Monthly water situation report: East Anglia

1 Summary - May 2025

Rainfall across East Anglia in May was below average, ranging from 31% to 78% of the long term average. With a dry start to the month, the soil moisture deficit increased across the area, with a temporary decline at the end of May following rainfall. River flows continued to recede throughout May, with the majority of sites recording below normal or notably low flows for the time of year. Groundwater levels at all sites for which data was available have shown receding levels through April and May, with the majority of sites recording normal or below normal levels. All public water supply reservoirs are more than 90% of their full capacity.

1.1 Rainfall

May 2025 rainfall across East Anglia ranged from 31% to 78% of the long term average [LTA] for the month. The month began dry, with rainfall occurring towards the end of the month. Northern catchments were typically slightly wetter than the catchments to the south-west and south-east. The East Anglia area average rainfall for May 2025 was 23mm, approximately 49% of the 1991 to 2020 LTA for May. Cumulative rainfall totals over the past 3 months, for all catchments in the East Anglia area have been classified as exceptionally low. The combined East Anglia rainfall for March to May was 51mm, which is the third driest spring rainfall total for East Anglia based on records going back to 1871.Over the past 12 months, rainfall totals have been classified as normal in the south-west catchments, with below normal and notably low classifications to the east of the area.

1.2 Soil moisture deficit and recharge

The soil moisture deficit [SMD] for East Anglia continued to increase into May 2025, with rainfall towards the end of the month reducing the deficit temporarily. The SMD across East Anglia ranged from 71mm to 130mm, with the west and south-east catchments experiencing the highest deficits. Across all catchments, the SMD difference from the LTA ranged from 26mm to 50mm.

1.3 River flows

River flows ranged between 28% to 79% of the LTA, with the majority of report sites recording below normal or notably low flows for the time of year. The lower flows were typically towards the centre and east of the area. One site, the Waveney, recorded exceptionally low flows, experiencing 28% of the LTA flow for the catchment. River flows declined throughout May, with increased flows towards the end of the month in response to rainfall.

1.4 Groundwater levels

Groundwater levels at all sites for which data was available have shown receding levels through April and May. At the end of May groundwater levels across East Anglia area ranged from below normal to normal, with one site, Therfield recording notably high groundwater levels.

1.5 Reservoir stocks

By the end of May 2025, all reservoirs in the East Anglia area had more than 90% of their full capacity. Hanningfield, Alton, Ardleigh and Grafham all held water either on or below their respective operating curves. Abberton's stored volume was above the normal operating curve.

1.6 Forward look

1.6.1 Probabilistic ensemble projections for river flows at key sites

River flow projections show a high probability of normal or below normal flows for the Ouse, Kym, Ivel and Bedford Ouse by the end of June 2025. River flow projections for the Ely Ouse show a higher probability of exceptionally low flows. For September 2025, flow projections indicate an approximate 48% or higher probability of normal or higher flows for the Ouse, Kym, Ivel and Bedford Ouse. The Ely Ouse projection for September 2025 indicates a 44% probability of below normal flows.

1.6.2 Probabilistic ensemble projections for groundwater levels in key aquifers

Groundwater level projections show a high probability of below normal to normal groundwater levels by the end of September 2025. The Therfield Rectory projection indicates levels will remain above normal to notably high. Groundwater level projection for March 2026, show a high probability of notably low to below normal groundwater levels. The Therfield Rectory projection indicates an approximate 55% or higher probability of normal or higher groundwater levels by the end of March 2026.

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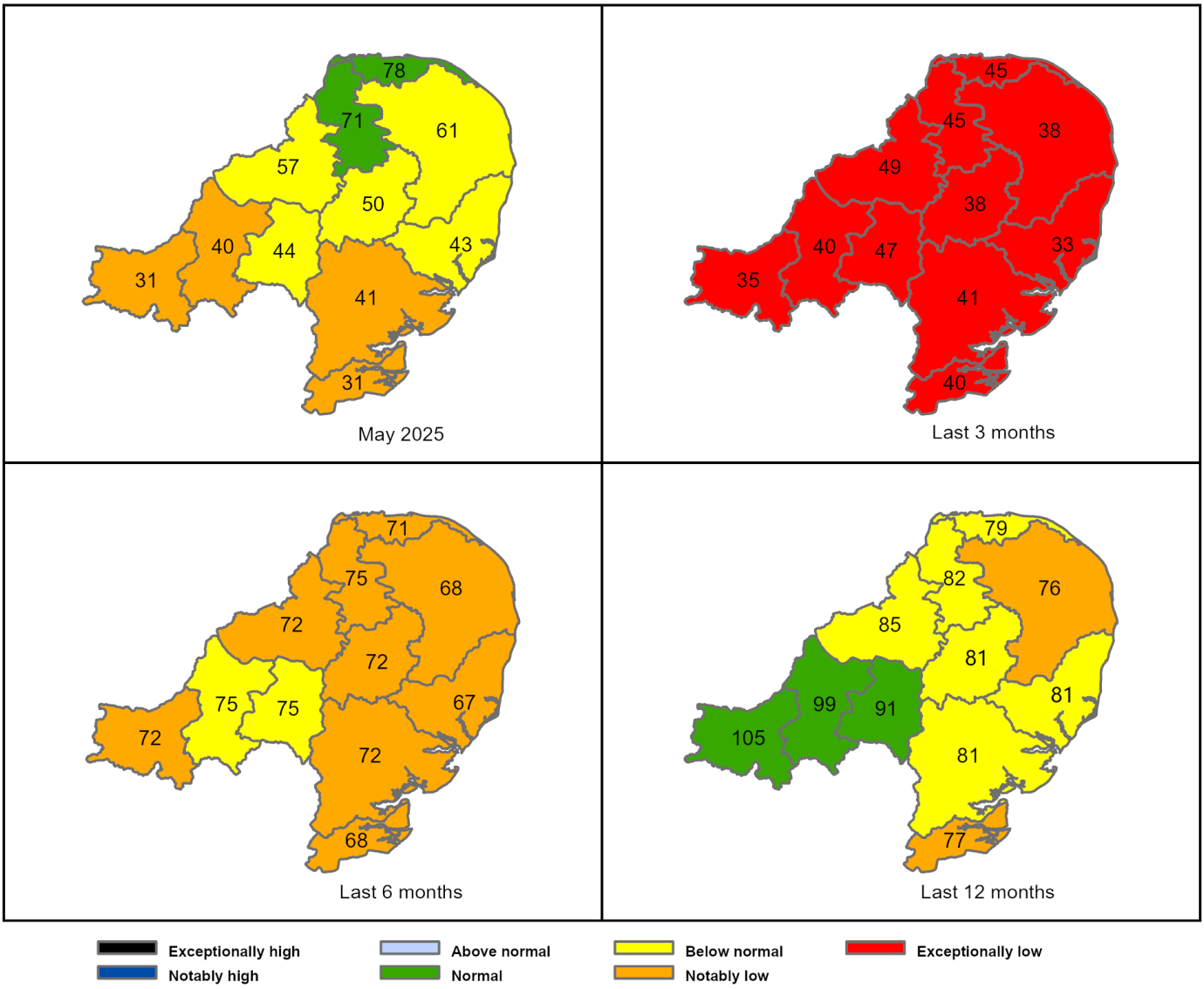
2 Rainfall

2.1 Rainfall map

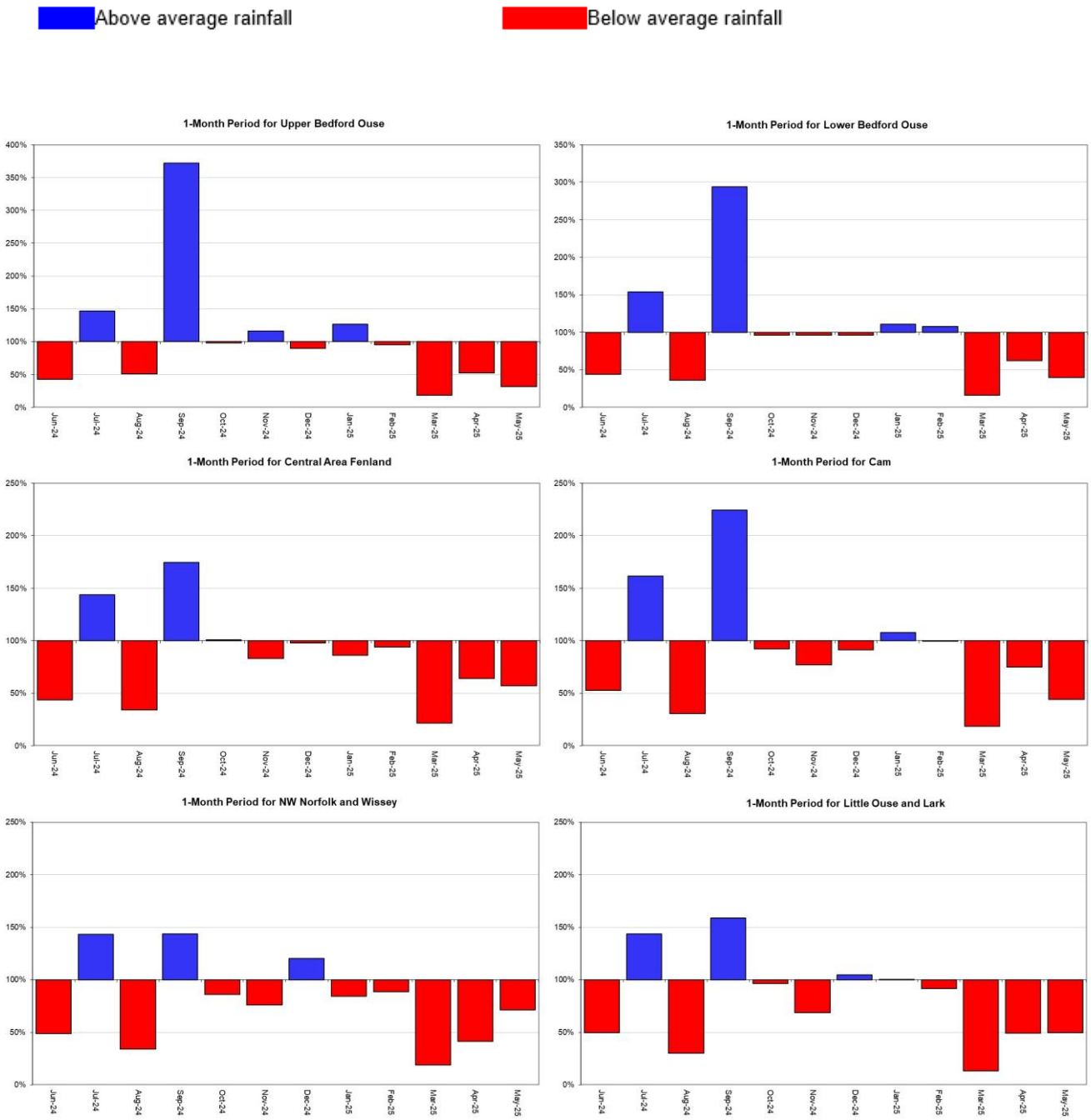
Figure 2.1: Total rainfall for hydrological areas across East Anglia, expressed as a percentage of long term average rainfall for the current month (up to 31 May 2025), the last 3 months, the last 6 months, and the last 12 months. Category classes are based on an analysis of respective historic totals. Table available in the appendices with detailed information.

