Monthly water situation report: East Anglia

1 Summary - April 2025

April rainfall across East Anglia ranged from 30% to 70% of the long term average for the month. With a dry April following an exceptionally dry March, the soil moisture deficit for East Anglia increased to 66mm, which is considered notably high for the time of year. With very little effective rainfall, river flow site hydrographs could be described as typically displaying a steady base flow recession from March 2025 onward. Groundwater levels at all sites for which data was available have shown receding levels through March and April, although levels at the majority of report sites remain normal for the time of year. All public water supply reservoirs are above or approximately in line with their respective normal operating curves.

1.1 Rainfall

April 2025 rainfall across East Anglia ranged from 30% to 70% of the long term average [LTA] for the month. Southern and western catchments were typically slightly wetter than the catchments to the north and east. The East Anglia area averaged rainfall for April 2025 was 22mm. This total is approximately 54% of the 1991 to 2020 LTA for April. The combined East Anglia rainfall for March and April 2025 was 28mm, which is the fifth driest March to April rainfall total for East Anglia based on records going back to 1871.

1.2 Soil moisture deficit and recharge

The exceptionally low spring rainfall to date has seen the soil moisture deficit [SMD] for East Anglia increase to 66mm, which is classified as notably high for the time of year. There is little variation in SMD values across the area, with the majority of East Anglian catchments having SMD values in the range of 64mm to 74mm.

1.3 River flows

All river gauging stations included within the East Anglia water situation report recorded below average month mean flows for April 2025. River flows ranged between 25% to 99% of the LTA, with the majority of report sites recording normal to below normal flows for the time of year. The lower flows were typically towards the centre and east of the area, reflecting the distribution of rainfall across the month.

1.4 Groundwater levels

Groundwater levels at all sites for which data was available have shown receding levels through March and April. The dry start to spring has resulted in a truncated recharge season, although groundwater levels at the majority of report sites remain normal for the time of year.

1.5 Reservoir stocks

By the end of April 2025, Abberton, Hanningfield, Grafham and Alton all held water in excess of their respective normal operating curves. Ardleigh's stored volume was just below the normal operating curve, but still equivalent to 95% of the full capacity.

1.6 Forward look

1.6.1 Probabilistic ensemble projections for river flows at key sites

The river flow projections indicate an approximate 50% or higher probability of normal or higher flows by June 2025 at all forecast sites. For September 2025, flow projections indicate an approximate 65% or higher probability of normal or higher flows at all forecast sites.

1.6.2 Probabilistic ensemble projections for groundwater levels in key aquifers

With groundwater levels typically being slower to change than river levels, there is a high likelihood of continued normal or higher groundwater levels by the end of September 2025 for most forecast sites. As the projections go further into the future, the influence of current conditions reduces, although there remains a high likelihood of normal or higher groundwater conditions at all forecast sites by March 2026.

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*[SMD]: soil moisture deficits

