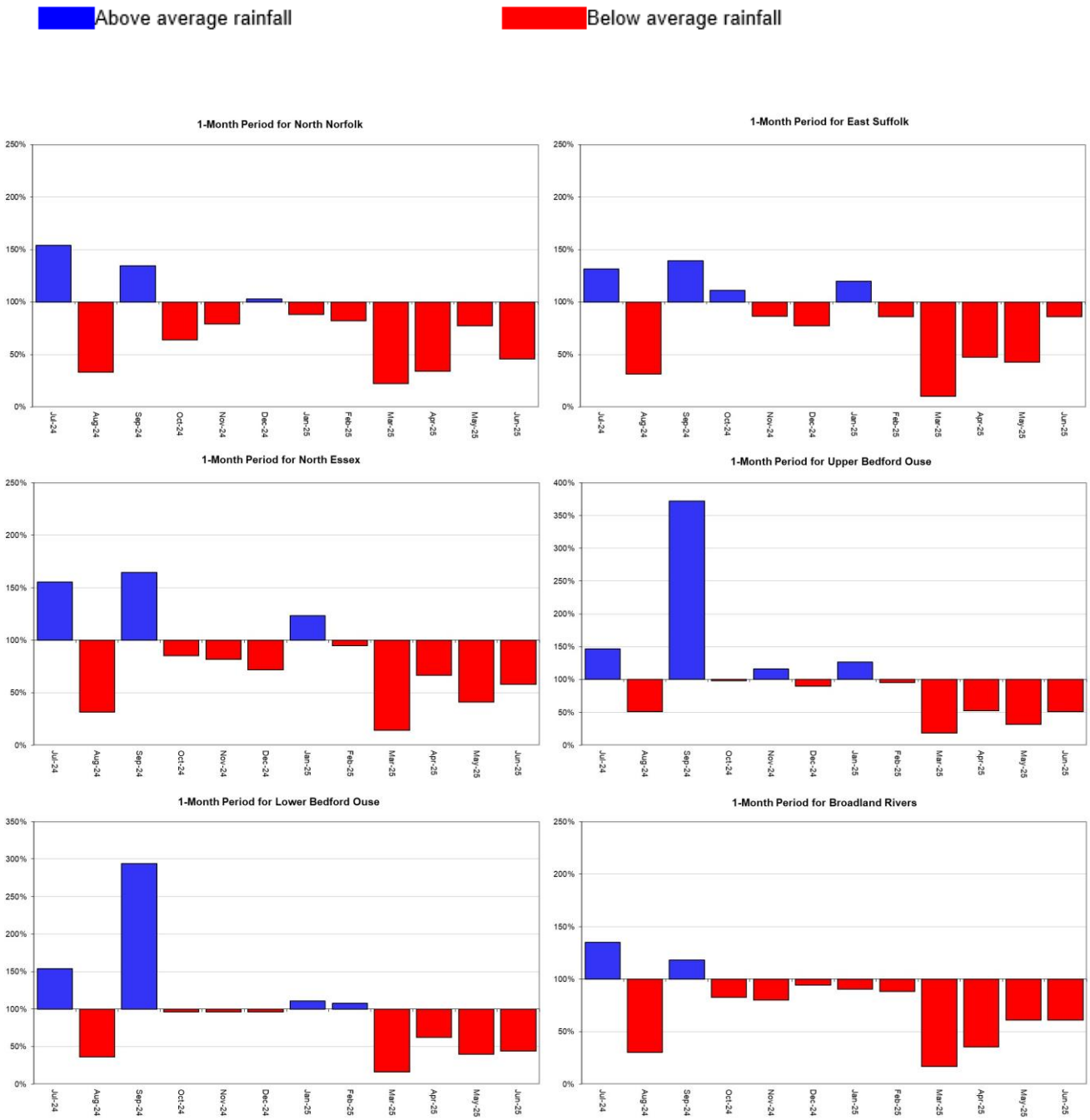
Figure 2.1: Total rainfall for hydrological areas across East Anglia, expressed as a percentage of long term average rainfall for the current month (up to 30 June 2025), the last 3 months, the last 6 months, and the last 12 months. Category classes are based on an analysis of respective historic totals. Table available in the appendices with detailed information.

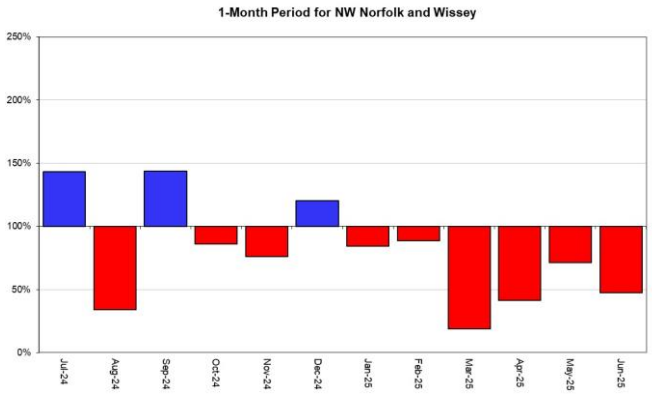


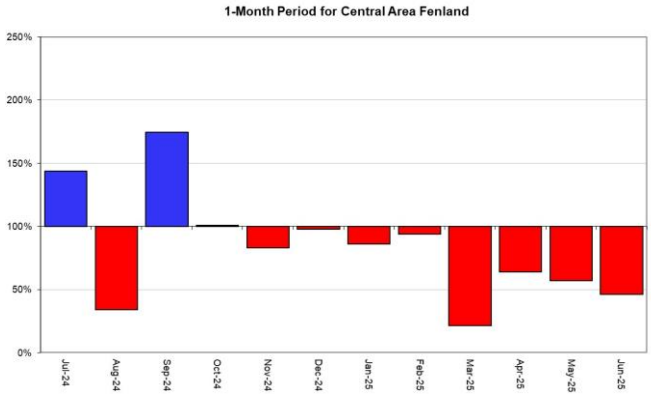
HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

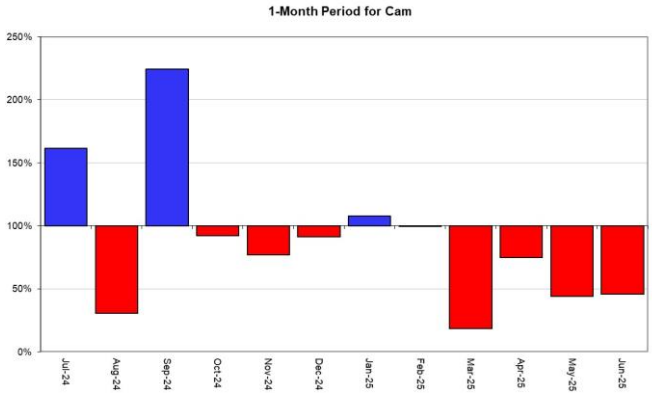
2.2 Rainfall charts

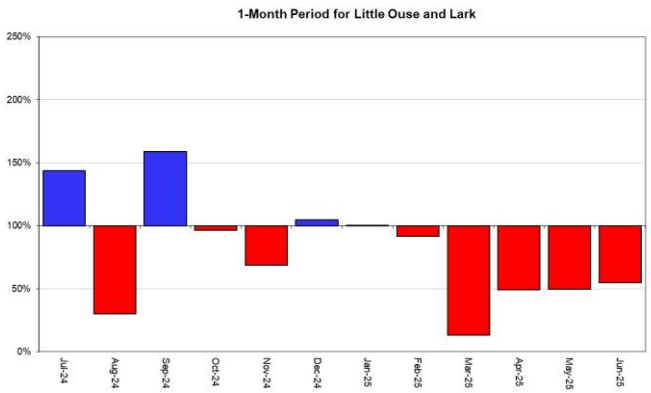
Figure 2.2: Monthly rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average for each region and for England.

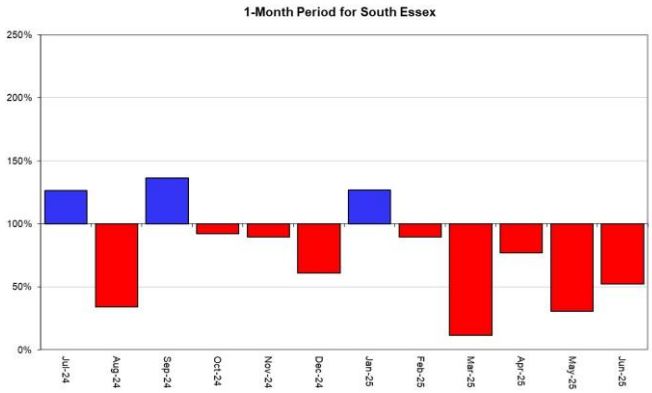






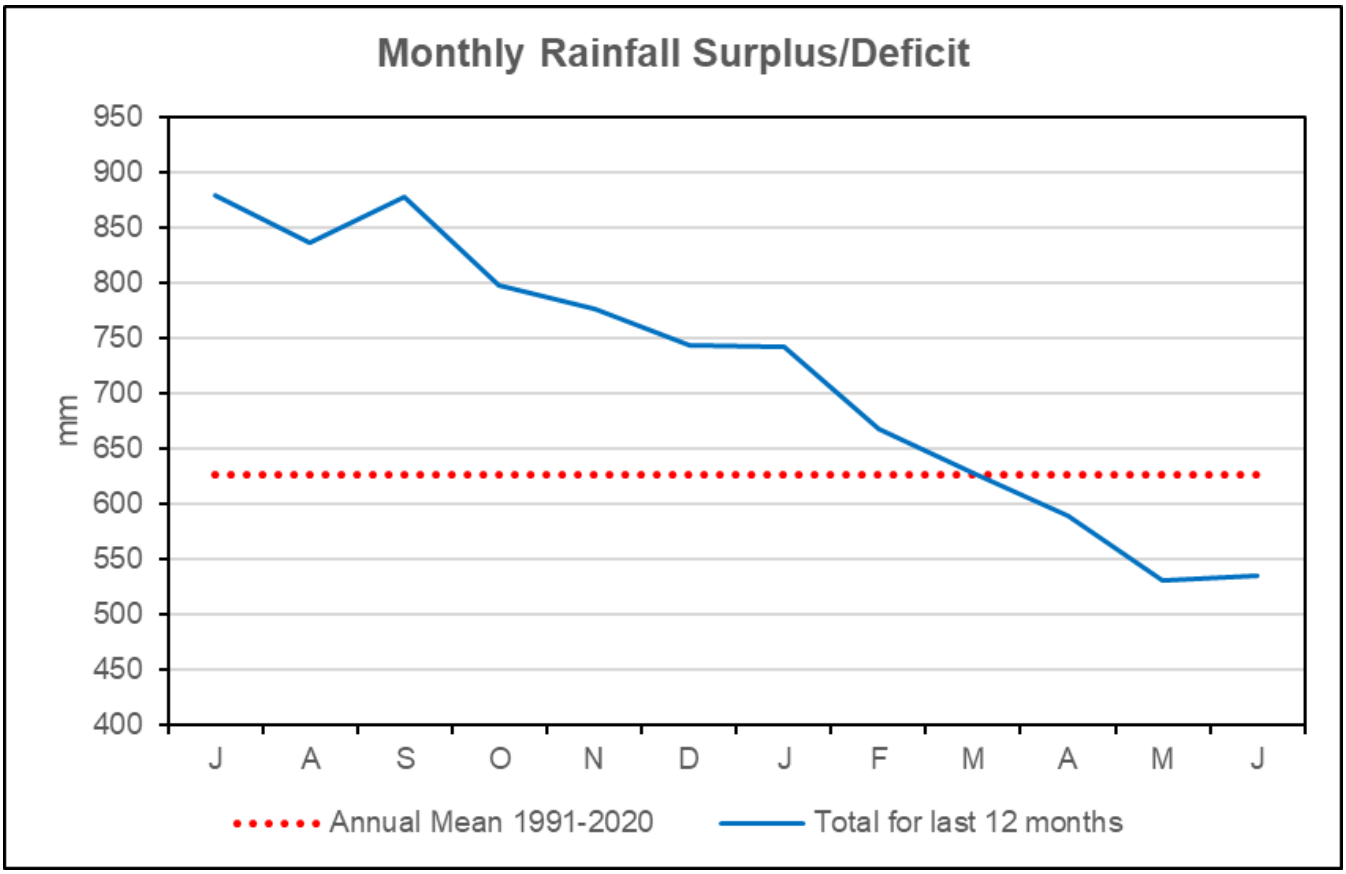






HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

2.3 Monthly rainfall surplus deficit chart



HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

3 Soil moisture deficit

3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficit values for 30 September 2022. Values based on the weekly MORECS data for real land use.