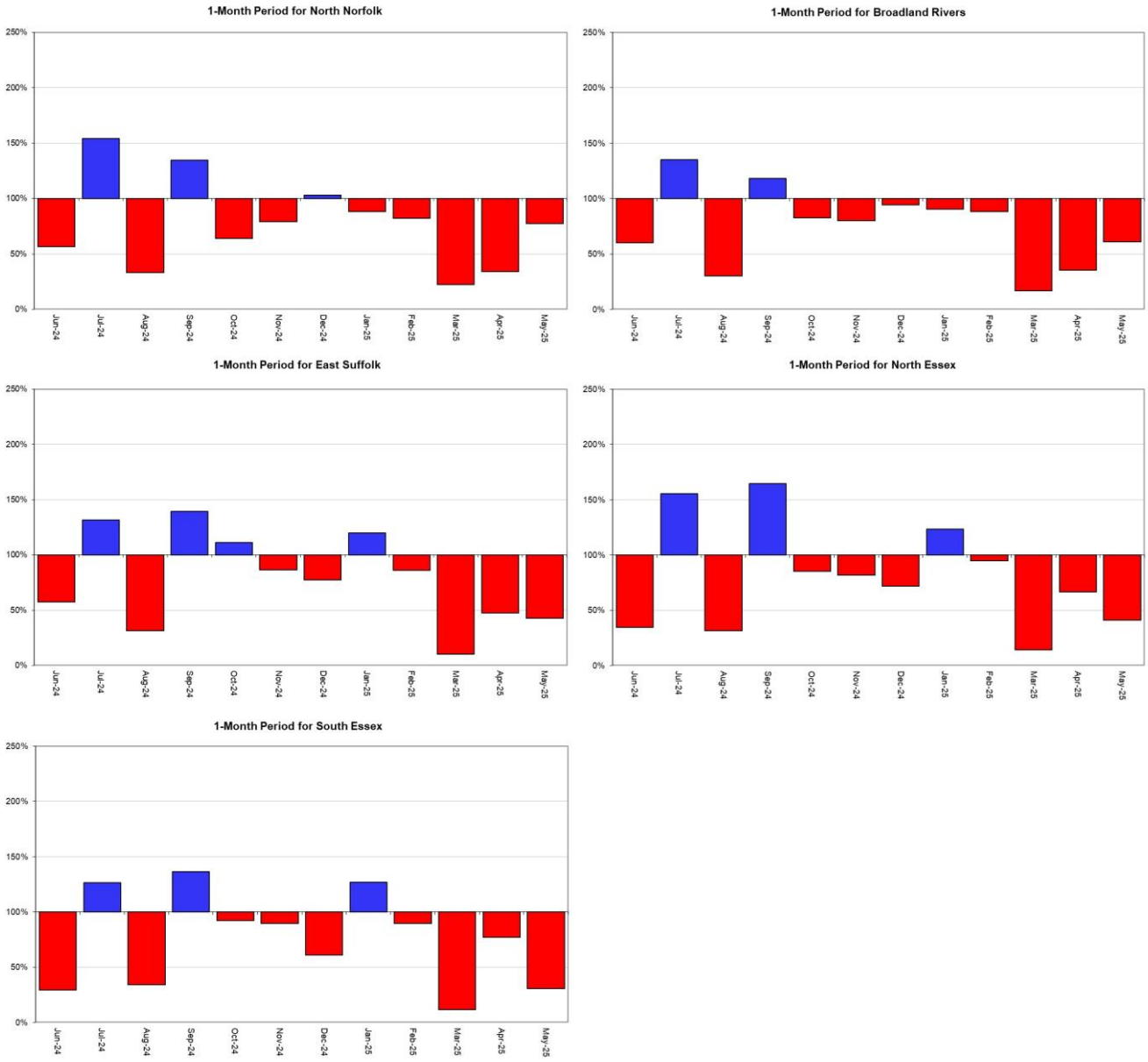


HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved.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

2.2 Rainfall charts

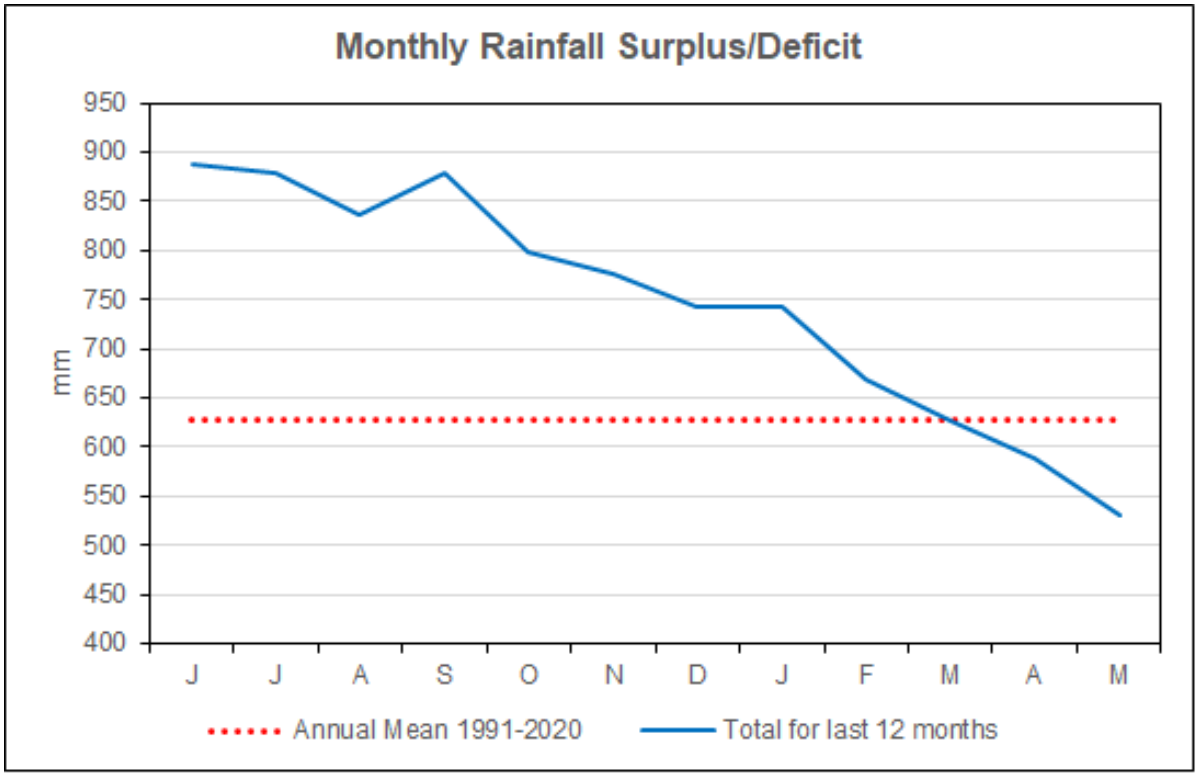
Figure 2.2: Monthly rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average for each region and for England.





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 31 May 2025. Values based on the weekly MORECS data for real land use.