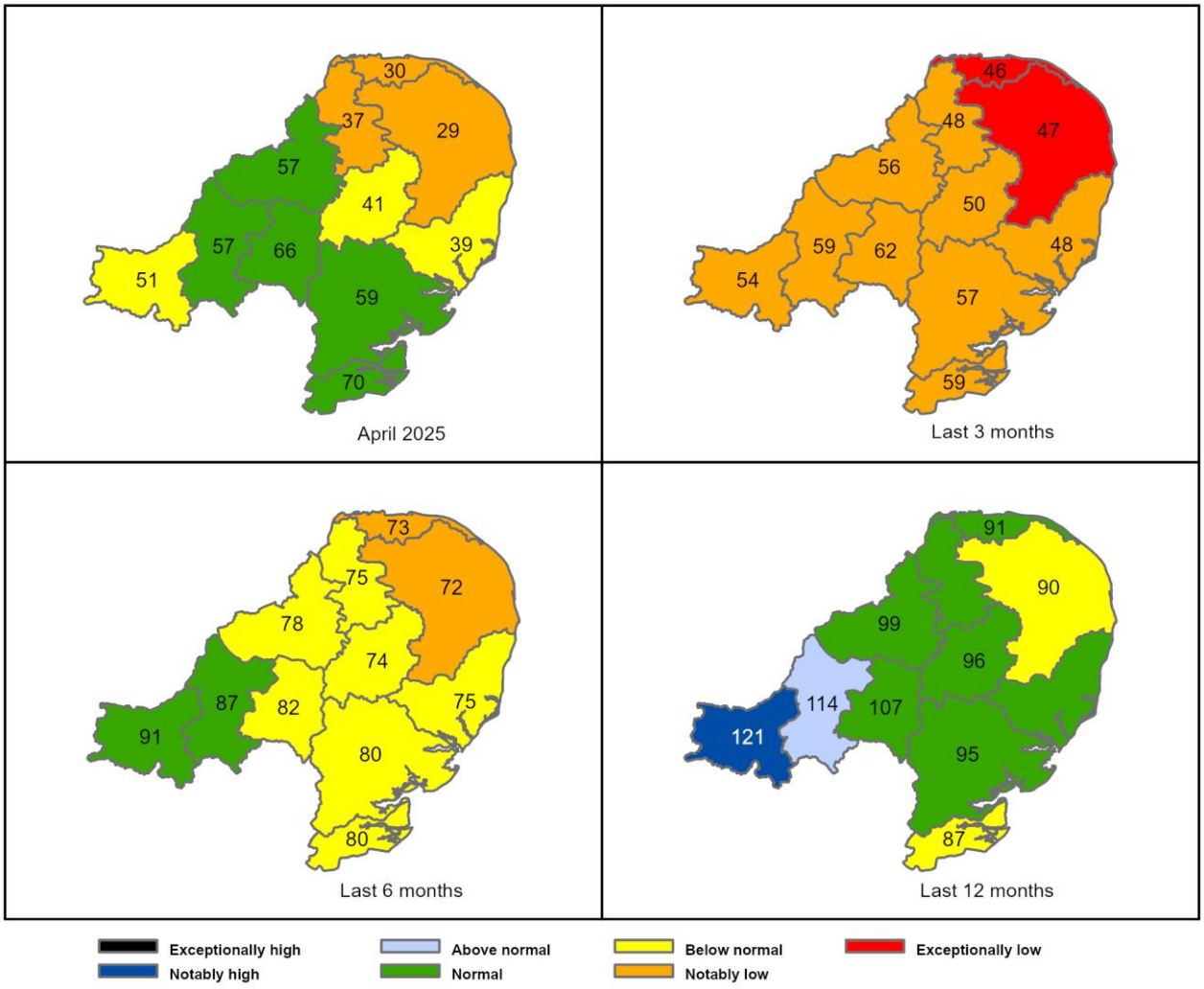
*[LTA]: long term average

Contact Details: 03708 506 506

2 Rainfall

2.1 Rainfall map

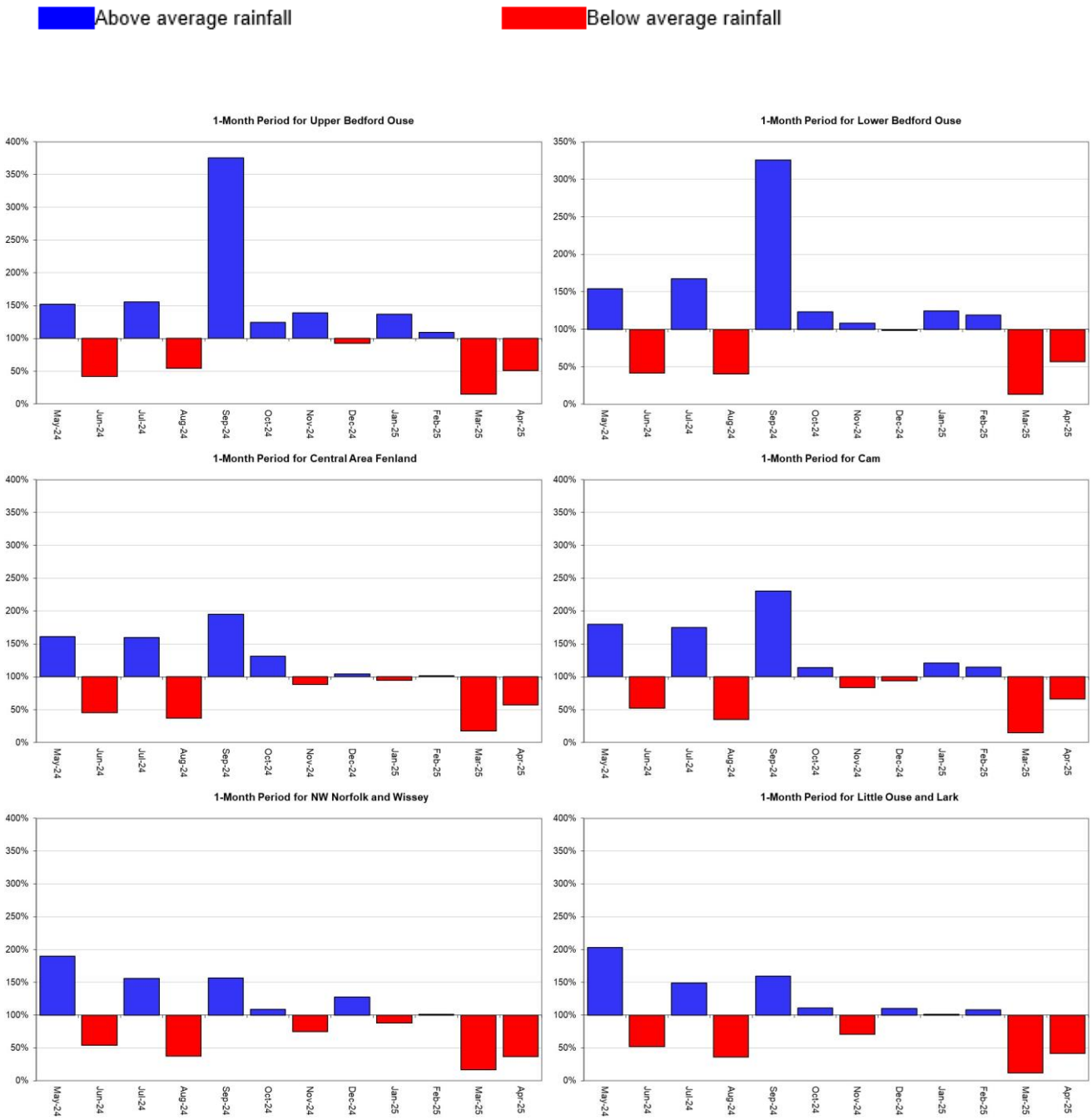
Figure 2.1: Total rainfall for hydrological areas across East Anglia, expressed as a percentage of long term average rainfall for the current month (up to 30 April 2025), the last 3 months, the last 6 months, and the last 12 months. Category classes are based on an analysis of respective historic totals.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