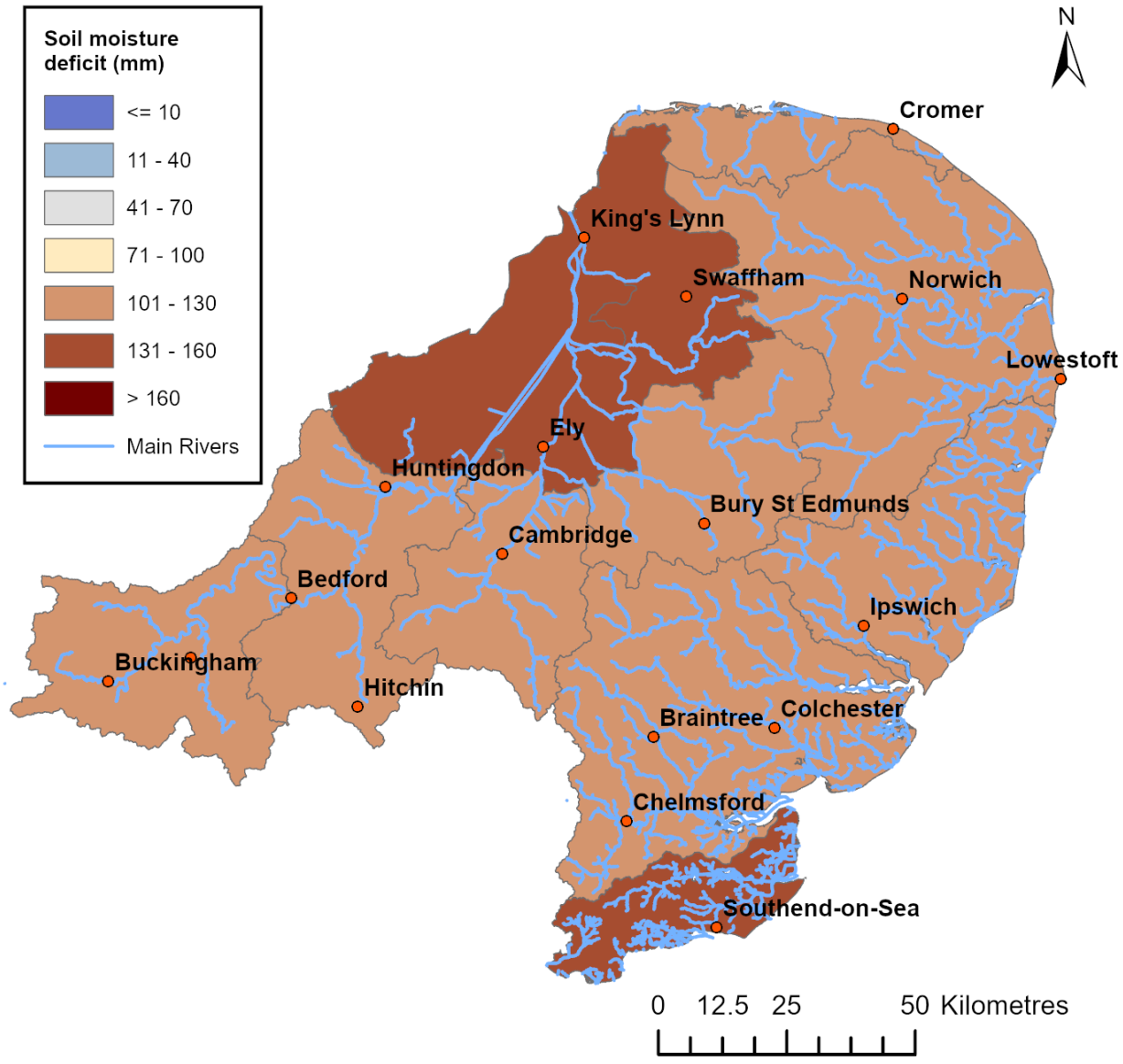
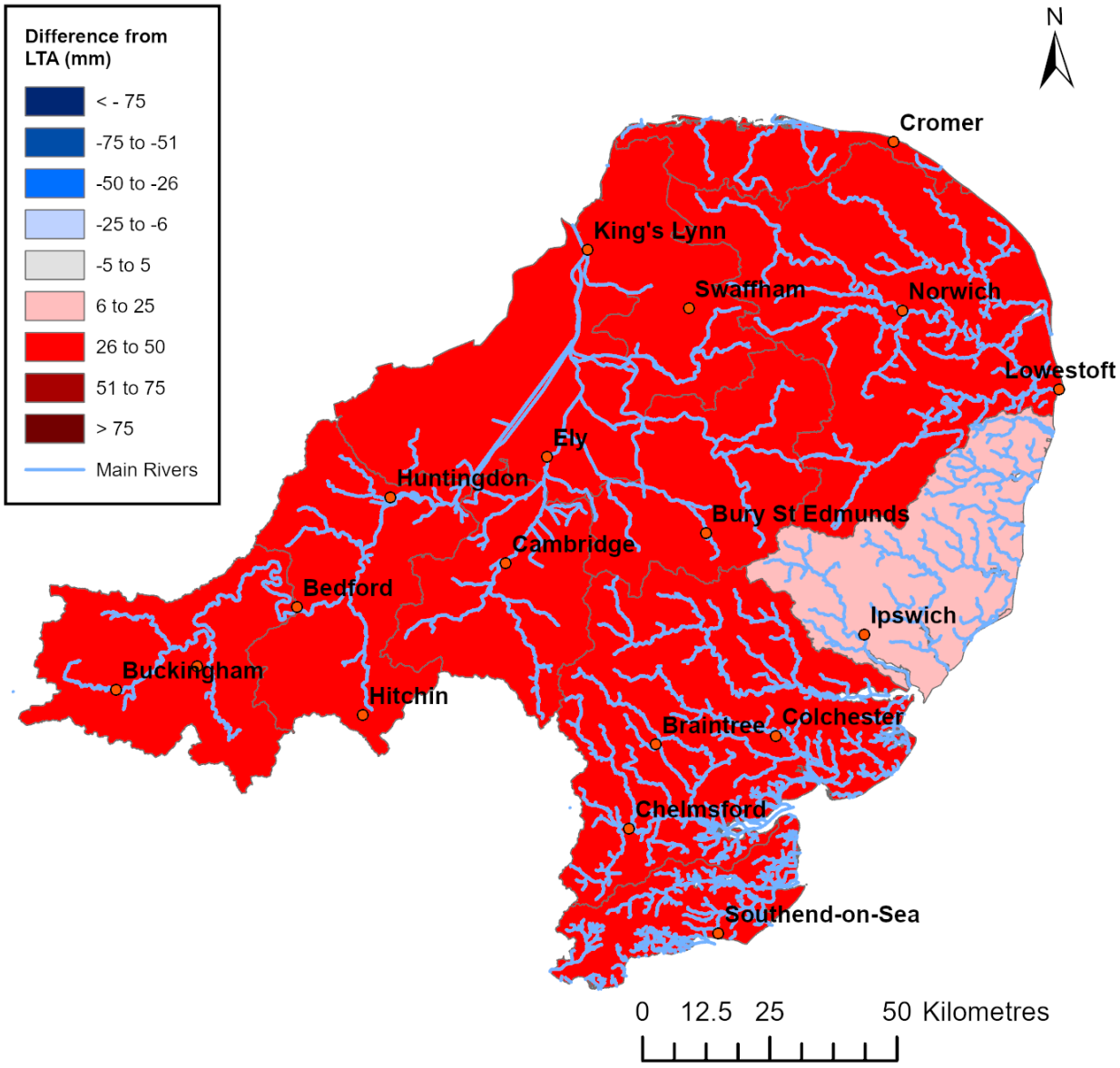
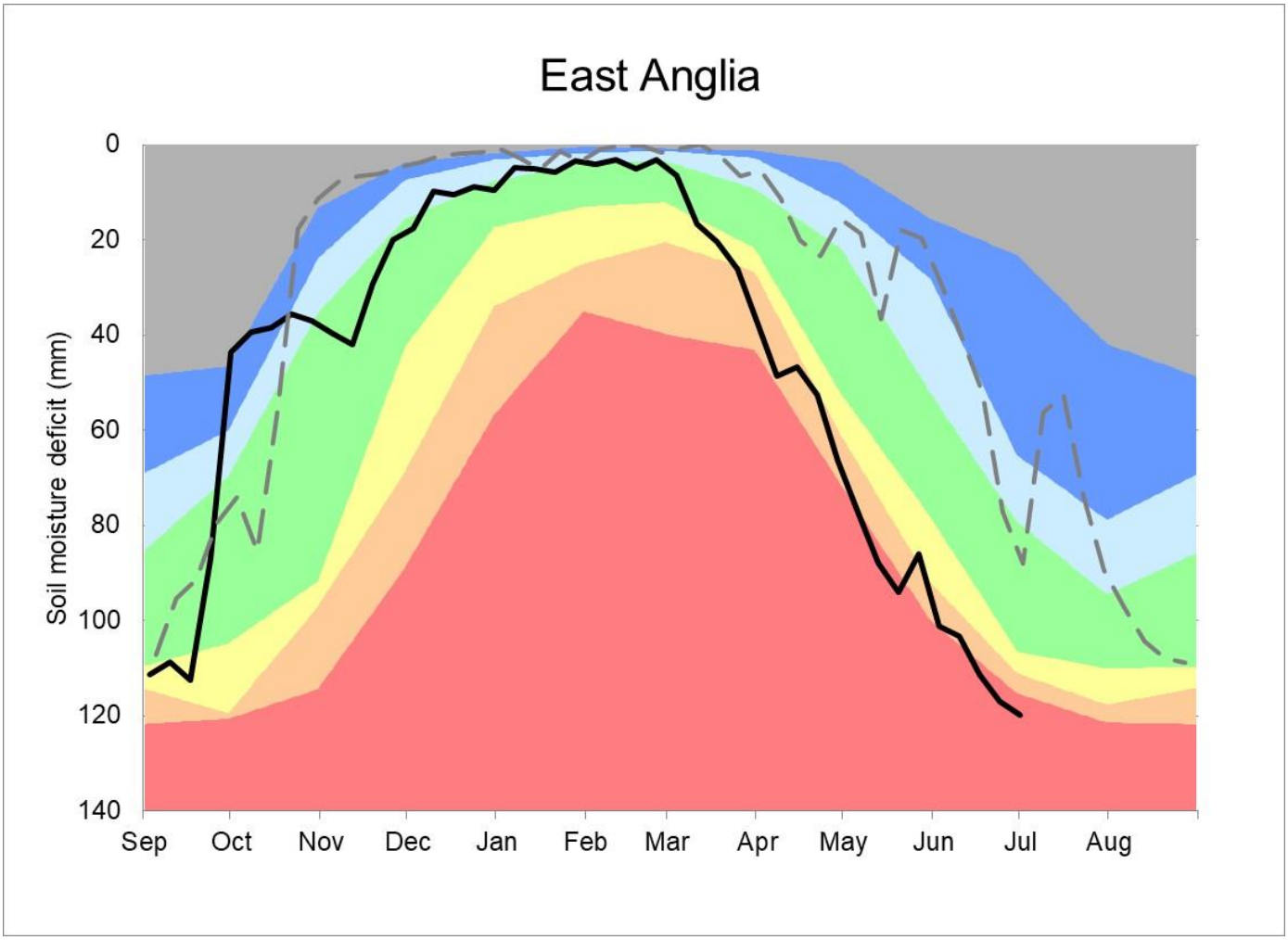