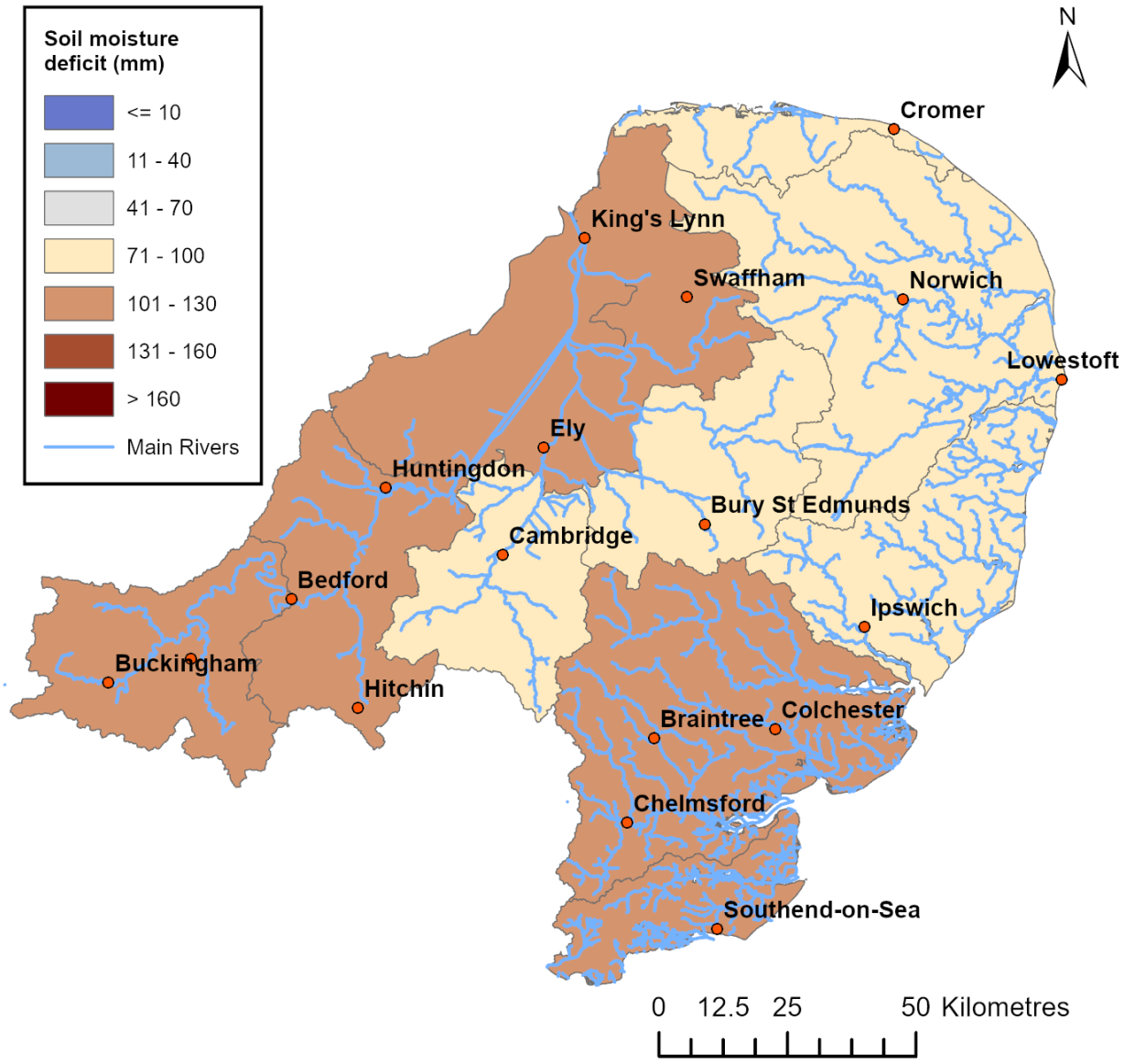
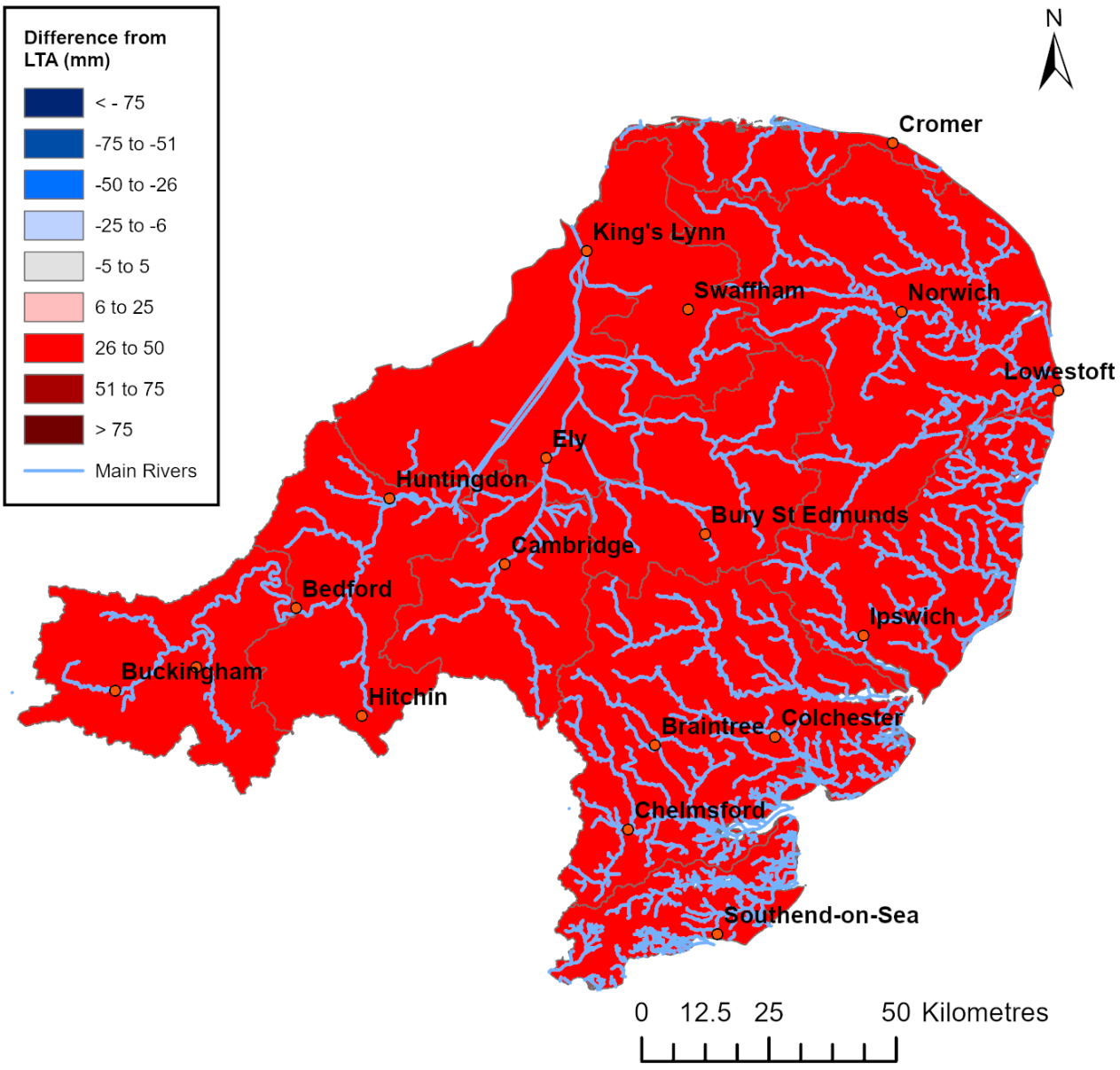
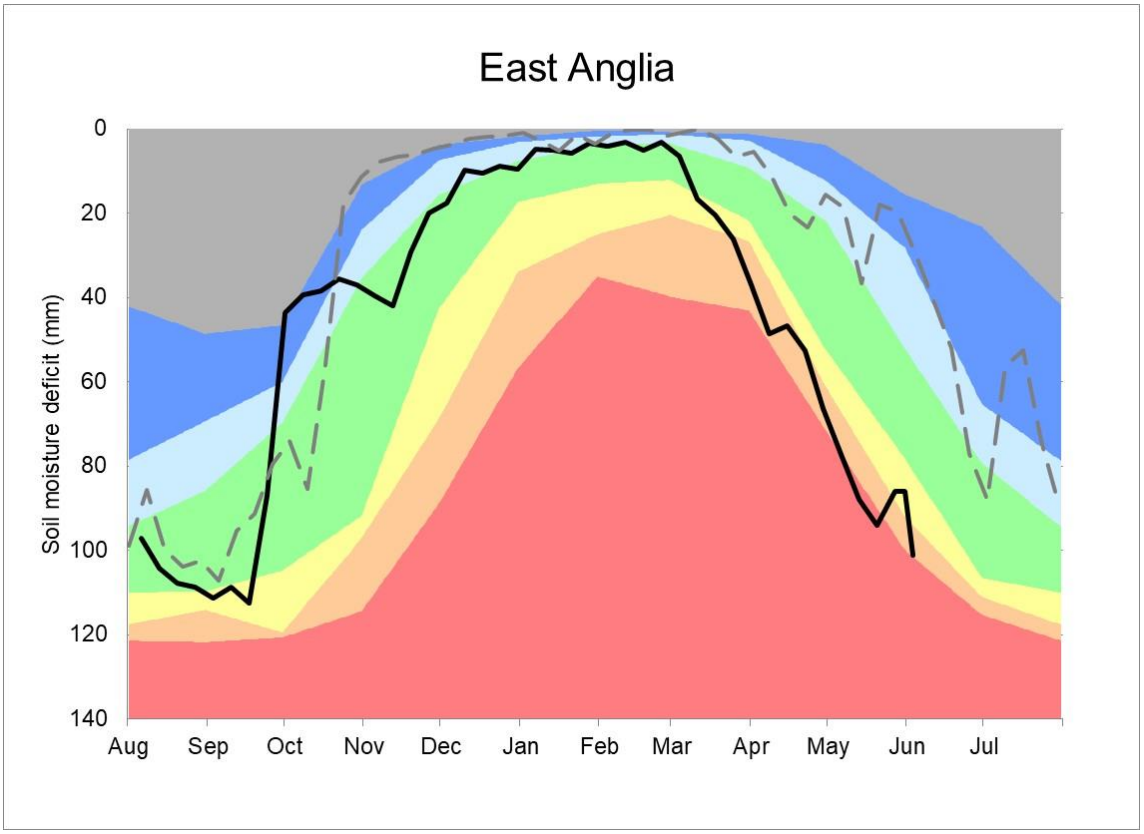


Figure 3.1.2: Soil moisture deficit difference from long term average for 31 May 2025. Values based on the weekly MORECS data for real land use.



3.2 Soil moisture deficit charts

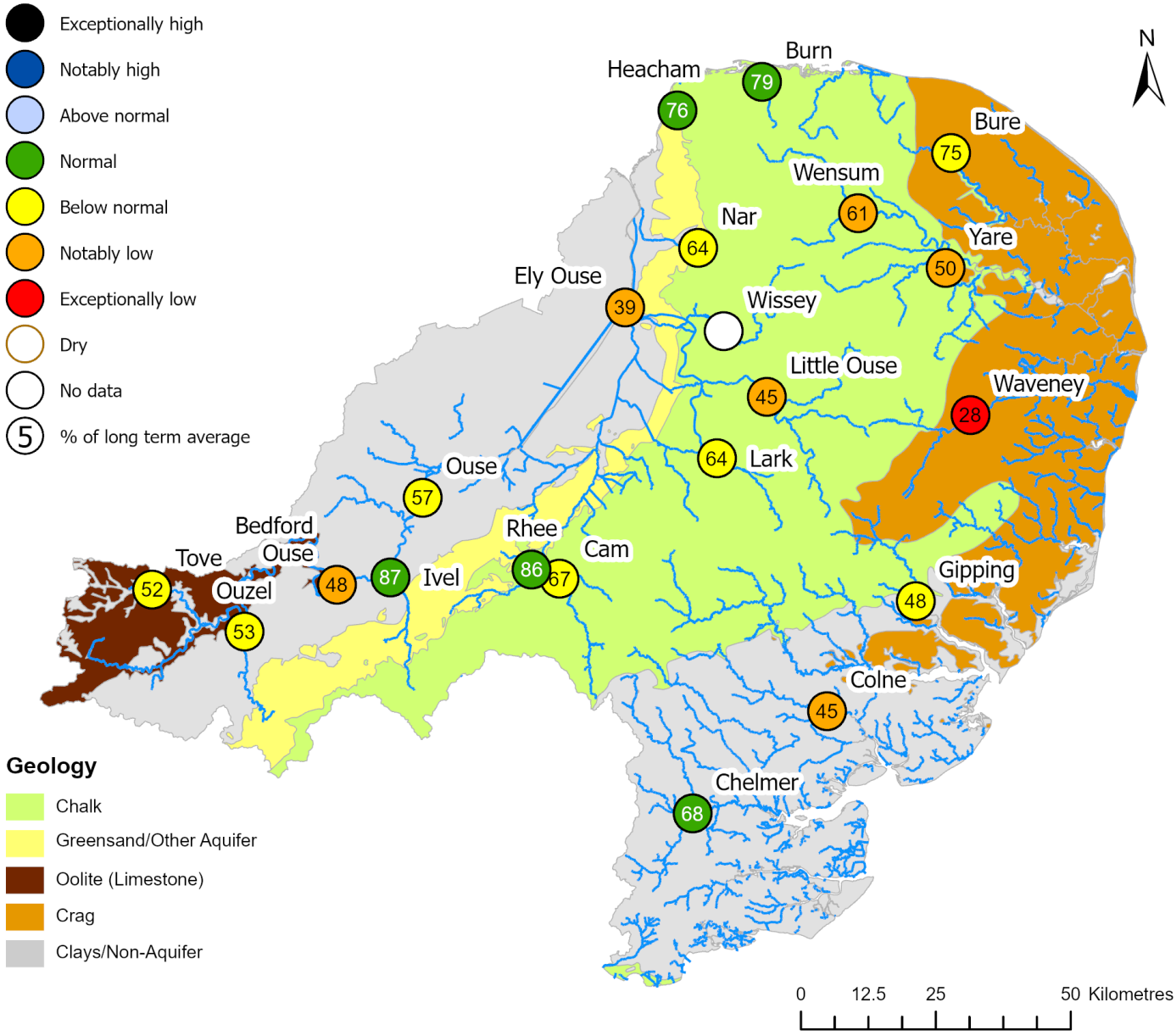
Figure 3.2: Latest soil moisture deficit compared to an analysis of historic 1991 to 2020 long term data set. Weekly MORECS data for real land use.



4 River flows

4.1 River flows map

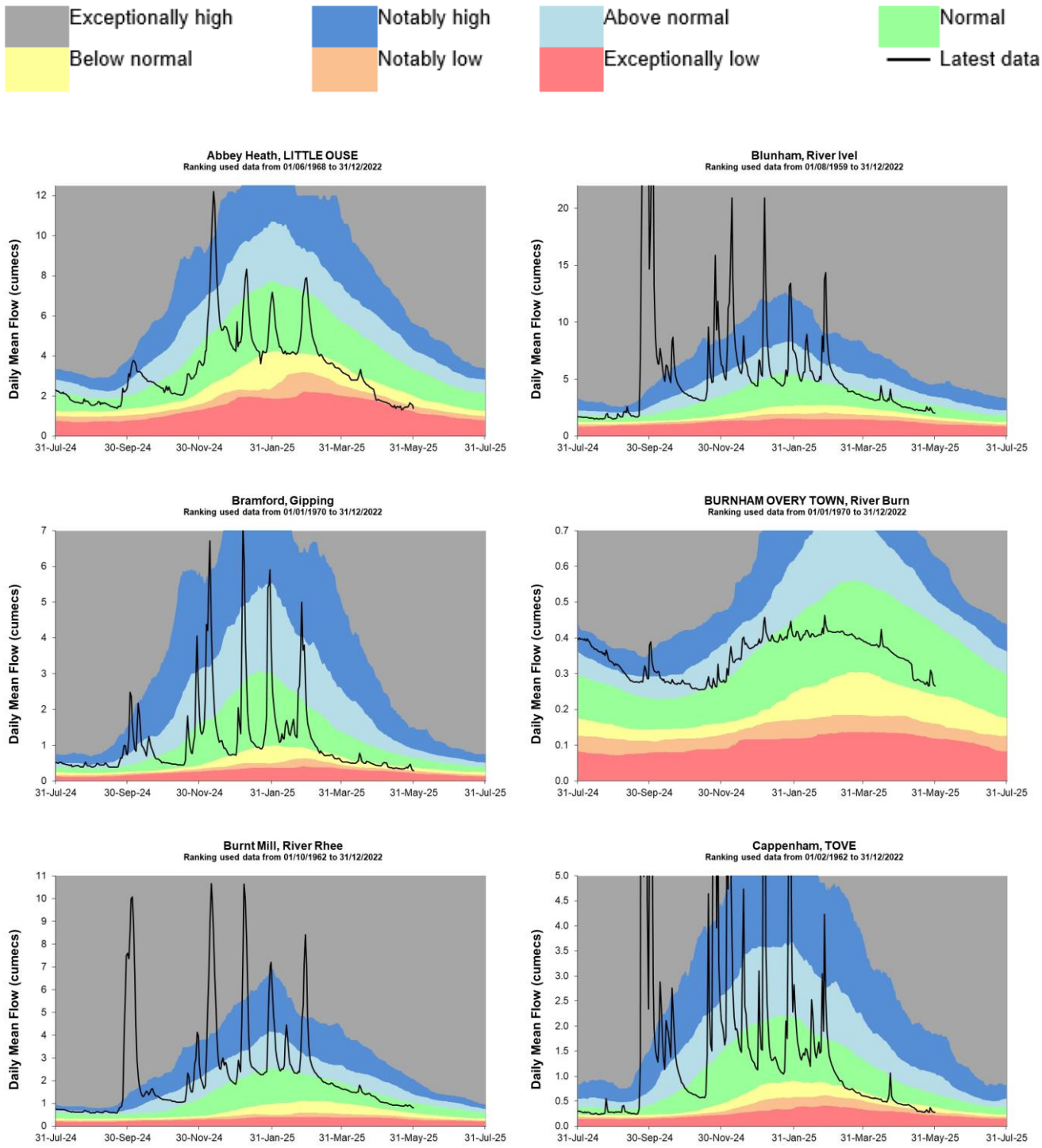
Figure 4.1: Monthly mean river flow for indicator sites for May 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic May monthly means Table available in the appendices with detailed information.



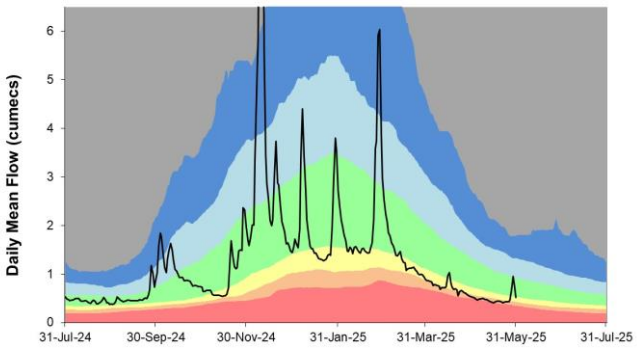
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

4.2 River flow charts

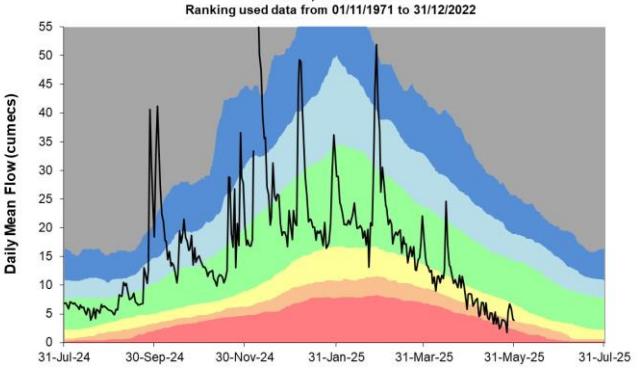
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



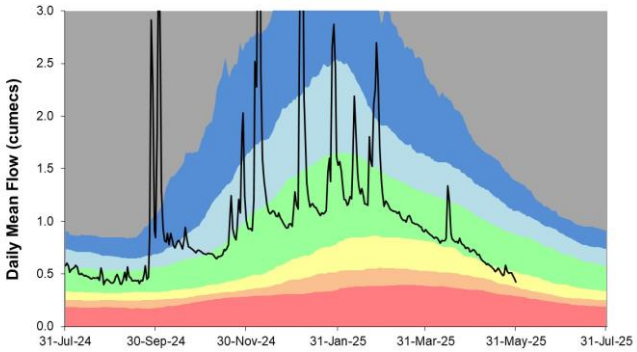
COLNEY, River Yare
Ranking used data from 01/01/1970 to 31/12/2022



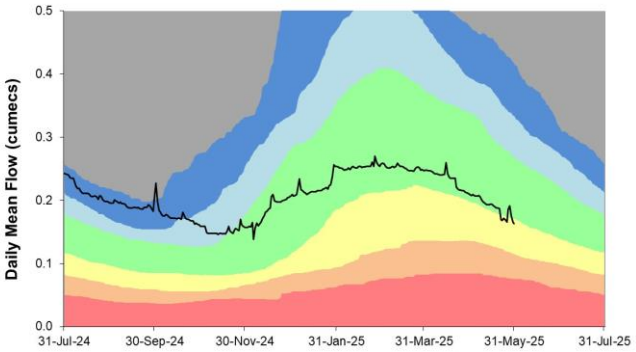
Denver, ELY OUSE
Ranking used data from 01/11/1971 to 31/12/2022



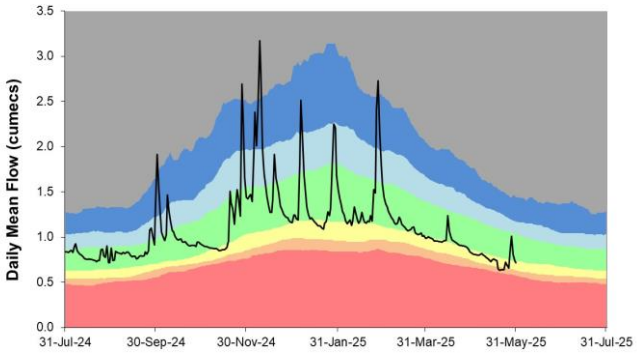
Dernford, CAM
Ranking used data from 21/02/1949 to 23/12/2022



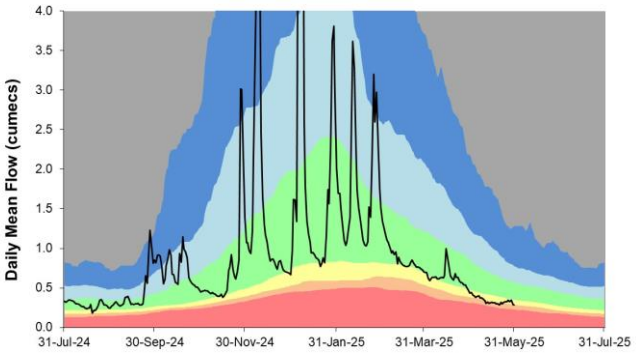
Heacham, HEACHAM
Ranking used data from 01/11/1965 to 31/12/2022



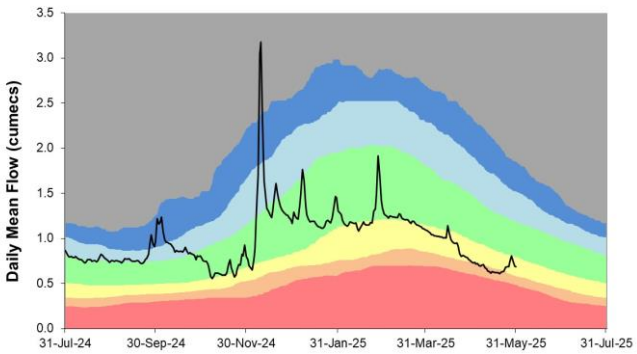
Ingworth, Bure
Ranking used data from 01/01/1970 to 31/12/2022



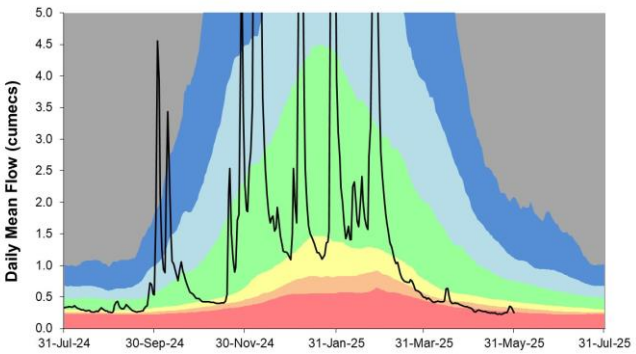
Lexden, Colne
Ranking used data from 01/01/1970 to 31/12/2022

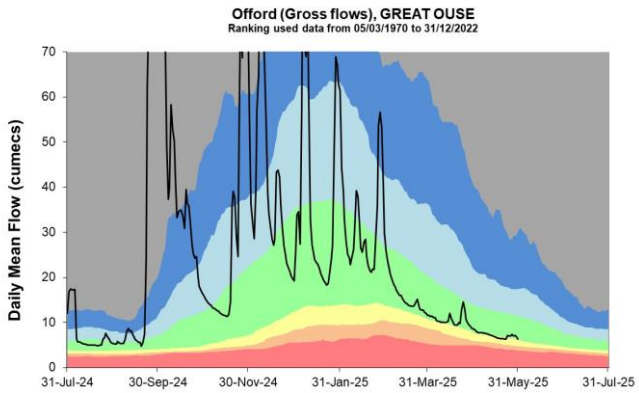


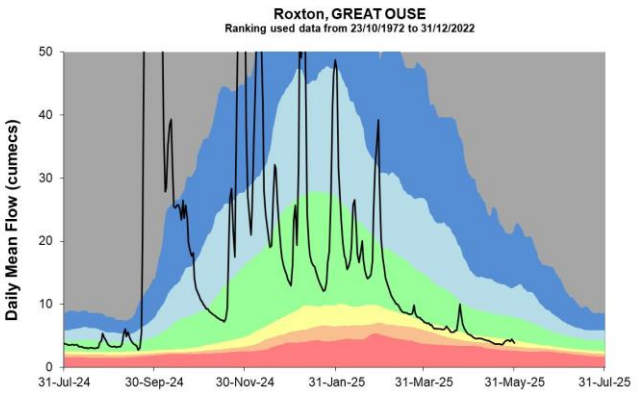
Marham, River Nar
Ranking used data from 01/09/1953 to 31/12/2022