Figure 3.2: Soil moisture deficit difference from long term average for 30 June 2025. Values based on the weekly MORECS data for real land use.



3.2 Soil moisture deficit charts

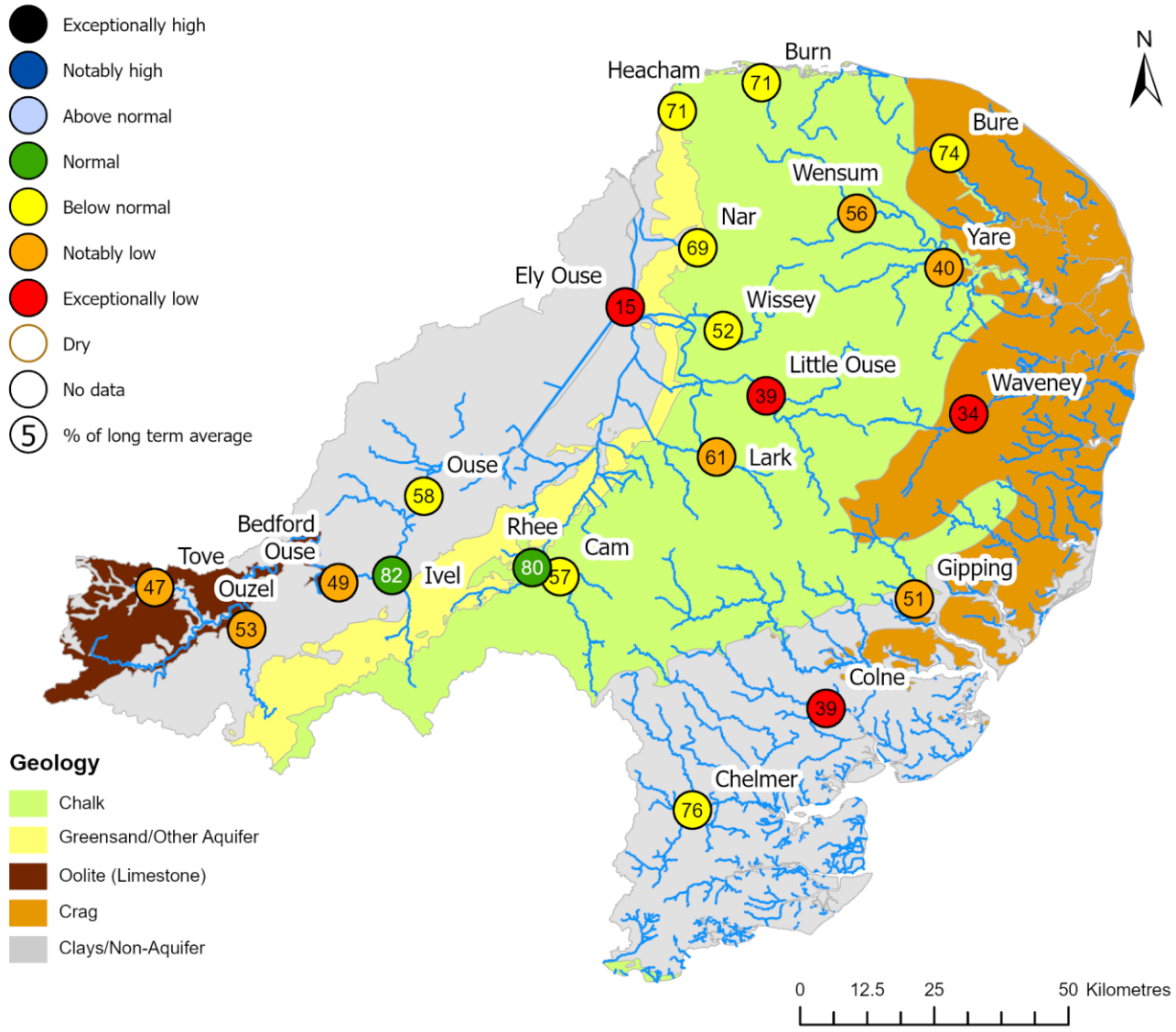
Figure 3.3: Latest soil moisture deficit compared to an analysis of historic 1991 to 2020 long term data set. Weekly MORECS data for real land use.



4 River flows

4.1 River flows map

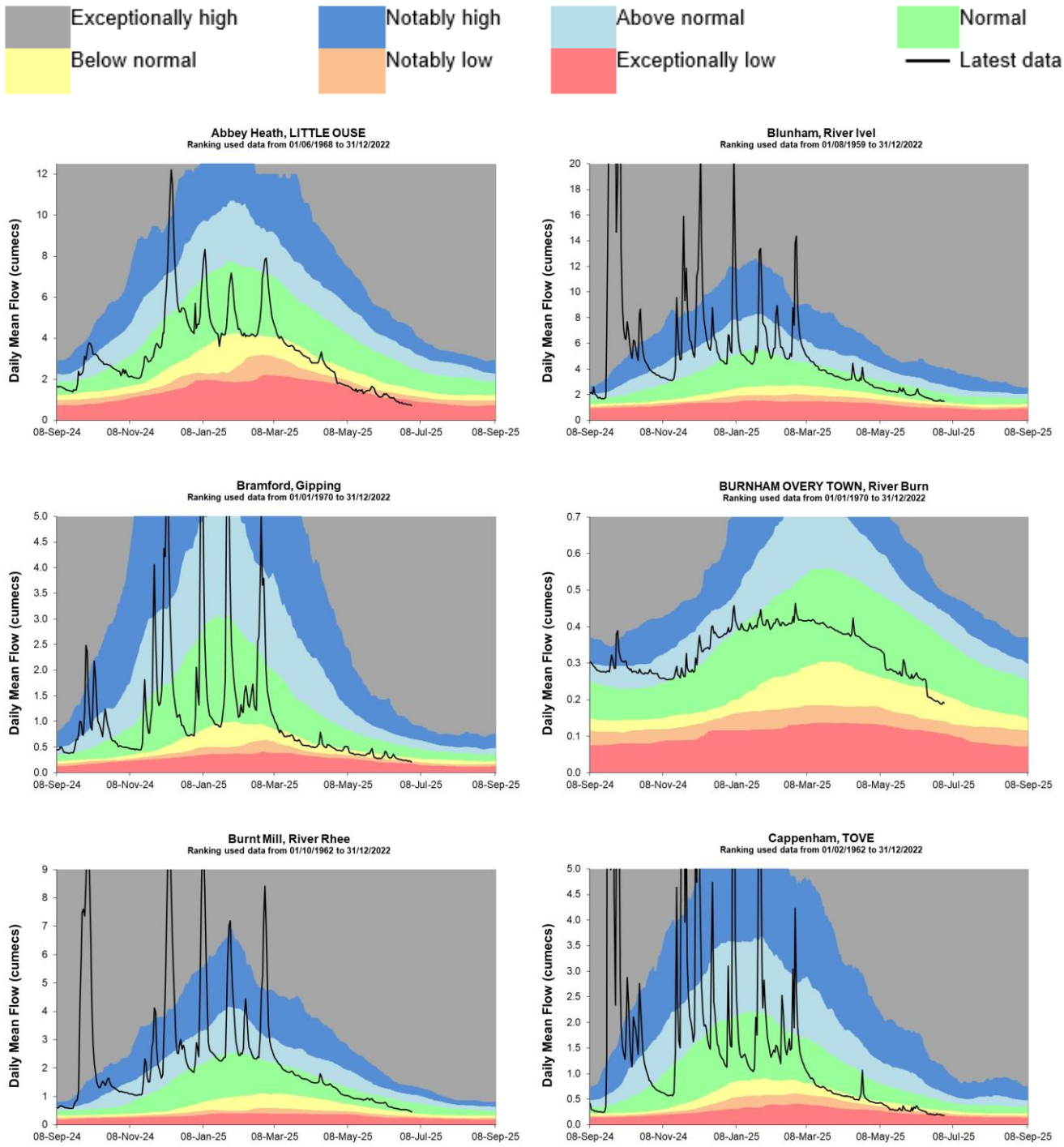
Figure 4.1: Monthly mean river flow for indicator sites for June 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic September monthly means Table available in the appendices with detailed information.