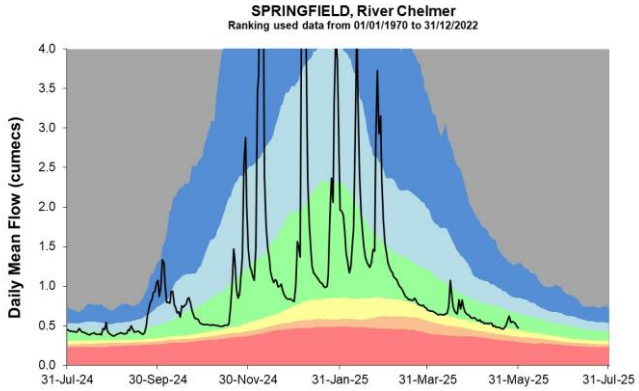


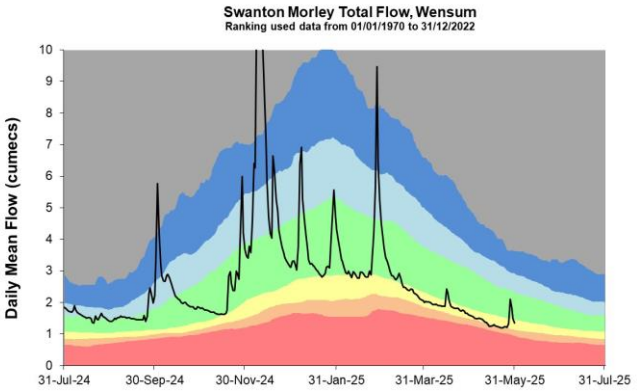
Needham Weir Total, Waveney
Ranking used data from 01/01/1970 to 31/12/2022

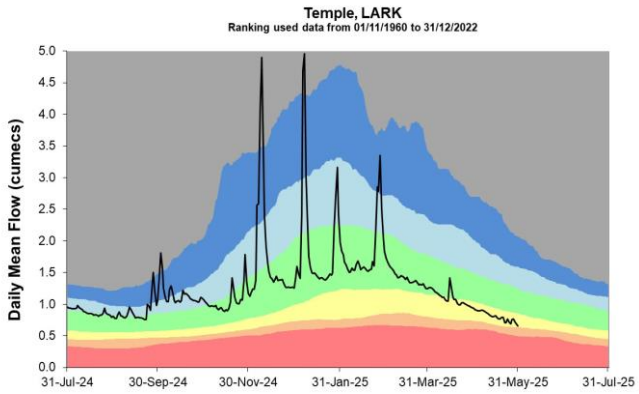


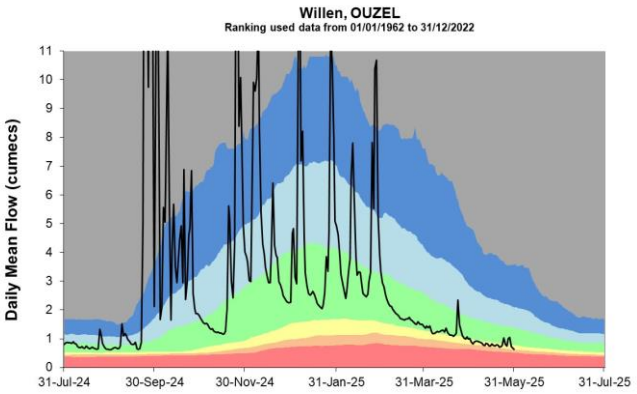










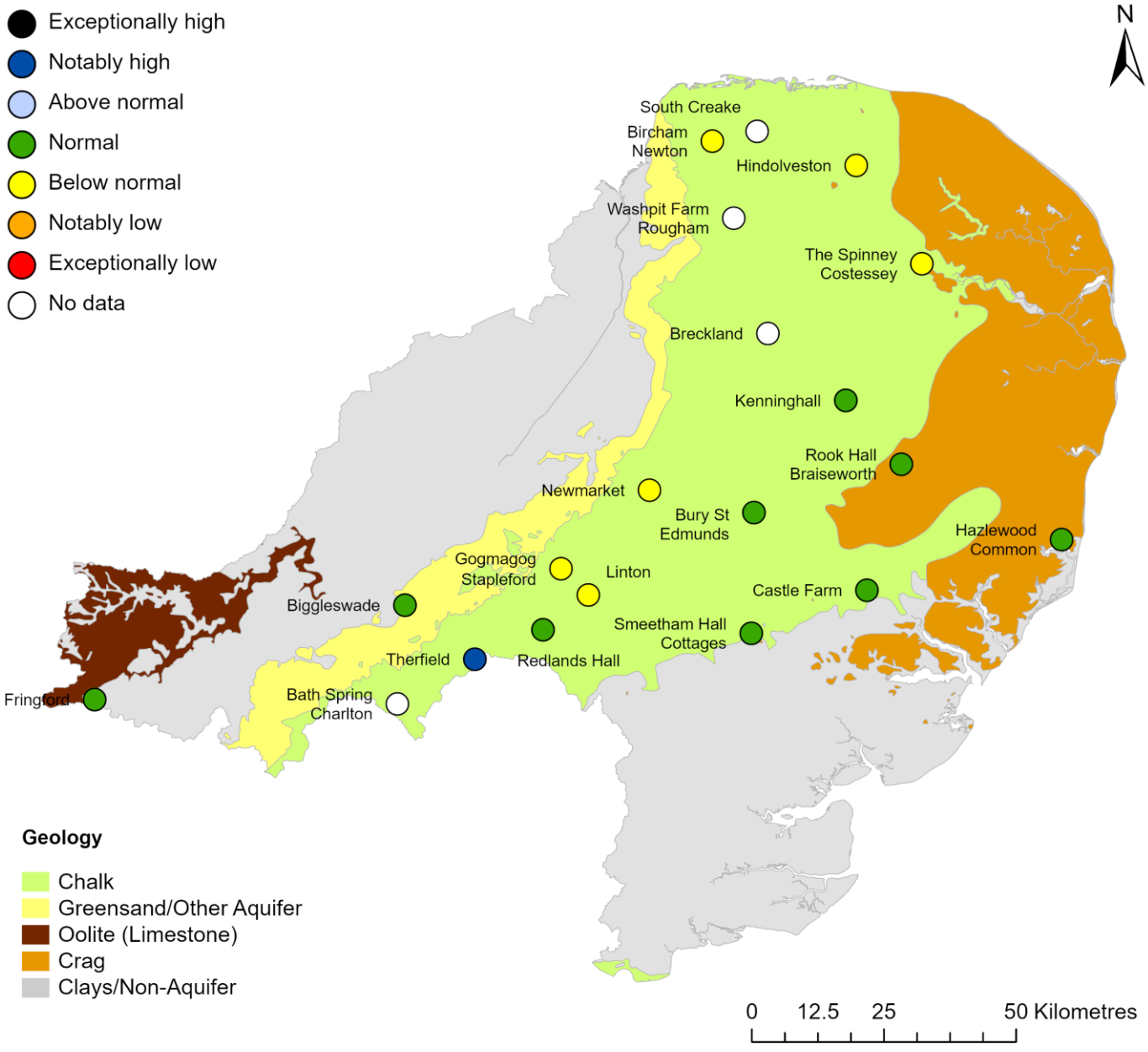


Source: Environment Agency.

5 Groundwater levels

5.1 Groundwater levels map

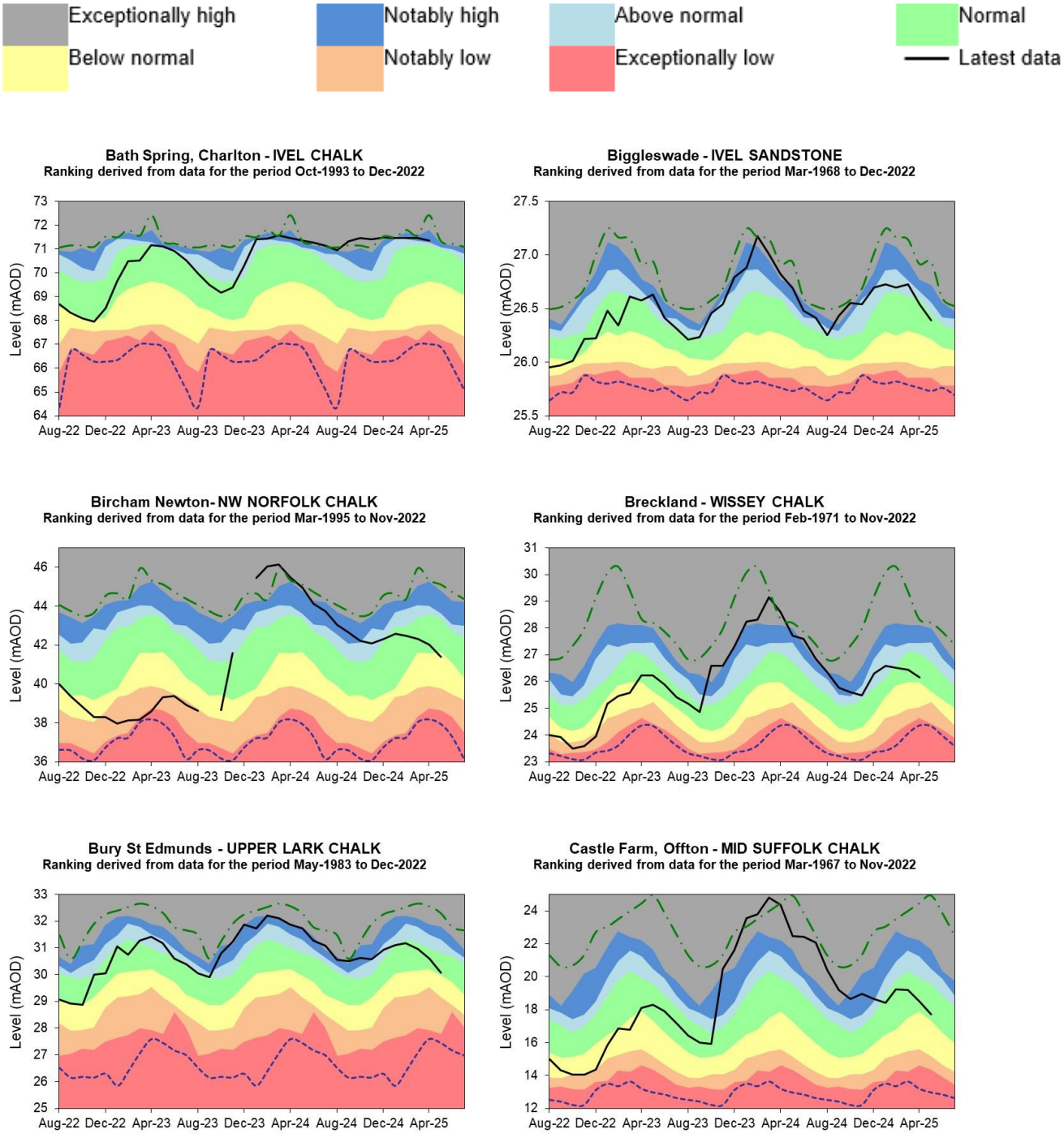
Figure 5.1: Groundwater levels for indicator sites at the end of May 2025, classed relative to an analysis of respective historic May levels. Table available in the appendices with detailed information.