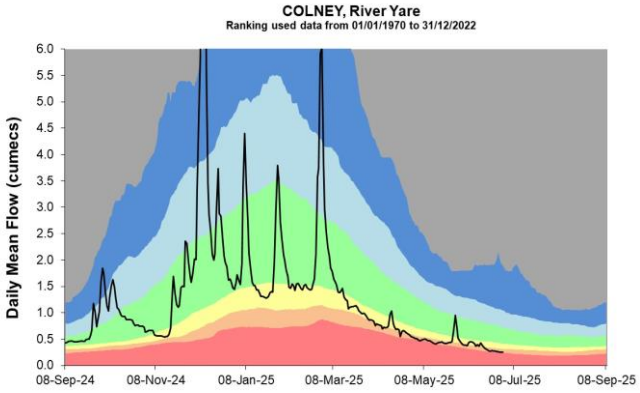


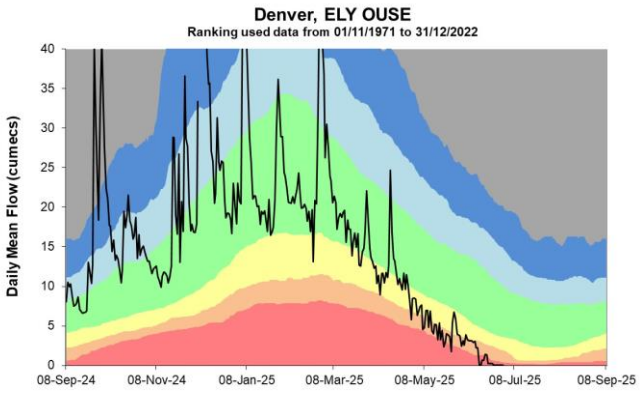
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

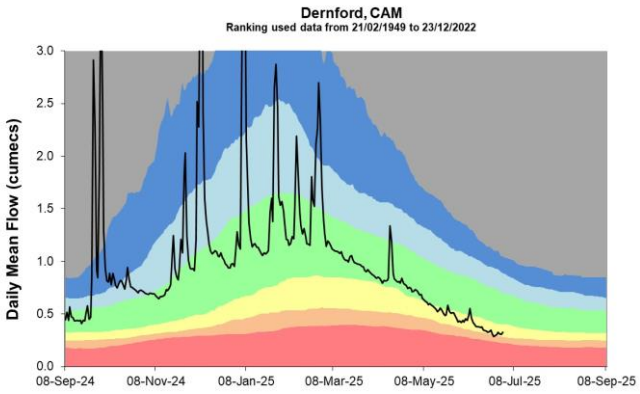
4.2 River flow charts

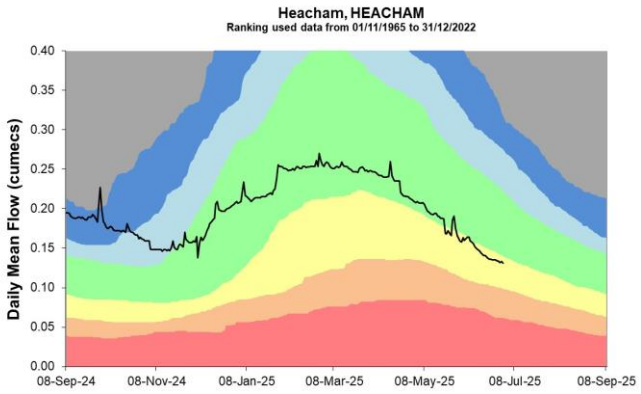
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

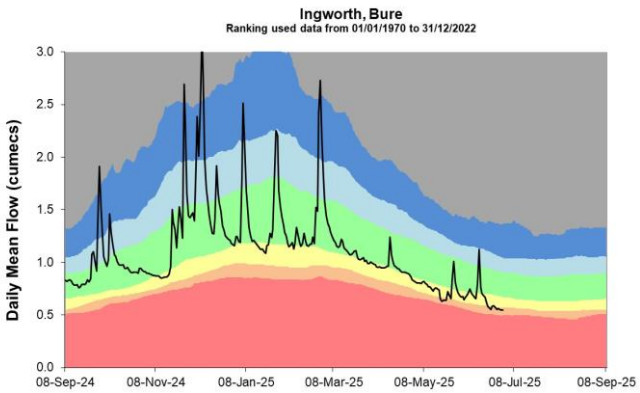


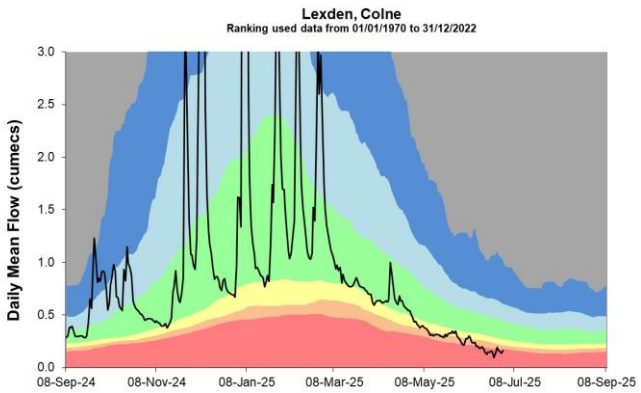

COLNEY, River Yare
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

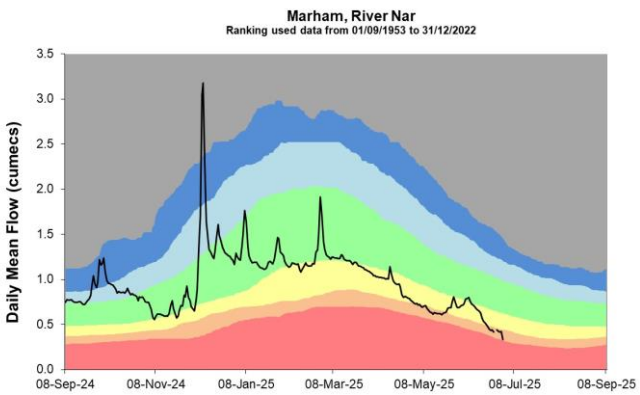

Denver, ELY OUSE
Ranking used data from 01/11/1971 to 31/12/2022
Daily Mean Flow (cumecs)
40
35
30
25
20
15
10
5
0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

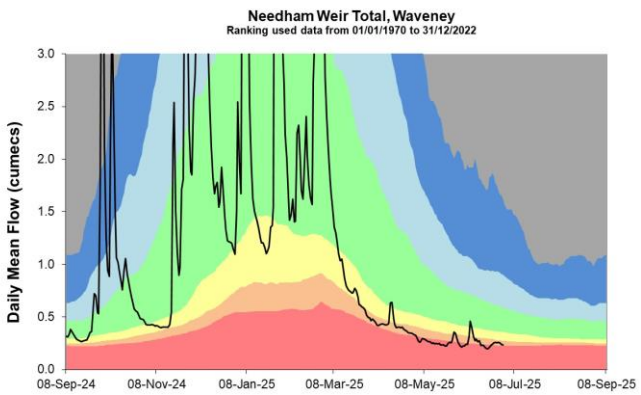

Dernford, CAM
Ranking used data from 21/02/1949 to 23/12/2022
Daily Mean Flow (cumecs)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

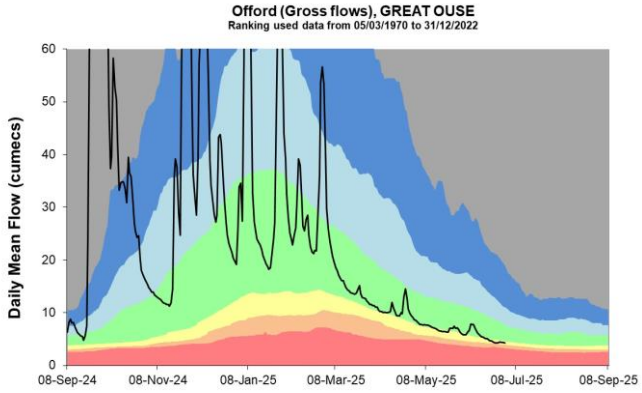

Heacham, HEACHAM
Ranking used data from 01/11/1965 to 31/12/2022
Daily Mean Flow (cumecs)
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

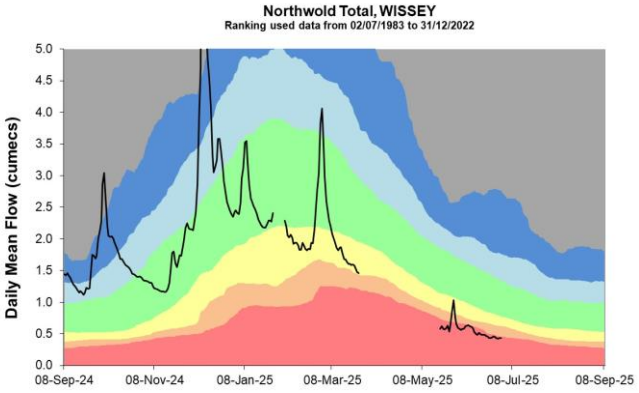

Ingworth, Bure
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

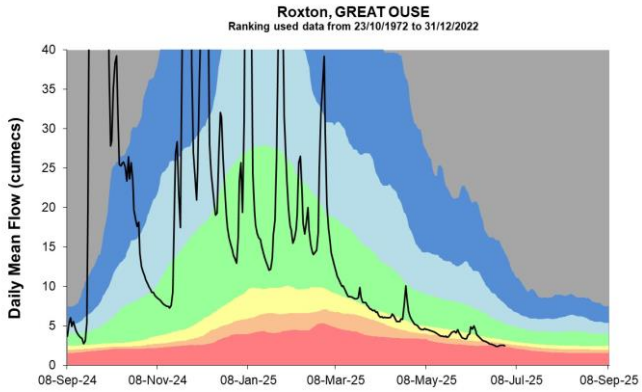

Lexden, Colne
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

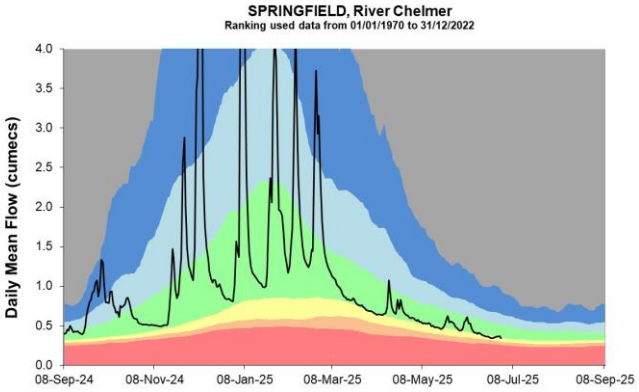

Marham, River Nar
Ranking used data from 01/09/1953 to 31/12/2022
Daily Mean Flow (cumecs)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

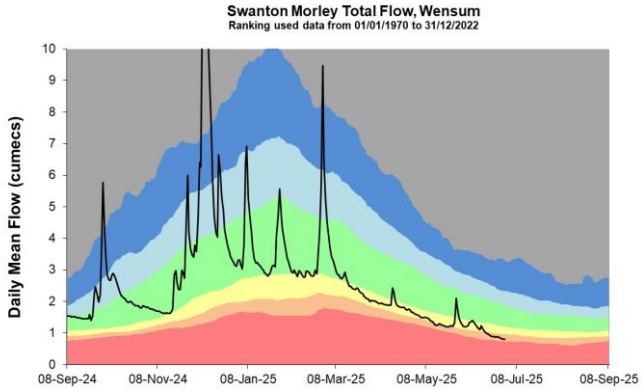

Needham Weir Total, Waveney
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
08-Sep-24
08-Nov-24
08-Jan-25
08-Mar-25
08-May-25
08-Jul-25
08-Sep-25