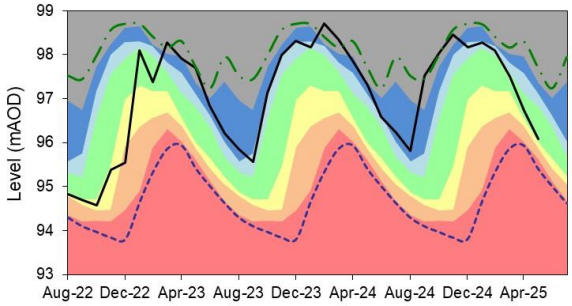
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

5.2 Groundwater level charts

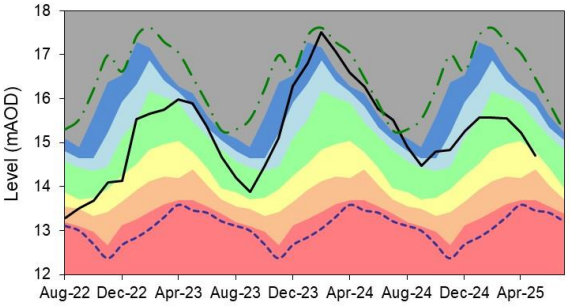
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.



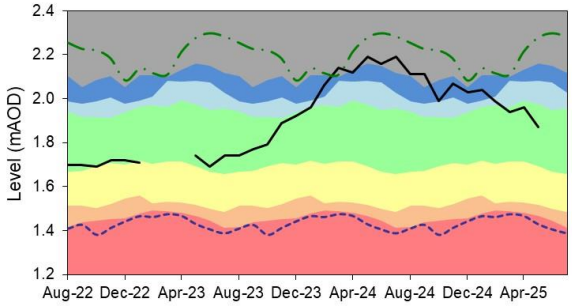
Fringford - GREAT OOLITE
Ranking derived from data for the period Sep-1980 to Dec-2022



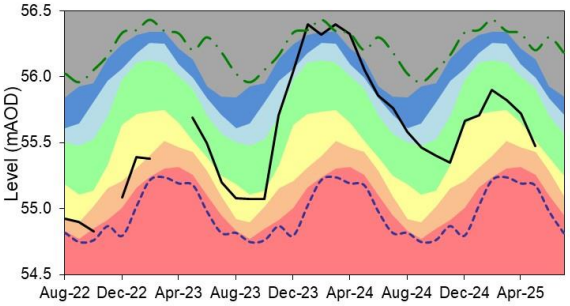
Gog Magog, Stapleford - CAM CHALK
Ranking derived from data for the period Jan-1980 to Dec-2022



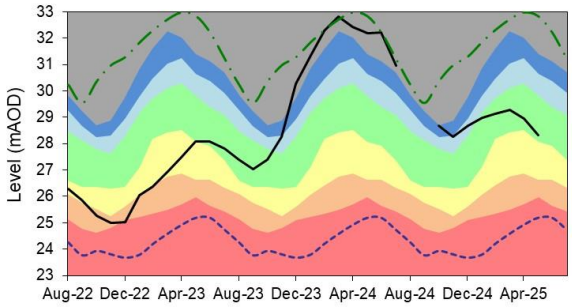
Hazlewood Common - SUFFOLK CRAG
Ranking derived from data for the period Oct-1988 to Nov-2022



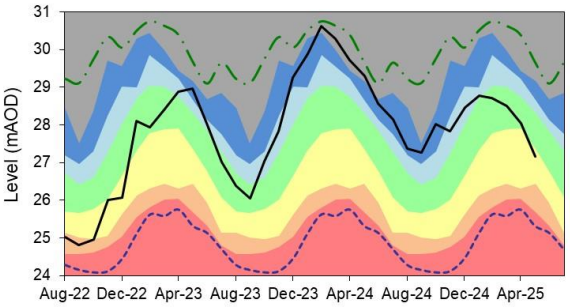
Hindolveston - NORFOLK CHALK
Ranking derived from data for the period Sep-1984 to Nov-2022



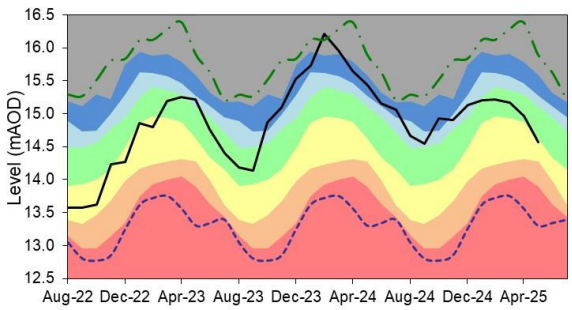
Kenninghall - LITTLE OUSE CHALK
Ranking derived from data for the period Aug-1973 to Dec-2022



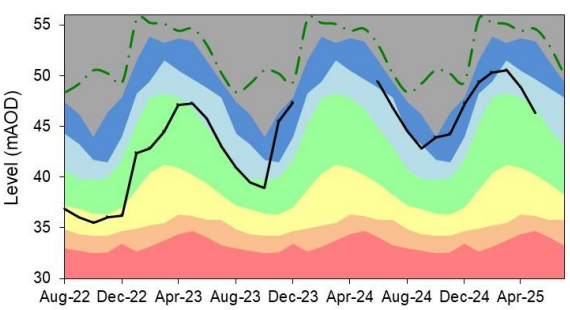
Linton - CAM CHALK
Ranking derived from data for the period Jan-1980 to Dec-2022

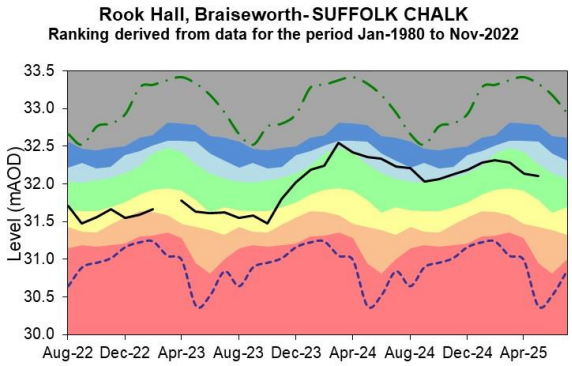


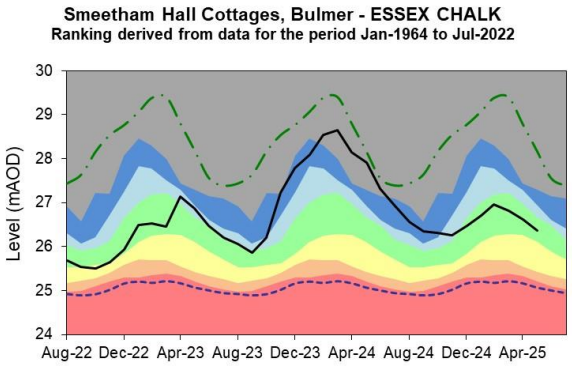
Newmarket - SNAIL CHALK
Ranking derived from data for the period Feb-1983 to Dec-2022

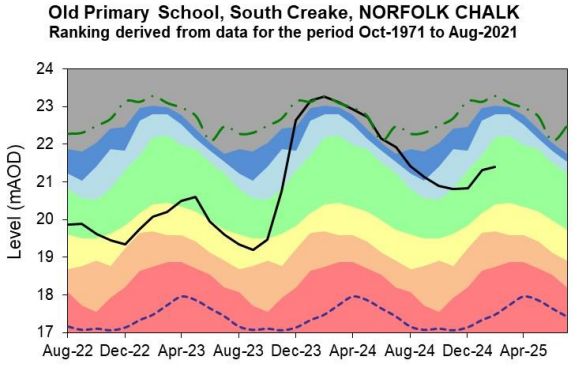


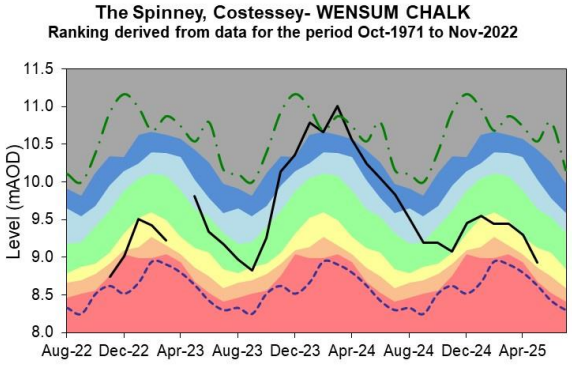
Redlands Hall, Ickleton - CAM CHALK
Ranking derived from data for the period Aug-1963 to Dec-2022