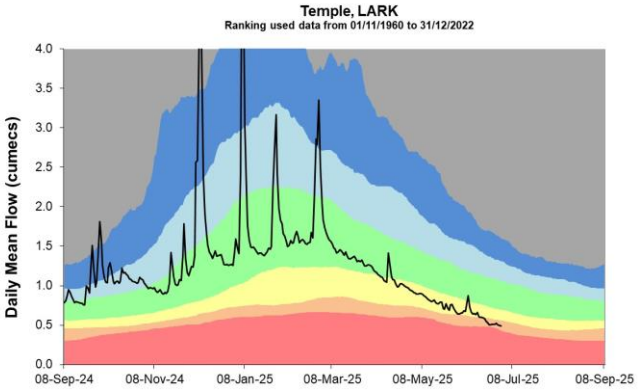


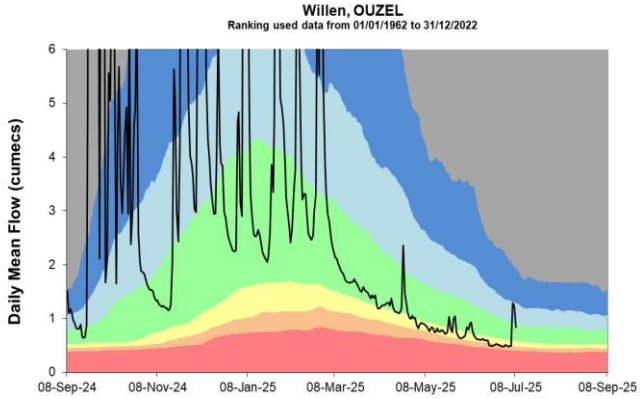










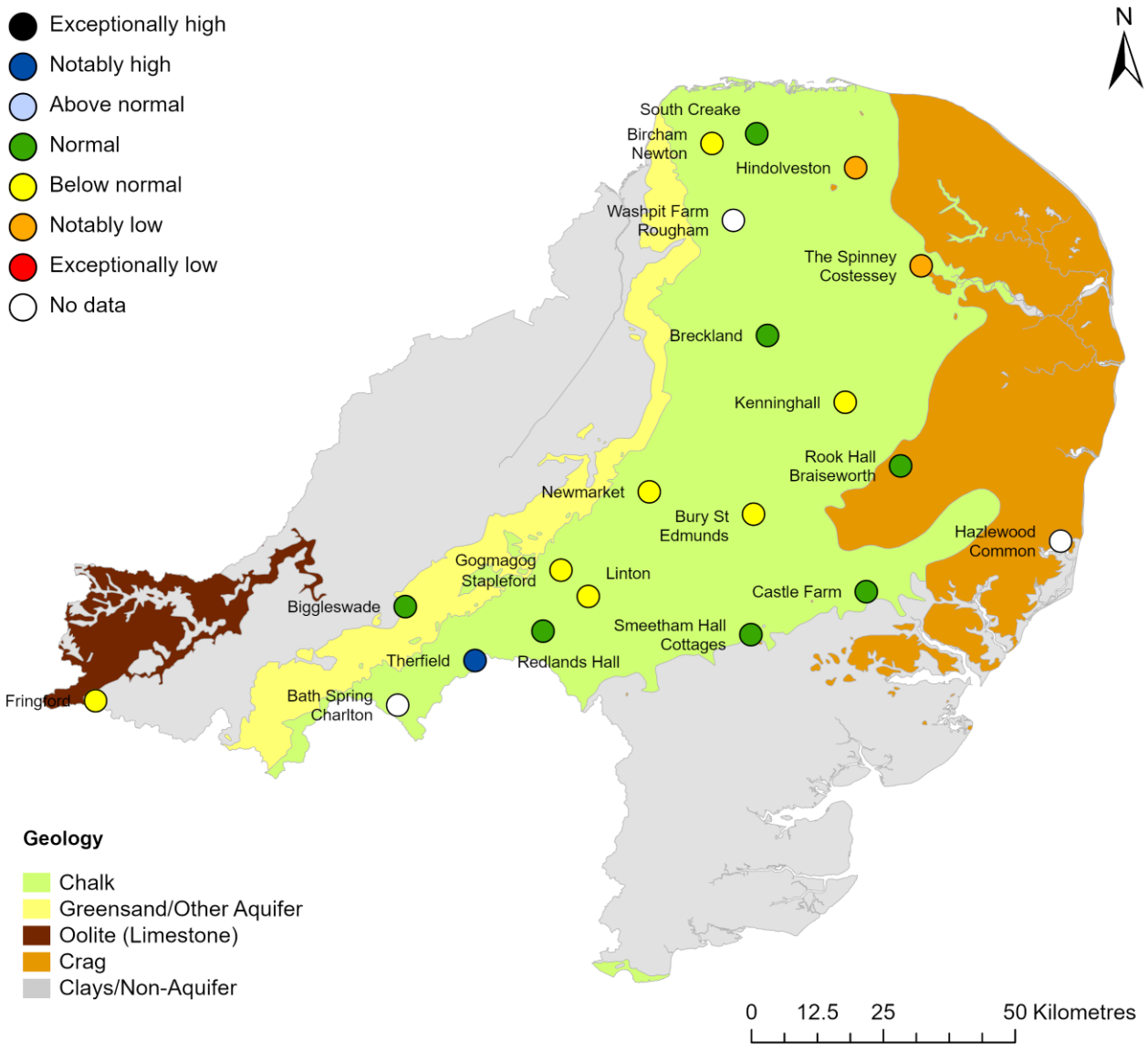


Source: Environment Agency.

5 Groundwater levels

5.1 Groundwater levels map

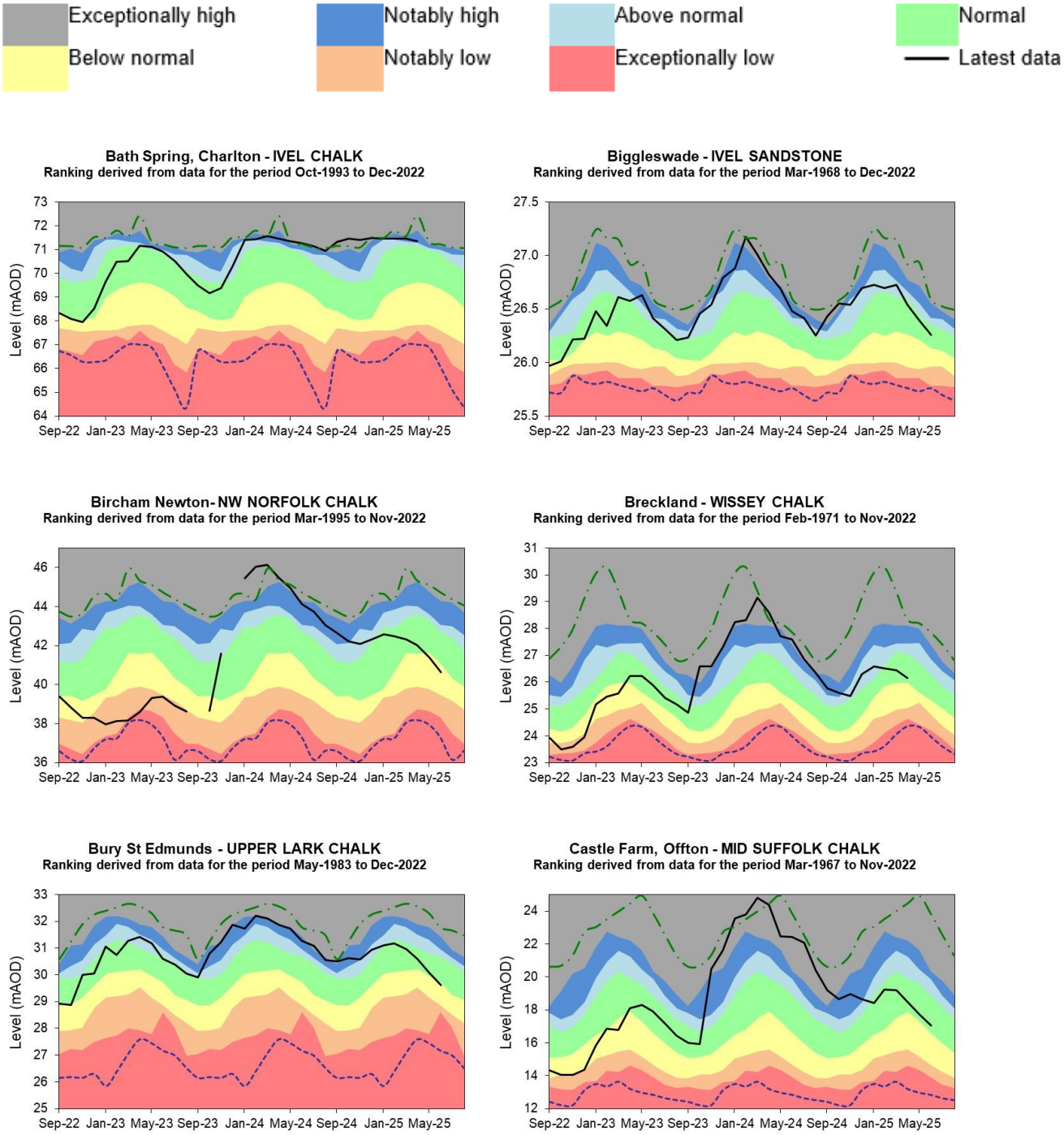
Figure 5.1: Groundwater levels for indicator sites at the end of June 2025, classed relative to an analysis of respective historic September levels. Table available in the appendices with detailed information.



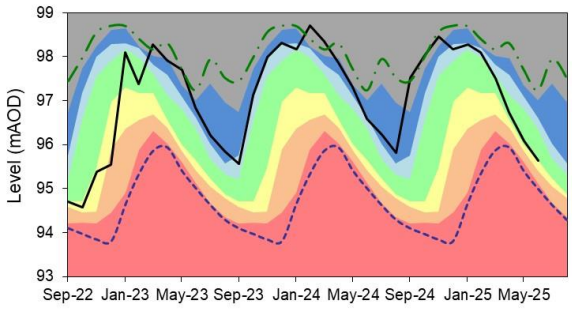
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

5.2 Groundwater level charts

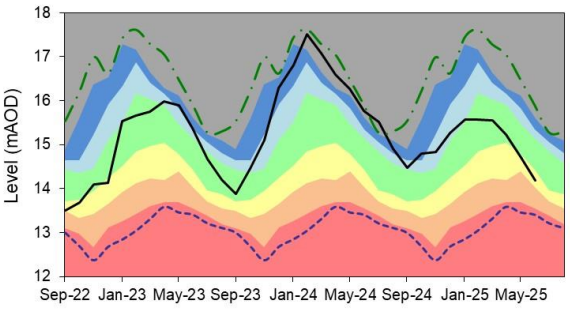
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.



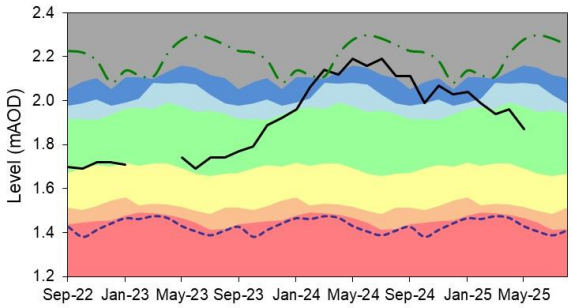
Fringford - GREAT OOLITE
Ranking derived from data for the period Sep-1980 to Dec-2022



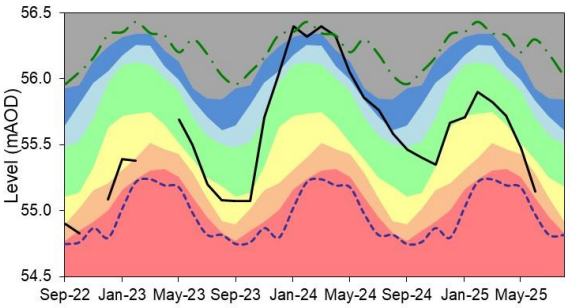
Gog Magog, Stapleford - CAM CHALK
Ranking derived from data for the period Jan-1980 to Dec-2022



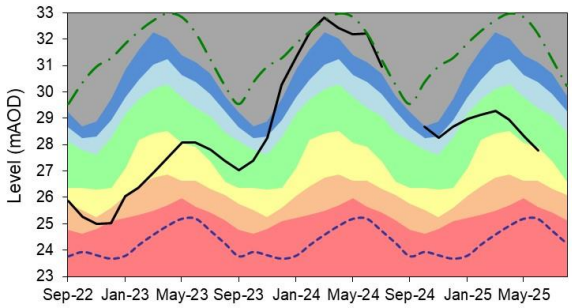
Hazlewood Common - SUFFOLK CRAG
Ranking derived from data for the period Oct-1988 to Nov-2022



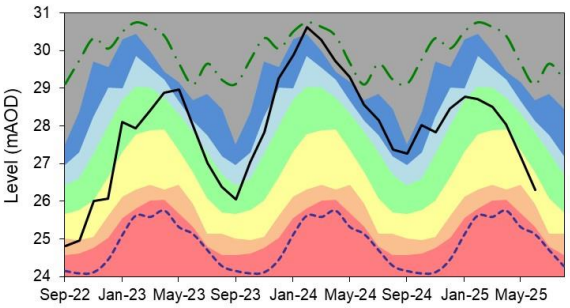
Hindolveston - NORFOLK CHALK
Ranking derived from data for the period Sep-1984 to Nov-2022



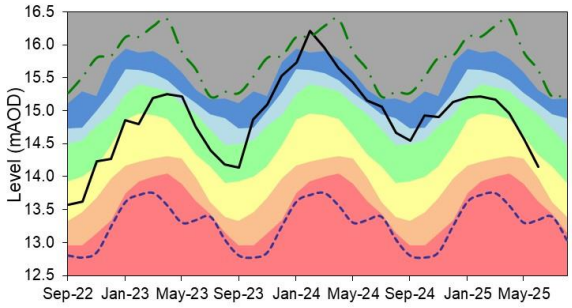
Kenninghall - LITTLE OUSE CHALK
Ranking derived from data for the period Aug-1973 to Dec-2022



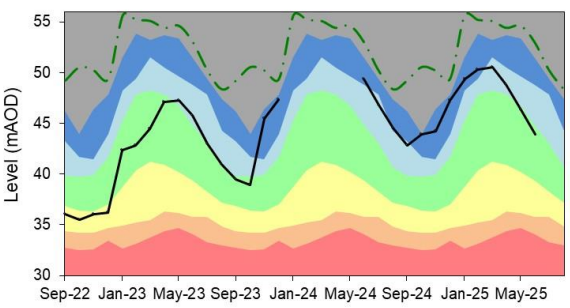
Linton - CAM CHALK
Ranking derived from data for the period Jan-1980 to Dec-2022

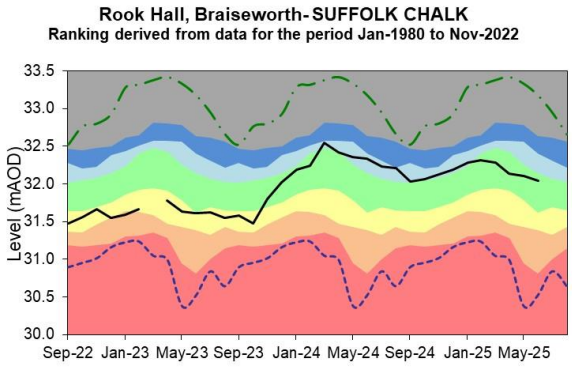


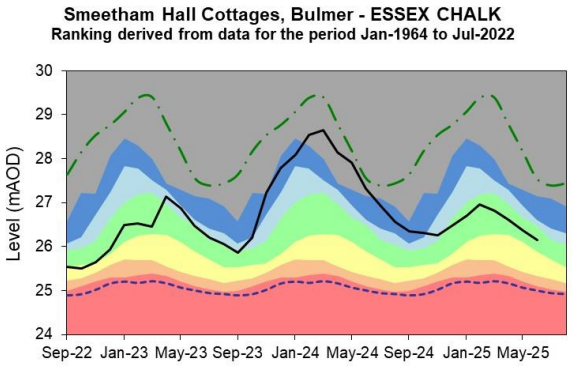
Newmarket - SNAIL CHALK
Ranking derived from data for the period Feb-1983 to Dec-2022

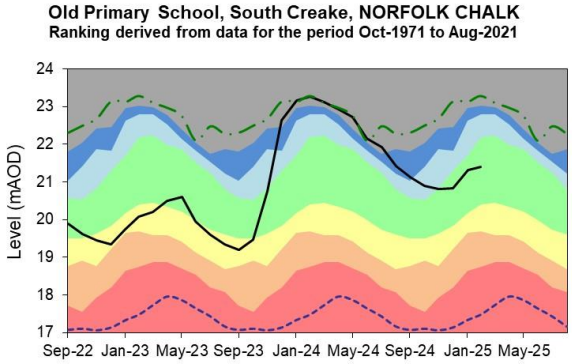


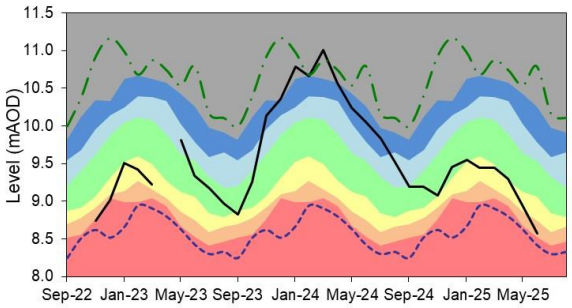
Redlands Hall, Ickleton - CAM CHALK
Ranking derived from data for the period Aug-1963 to Dec-2022

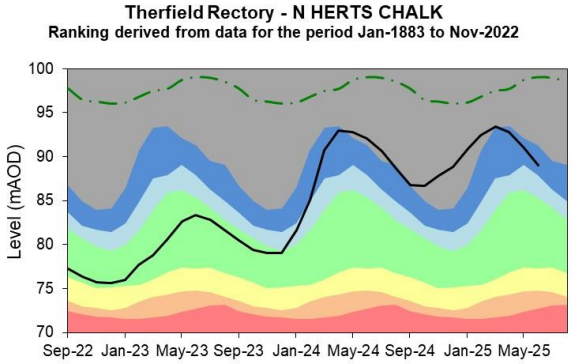








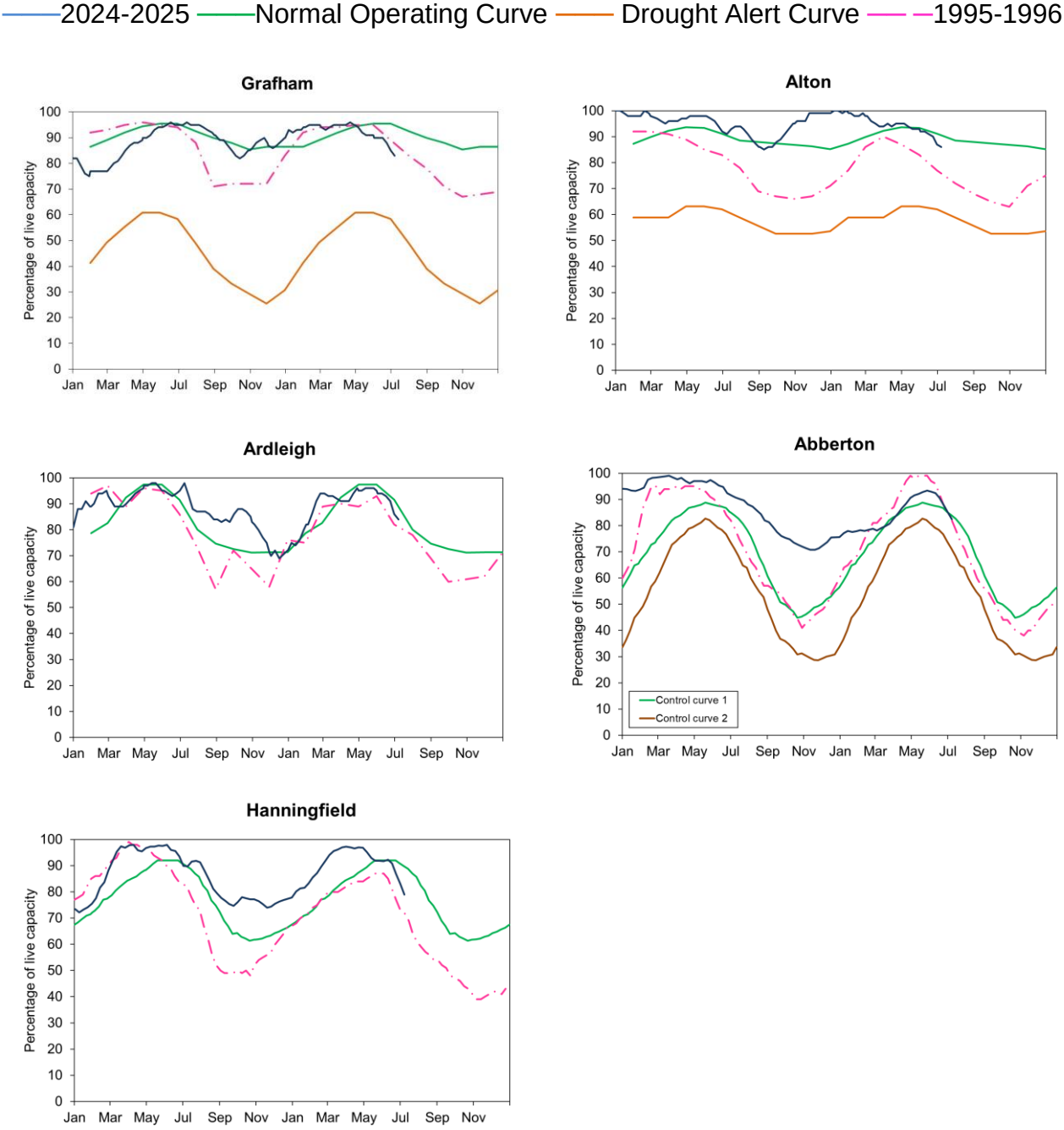




Source: Environment Agency, 2025.