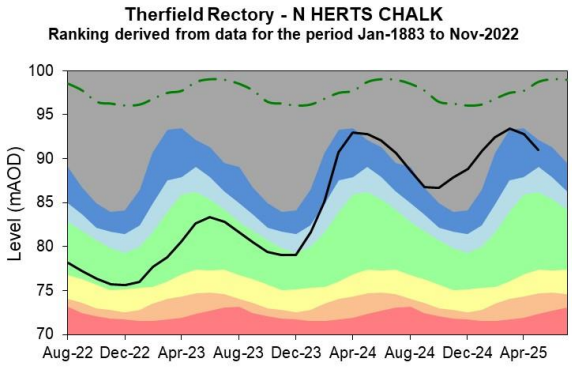


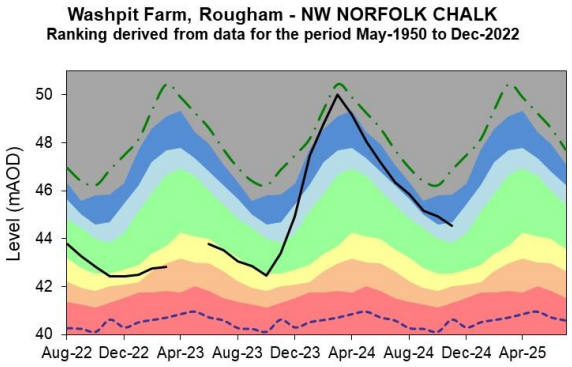








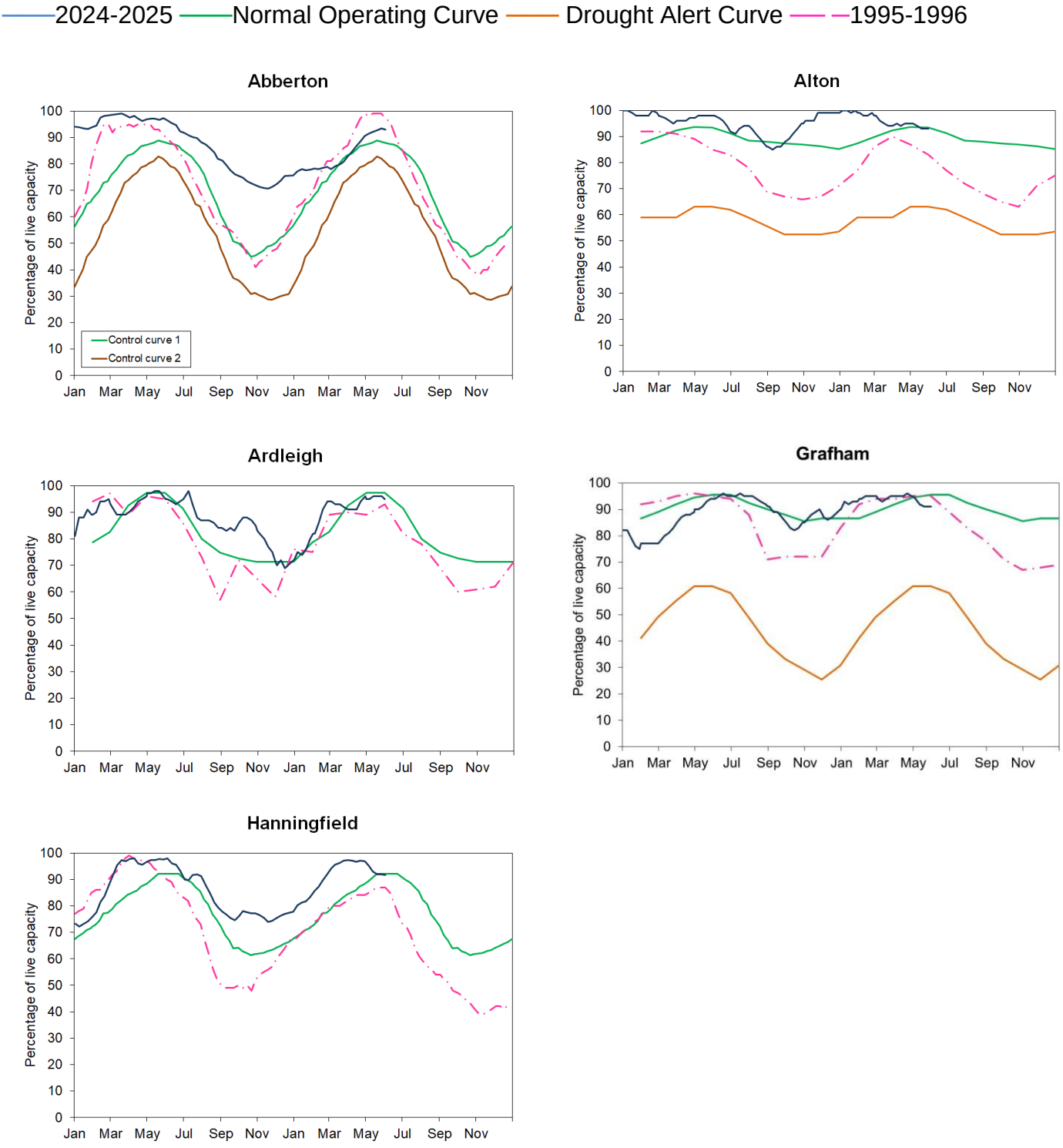




Source: Environment Agency, 2025.

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.

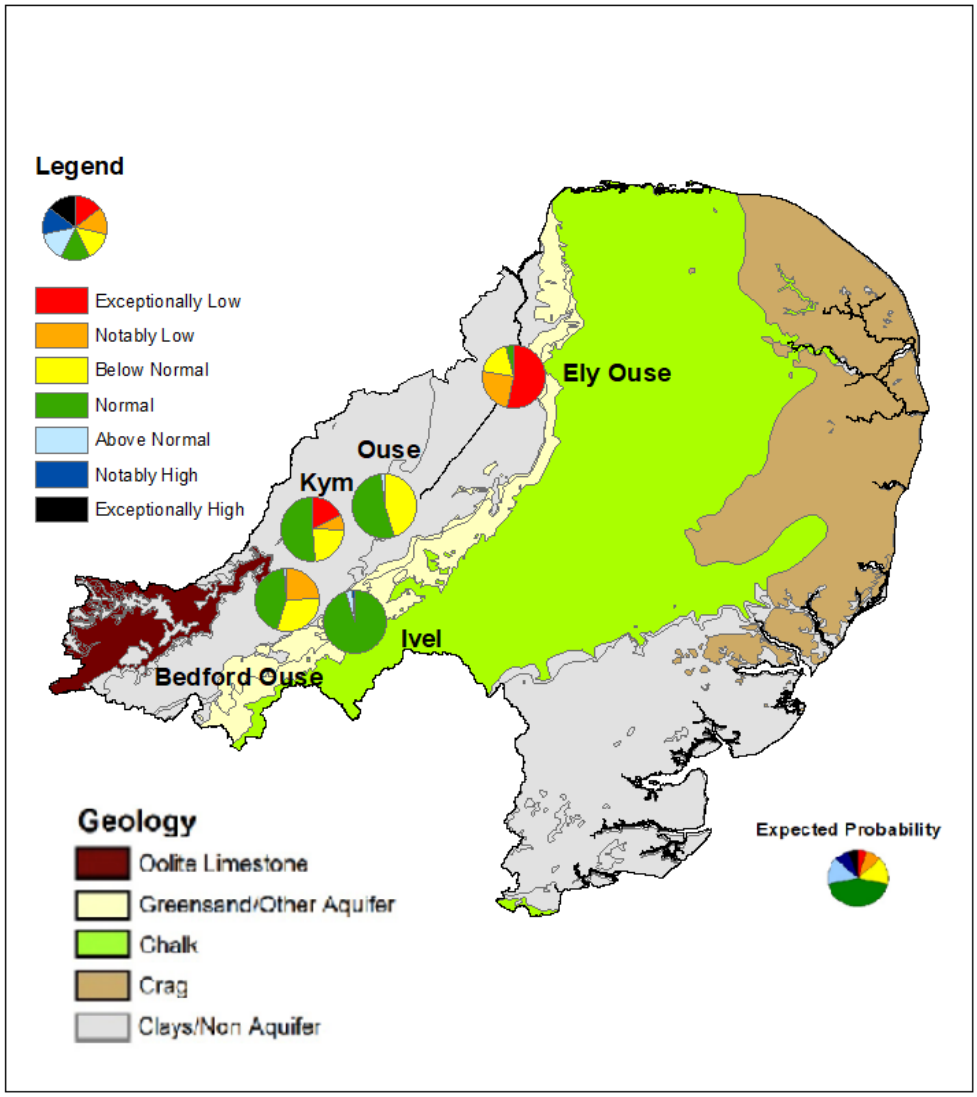


(Source: water companies).

7 Forward look

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

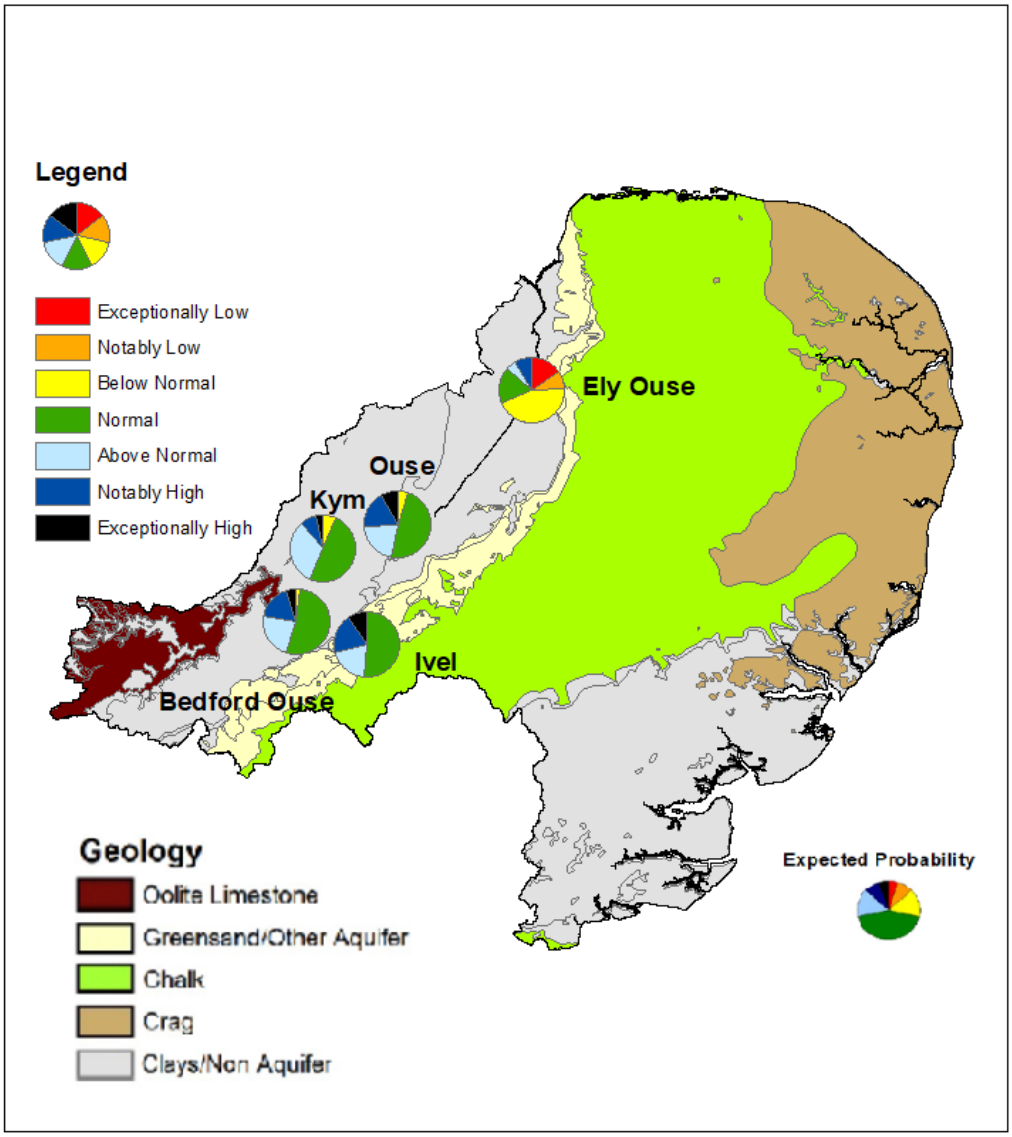
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those 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 September 2025