6 Reservoir stocks

Figure 6.1: End of month regional reservoir stocks compared to the normal operating curve, drought curve and dry 1995-1996 stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.

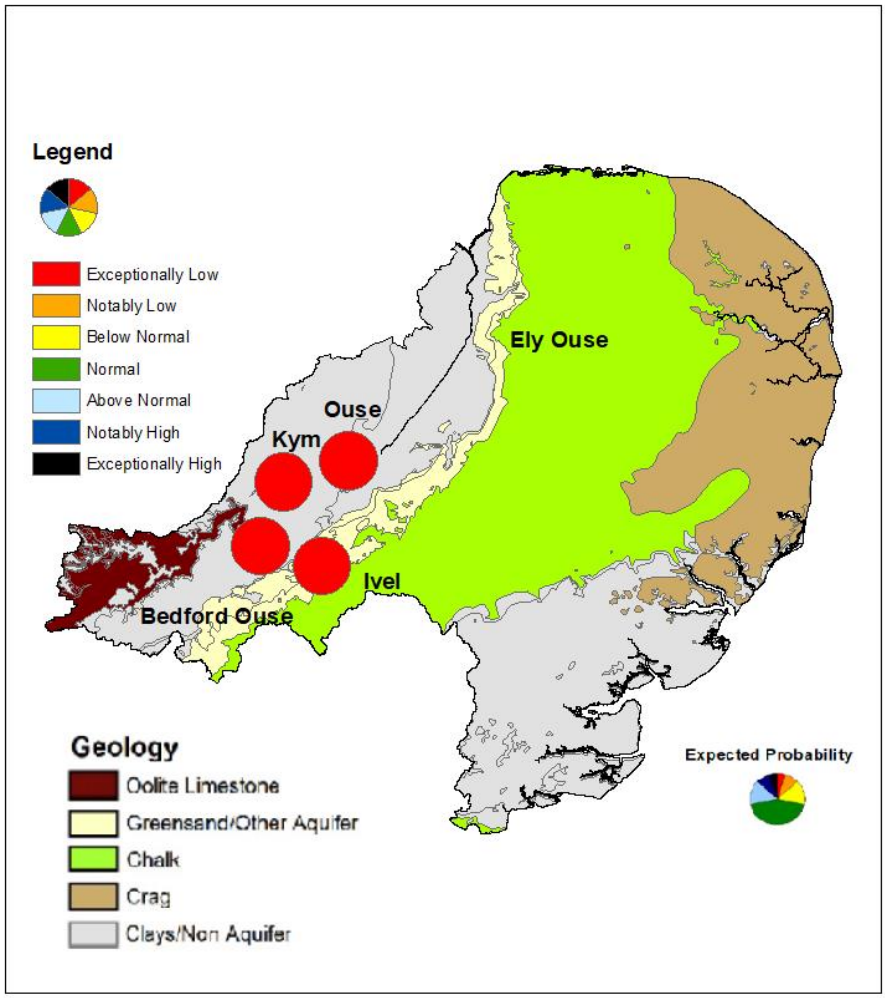


(Source: water companies).

7 Forward look

7.1 Probabilistic ensemble projection of river flows at key sites in September 2025

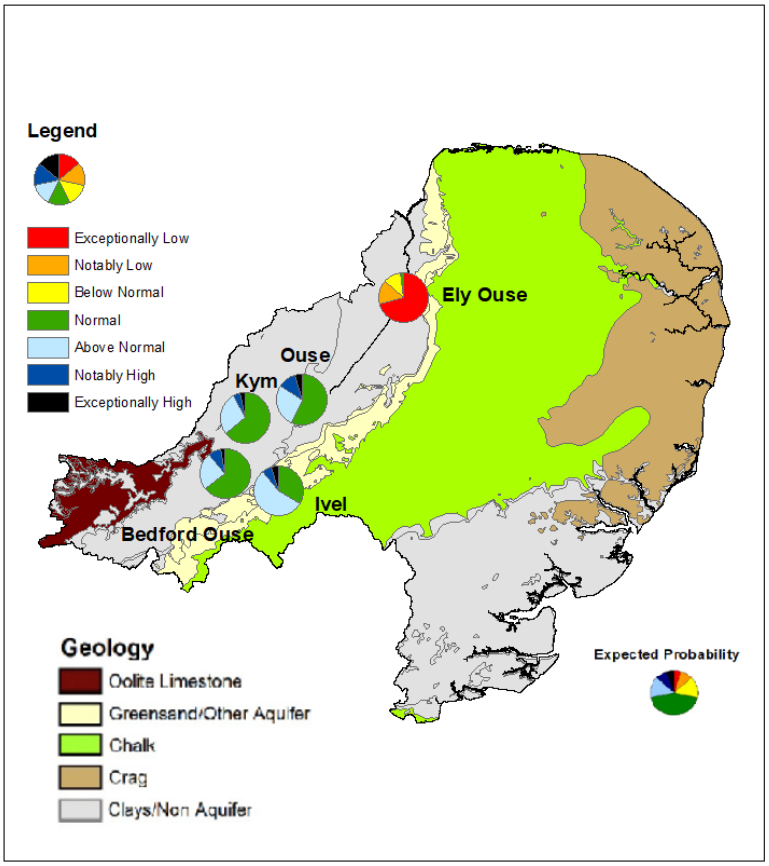
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those which would typically occur 15% of the time. Normal levels are those which would typically occur 44% of the time within the historic record.



Pie charts indicate probability, based on climatology, of the surface water flow at each site being, for example, exceptionally low for the time of year. (Source: Centre for Ecology and Hydrology, Environment Agency) Geological map reproduced with kind permission from UK Groundwater Forum, BGS © NERC. Crown copyright. All rights reserved. Environment Agency, 100026380, 2025.

7.2 Probabilistic ensemble projection of river flows at key sites in December 2025

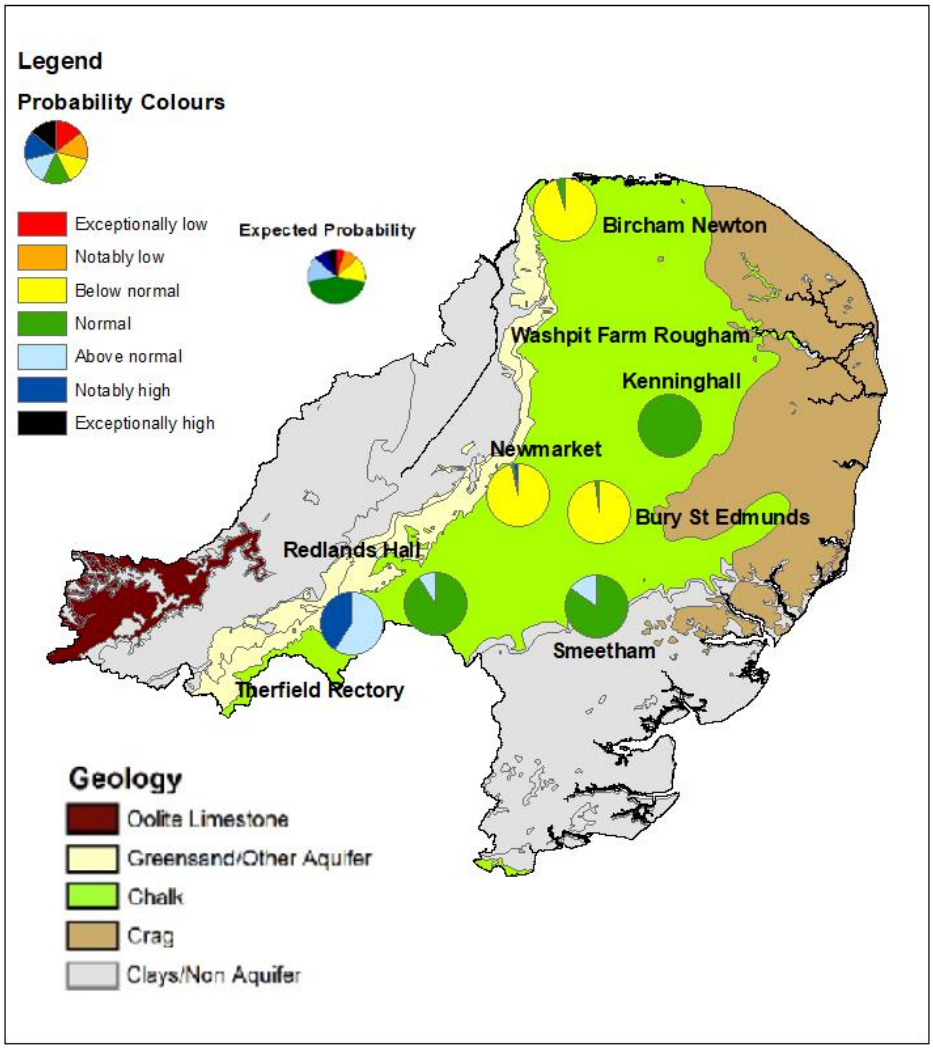
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those which would typically occur 15% of the time. Normal levels are those which would typically occur 44% of the time within the historic record.



Pie charts indicate probability, based on climatology, of the surface water flow at each site being, for example, exceptionally low for the time of year. (Source: Centre for Ecology and Hydrology, Environment Agency) Geological map reproduced with kind permission from UK Groundwater Forum, BGS © NERC. Crown copyright. All rights reserved. Environment Agency, 100026380, 2025

7.3 Probabilistic ensemble projection of groundwater levels at key sites in September 2025

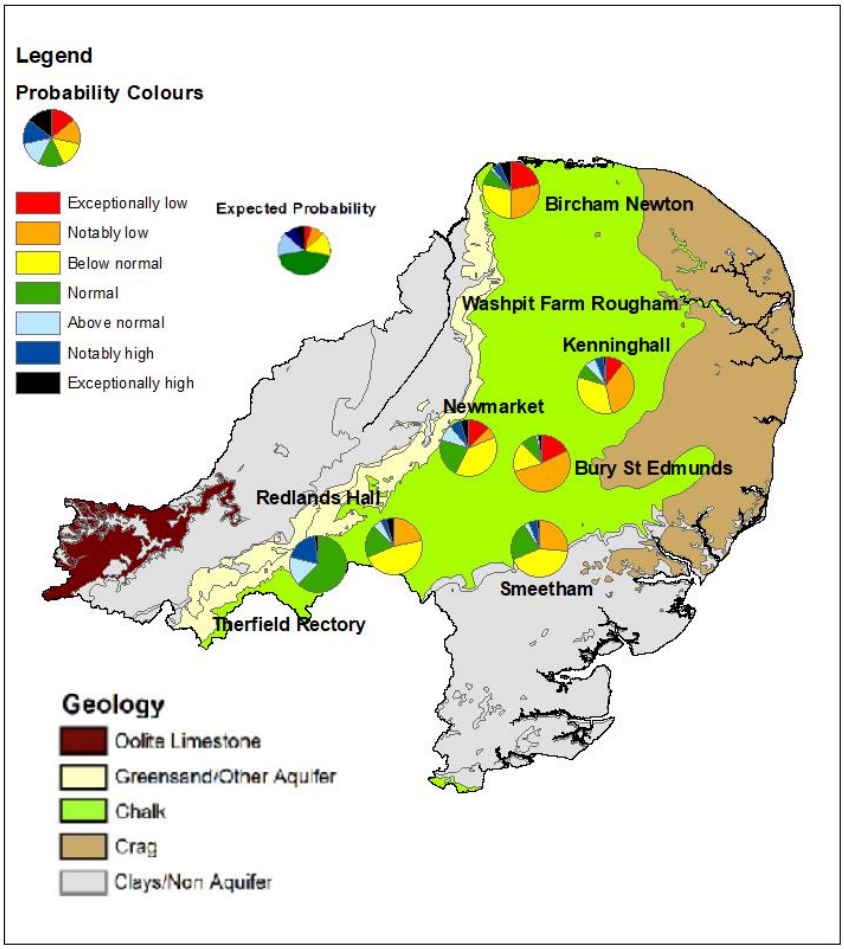
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those which would typically occur 15% of the time. Normal levels are those which would typically occur 44% of the time within the historic record.



Pie charts indicate probability, based on climatology, of the groundwater level at each site being, for example, exceptionally low for the time of year. (Source: Environment Agency)

7.4 Probabilistic ensemble projection of groundwater levels at key sites in March 2026

Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those which would typically occur 15% of the time. Normal levels are those which would typically occur 44% of the time within the historic record.



Pie charts indicate probability, based on climatology, of the groundwater level at each site being, for example, exceptionally low for the time of year. (Source: Environment Agency) Geological map reproduced with kind permission from UK Groundwater Forum, BGS © NERC. Crown copyright. All rights reserved. Environment Agency, 100026380, 2025

8 Glossary

8.1 Terminology

Aquifer

A geological formation able to store and transmit water.

Areal average rainfall

The estimated average depth of rainfall over a defined area. Expressed in depth of water (mm).

Artesian

The condition where the groundwater level is above ground surface but is prevented from rising to this level by an overlying continuous low permeability layer, such as clay.

Artesian borehole

Borehole where the level of groundwater is above the top of the borehole and groundwater flows out of the borehole when unsealed.

Cumecs

Cubic metres per second (m^{3s-1}).

Effective rainfall

The rainfall available to percolate into the soil or produce river flow. Expressed in depth of water (mm).

Flood alert and flood warning

Three levels of warnings may be issued by the Environment Agency. Flood alerts indicate flooding is possible. Flood warnings indicate flooding is expected. Severe flood warnings indicate severe flooding.

Groundwater

The water found in an aquifer.

Long term average (LTA)

The arithmetic mean calculated from the historic record, usually based on the period 1991 to 2020. However, the period used may vary by parameter being reported on (see figure captions for details).

mAOD

Metres above ordnance datum (mean sea level at Newlyn Cornwall).

MORECS

Met Office Rainfall and Evaporation Calculation System. Met Office service providing real time calculation of evapotranspiration, soil moisture deficit and effective rainfall on a 40 by 40 km grid.

Naturalised flow

River flow with the impacts of artificial influences removed. Artificial influences may include abstractions, discharges, transfers, augmentation and impoundments.

NCIC

National Climate Information Centre. NCIC area monthly rainfall totals are derived using the Met Office 5 km gridded dataset, which uses rain gauge observations.

Recharge

The process of increasing the water stored in the saturated zone of an aquifer. Expressed in depth of water (mm).

Reservoir gross capacity

The total capacity of a reservoir.

Reservoir live capacity

The capacity of the reservoir that is normally usable for storage to meet established reservoir operating requirements. This excludes any capacity not available for use (for example, storage held back for emergency services, operating agreements or physical restrictions). May also be referred to as ‘net’ or ‘deployable’ capacity.

Soil moisture deficit (SMD)

The difference between the amount of water actually in the soil and the amount of water the soil can hold. Expressed in depth of water (mm).

8.2 Categories

Exceptionally high

Value likely to fall within this band 5% of the time.

Notably high

Value likely to fall within this band 8% of the time.

Above normal

Value likely to fall within this band 15% of the time.

Normal

Value likely to fall within this band 44% of the time.

Below normal

Value likely to fall within this band 15% of the time.

Notably low

Value likely to fall within this band 8% of the time.

Exceptionally low

Value likely to fall within this band 5% of the time.

9 Appendices

9.1 Rainfall table

Hydrological area	June 2025 rainfall % of long term average 1991 to 2020	June 2025 band	April 2025 to June cumulative band	January 2025 to June cumulative band	July 2024 to June 2025 cumulative band
Broadland Rivers	61	Normal	Notably low	Exceptionally low	Notably low
Cam	46	Below Normal	Notably low	Notably low	Normal
Central Area Fenland	46	Below Normal	Notably low	Exceptionally low	Below normal
East Suffolk	86	Normal	Notably low	Notably low	Below normal
Little Ouse And Lark	55	Below Normal	Exceptionally low	Exceptionally low	Below normal
Lower Bedford Ouse	44	Below Normal	Exceptionally low	Exceptionally low	Normal
North Essex	58	Below Normal	Notably low	Notably low	Below normal
North Norfolk	46	Below Normal	Exceptionally low	Exceptionally low	Notably low
Nw Norfolk And Wissey	47	Below Normal	Exceptionally low	Exceptionally low	Below normal

South Essex	52	Below Normal	Exceptionally low	Notably low	Notably low
Upper Bedford Ouse	51	Below Normal	Exceptionally low	Notably low	Normal

9.2 River flows table

Site name	River	Catchment	June 2025 band	May 2025 band
Abbey Heath	Little Ouse	Little Ouse	Exceptionally low	Notably low
Blunham	Ivel	Ivel	Normal	Normal
Bramford	Gipping	Gipping	Notably low	Below normal
Burnham Overy	Burn	Burn	Below normal	Normal
Burnt Mill	Rhee	Rhee	Normal	Normal
Cappenham	Tove	Tove	Notably low	Below normal
Colney	Yare	Yare	Notably low	Notably low
Denver	Ely Ouse	Cutoff and Renew Channel	Exceptionally low	Notably low
Dernford	Cam	Cam	Below normal	Below normal
Heacham	Heacham	Heacham	Below normal	Normal
Ingworth	Bure	Bure	Below normal	Below normal
Lexden	Colne	Colne Essex	Exceptionally low	Notably low
Marham	Nar	Nar	Below normal	Below normal
Needham Weir Total	Waveney (lower)	Waveney	Exceptionally low	Exceptionally low

Northwold Total	Wissey	Wissey	Below normal	Normal
Offord (gross Flows)	Great Ouse	Ouse Beds	Below normal	Below normal
Roxton	Great Ouse	Ivel	Notably low	Notably low
Springfield	Chelmer	Chelmer Upper	Below normal	Normal
Swanton Morley Total	Wensum	Wensum	Notably low	Notably low
Temple	Lark	Lark	Notably low	Below normal
Willen	Ouzel	Ouzel	Notably low	Below normal

9.3 Groundwater table

Site name	Aquifer	End of June 2025 band	End of May 2025 band
Biggleswade	Ivel Woburn Sands	Normal	Normal
Bircham Newton	North West Norfolk Chalk	Below normal	Below normal
Breckland	Wissey Chalk	Normal	
Bury St Edmunds	Upper Lark Chalk	Below normal	Normal
Castle Farm, Offton	East Suffolk Chalk	Normal	Normal
Gog Magog, Stapleford	Cam Chalk	Below normal	Below normal
Hazlewood Common	East Suffolk Crag		Normal
Hindolveston	Norfolk Chalk	Notably low	Below normal
Kenninghall	Little Ouse Chalk	Below normal	Normal
Linton	Cam Chalk	Below normal	Below normal
Newmarket	Snail Chalk	Below normal	Below normal
Old Primary School, South Creake	North Norfolk Chalk	Normal	

Redlands Hall, Ickleton	Cam Chalk	Normal	Normal
Rook Hall, Braiseworth	East Suffolk Chalk	Normal	Normal
Smeetham Hall Cottages, Bulmer	North Essex Chalk	Normal	Normal
The Spinney, Costessey	Wensum Chalk	Notably low	Below normal
Washpit Farm, Rougham	North West Norfolk Chalk		
Therfield Rectory	Upper Lee Chalk	Notably high	Notably high
Fringford P.s.	Upper Bedford Ouse Oolitic Limestone (great)	Below normal	Normal

9.4 Ensemble projections tables

9.4.1 Probabilistic ensemble projection of river flows at key sites in September 2025

Percentage of pie chart for each band

Site	Bedford Ouse	Kym	Ivel	Ouse	Ely Ouse
Exceptionally low	0	0	0	0	71
Notably low	0	0	0	0	16
Below normal	0	0	0	0	11
Normal	65	65	34	56	2
Above normal	24	27	55	27	0
Notably high	8	5	6	11	0
Exceptionally high	3	3	5	5	0

9.4.2 Probabilistic ensemble projection of river flows at key sites in December 2025

Percentage of pie chart for each band

Site	Bedford Ouse	Kym	Ivel	Ouse	Ely Ouse
Exceptionally low	8	8	2	10	16
Notably low	16	39	10	15	33
Below normal	45	26	27	47	20
Normal	13	11	37	11	11
Above normal	6	5	15	6	0
Notably high	6	3	3	6	9
Exceptionally high	5	8	6	5	11

9.4.3 Probabilistic ensemble projection of groundwater levels at key sites in September 2025

Percentage of pie chart for each band

Site	Therfield Rectory	Redlands Hall	Newmarket	Bircham Newton	Kenninghall	Bury St Edmunds	Smeetham
Exceptionally low	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Notably low	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below normal	0.0	0.0	96.9	95.3	0.0	98.4	0.0
Normal	0.0	90.6	1.6	4.7	100.0	1.6	84.4
Above normal	59.0	9.4	0.0	0.0	0.0	0.0	15.6
Notably high	41.0	0.0	1.6	0.0	0.0	0.0	0.0
Exceptionally high	0.0	0.0	0.0	0.0	0.0	0.0	0.0

9.4.4 Probabilistic ensemble projection of groundwater levels at key sites in March 2026

Percentage of pie chart for each band

Site	Therfield Rectory	Redlands Hall	Newmarket	Bircham Newton	Kenninghall	Bury St Edmunds	Smeetham
Exceptionally low	0.0	0.0	12.5	21.9	10.9	17.2	0.0
Notably low	0.0	21.9	6.3	28.1	35.9	53.1	26.6
Below normal	0.0	46.9	39.1	28.1	32.8	17.2	42.2
Normal	62.3	18.8	21.9	9.4	7.8	9.4	21.9
Above normal	16.4	4.7	9.4	1.6	6.3	1.6	3.1
Notably high	19.7	3.1	6.3	4.7	4.7	0.0	4.7
Exceptionally high	1.6	4.7	4.7	6.3	1.6	1.6	1.6