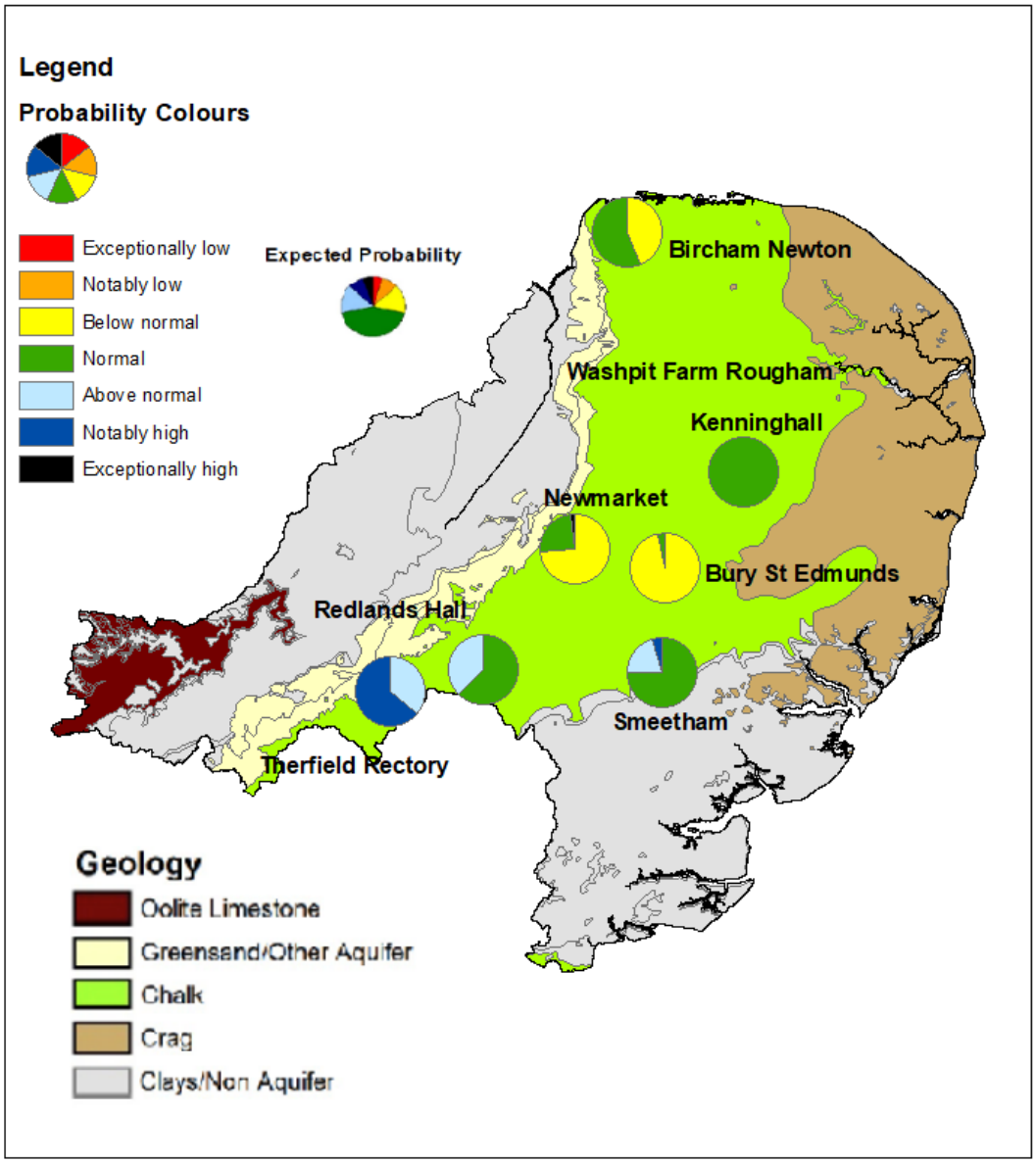
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those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

7.3 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

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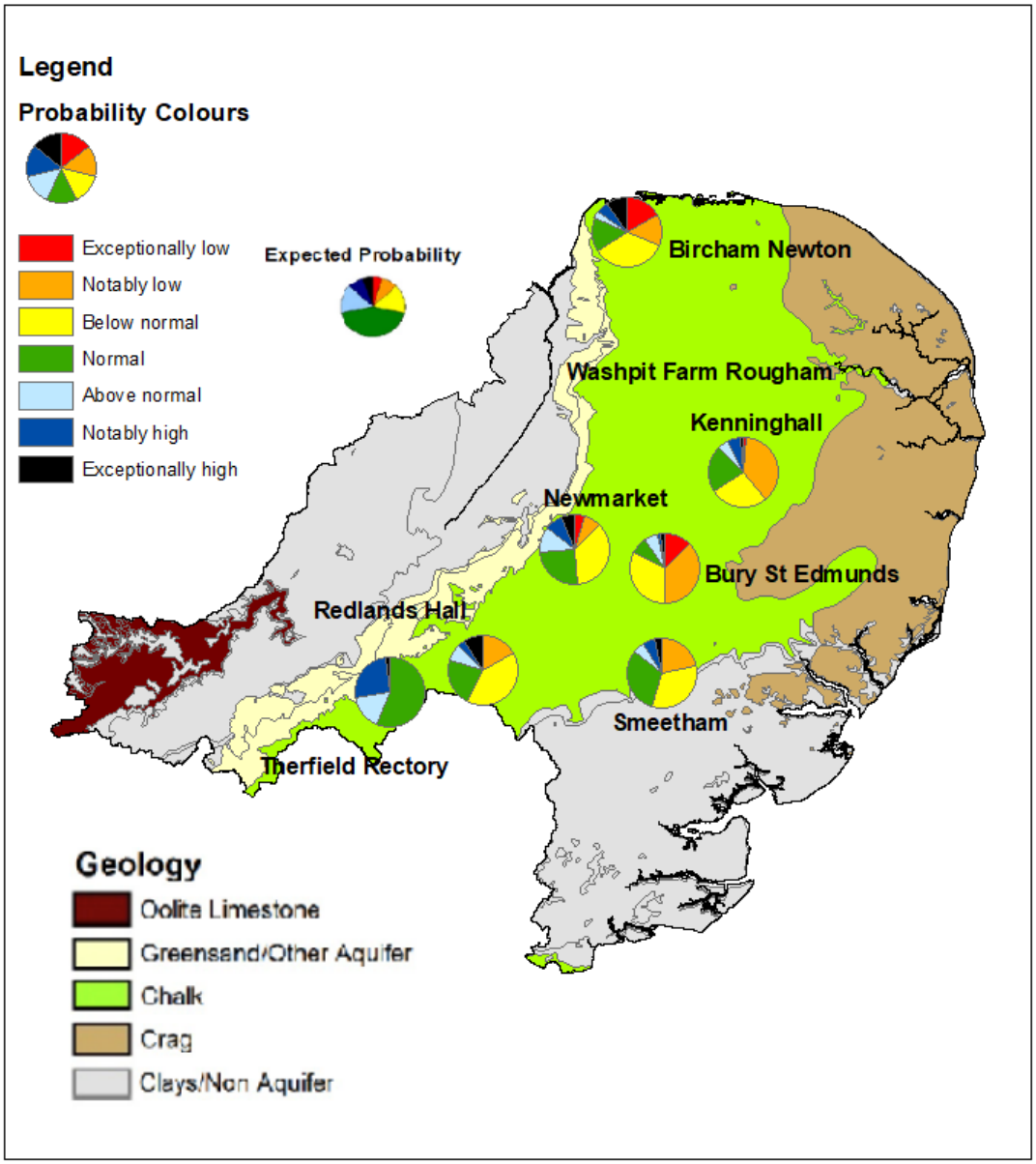

Pie charts indicate probability, based on climatology, of the groundwater level at each site being, for example, exceptionally low for the time of year. (Source: Environment Agency)

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	May 2025 rainfall % of long term average 1991 to 2020	May 2025 band	Mar 2025 to May cumulative band	Dec 2024 to May cumulative band	Jun 2024 to May cumulative band
Broadland Rivers	61	Below Normal	Exceptionally low	Notably low	Notably low
Cam	44	Below Normal	Exceptionally low	Below normal	Normal
Central Area Fenland	57	Below Normal	Exceptionally low	Notably low	Below normal
East Suffolk	43	Below Normal	Exceptionally low	Notably low	Below normal
Little Ouse And Lark	50	Below Normal	Exceptionally low	Notably low	Below normal
Lower Bedford Ouse	40	Notably Low	Exceptionally low	Below normal	Normal
North Essex	41	Notably Low	Exceptionally low	Notably low	Below normal
North Norfolk	78	Normal	Exceptionally low	Notably low	Below normal
Nw Norfolk And Wissey	71	Normal	Exceptionally low	Notably low	Below normal

South Essex	31	Notably Low	Exceptionally low	Notably low	Notably low
Upper Bedford Ouse	31	Notably Low	Exceptionally low	Notably low	Normal

9.2 River flows table

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

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

9.3 Groundwater table

Site name	Aquifer	End of May 2025 band	End of Apr 2025 band
Biggleswade	Ivel Woburn Sands	Normal	Normal
Bircham Newton	North West Norfolk Chalk	Below normal	Normal
Breckland	Wissey Chalk	No Data	Normal
Bury St Edmunds	Upper Lark Chalk	Normal	Normal
Castle Farm, Offton	East Suffolk Chalk	Normal	Normal
Gog Magog, Stapleford	Cam Chalk	Below normal	Normal
Hazlewood Common	East Suffolk Crag	Normal	Normal
Hindolveston	Norfolk Chalk	Below normal	Normal
Kenninghall	Little Ouse Chalk	Normal	Normal
Linton	Cam Chalk	Below normal	Normal
Newmarket	Snail Chalk	Below normal	Normal
Old Primary School, South Creake	North Norfolk Chalk	No Data	No Data

Redlands Hall, Ickleton	Cam Chalk	Normal	Above normal
Rook Hall, Braiseworth	East Suffolk Chalk	Normal	Normal
Smeetham Hall Cottages, Bulmer	North Essex Chalk	Normal	Normal
The Spinney, Costessey	Wensum Chalk	Below normal	Normal
Washpit Farm, Rougham	North West Norfolk Chalk	No Data	No Data
Therfield Rectory	Upper Lee Chalk	Notably high	Notably high
Fringford P.s.	Upper Bedford Ouse Oolitic Limestone (great)	Normal	Normal

9.4 Ensemble projections tables

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

Percentage of pie chart for each band

Site	Bedford Ouse	Kym	Ivel	Ouse	Ely Ouse
Exceptionally low	0	18	0	0	53
Notably low	24	8	0	0	24
Below normal	31	23	0	45	18
Normal	44	52	95	53	4
Above normal	2	0	3	2	0
Notably high	0	0	2	0	0
Exceptionally high	0	0	0	0	0

9.4.2 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	16
Notably low	0	0	0	0	9
Below normal	2	6	0	5	44
Normal	53	50	52	48	18
Above normal	23	32	19	21	4
Notably high	18	8	19	18	9
Exceptionally high	5	3	10	8	0

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	87.5	100.0	3.1	100.0	0.0
Normal	0.0	100.0	12.5	0.0	96.9	0.0	100.0
Above normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Notably high	100.0	0.0	0.0	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	4.7	17.2	1.6	12.5	0.0
Notably low	0.0	17.2	7.8	14.1	37.5	37.5	21.9
Below normal	0.0	40.6	35.9	34.4	26.6	32.8	32.8
Normal	55.7	21.9	25.0	15.6	21.9	7.8	31.3
Above normal	16.4	7.8	12.5	3.1	4.7	6.3	4.7
Notably high	26.2	3.1	7.8	6.3	6.3	1.6	6.3
Exceptionally high	1.6	9.4	6.3	9.4	1.6	1.6	3.1