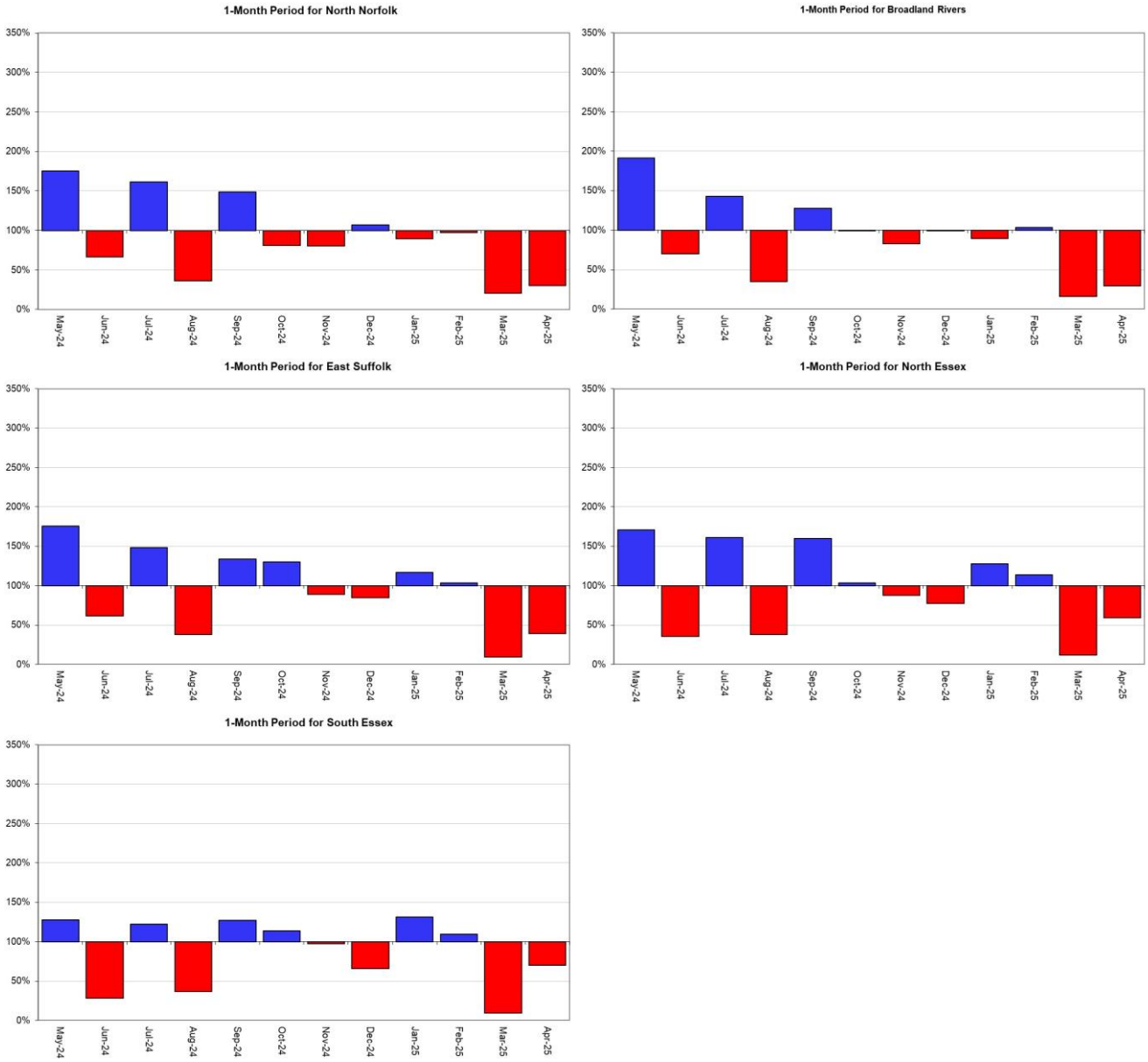


HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved.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

2.2 Rainfall charts

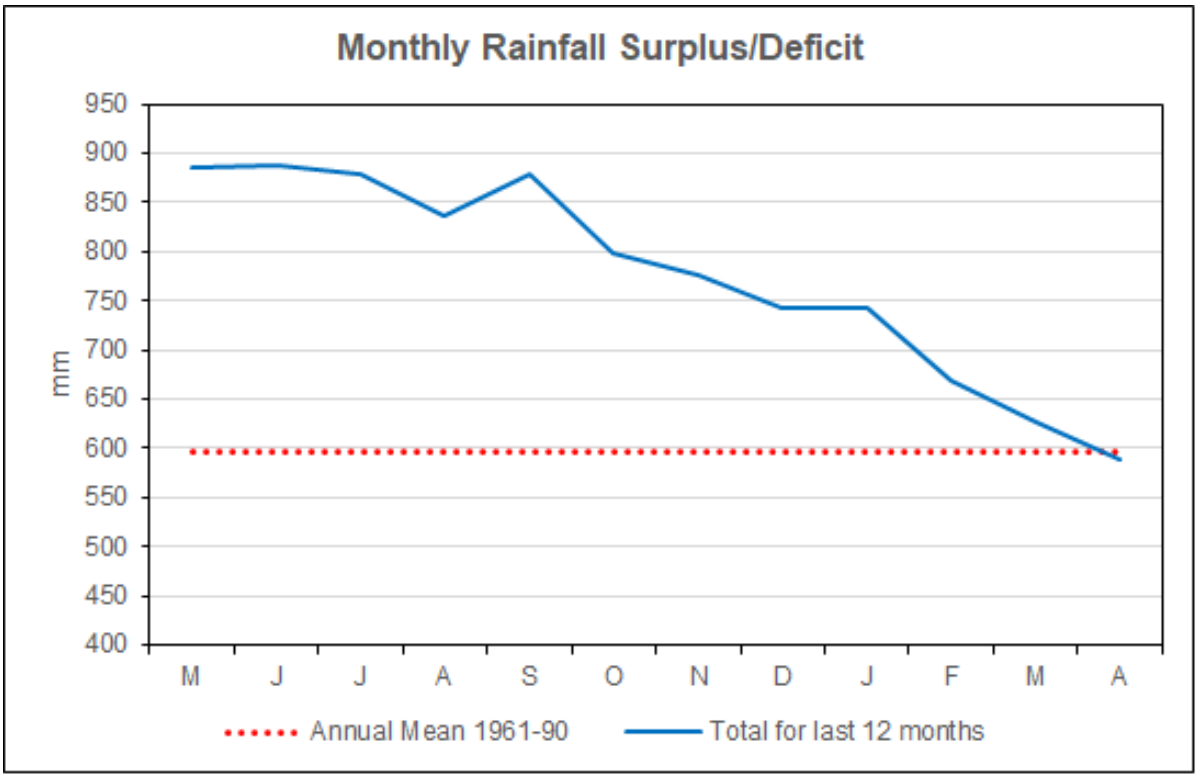
Figure 2.2: Monthly rainfall totals for the past 12 months as a percentage of the 1961 to 1990 long term average for each region and for England.





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

2.3 Monthly rainfall surplus deficit chart

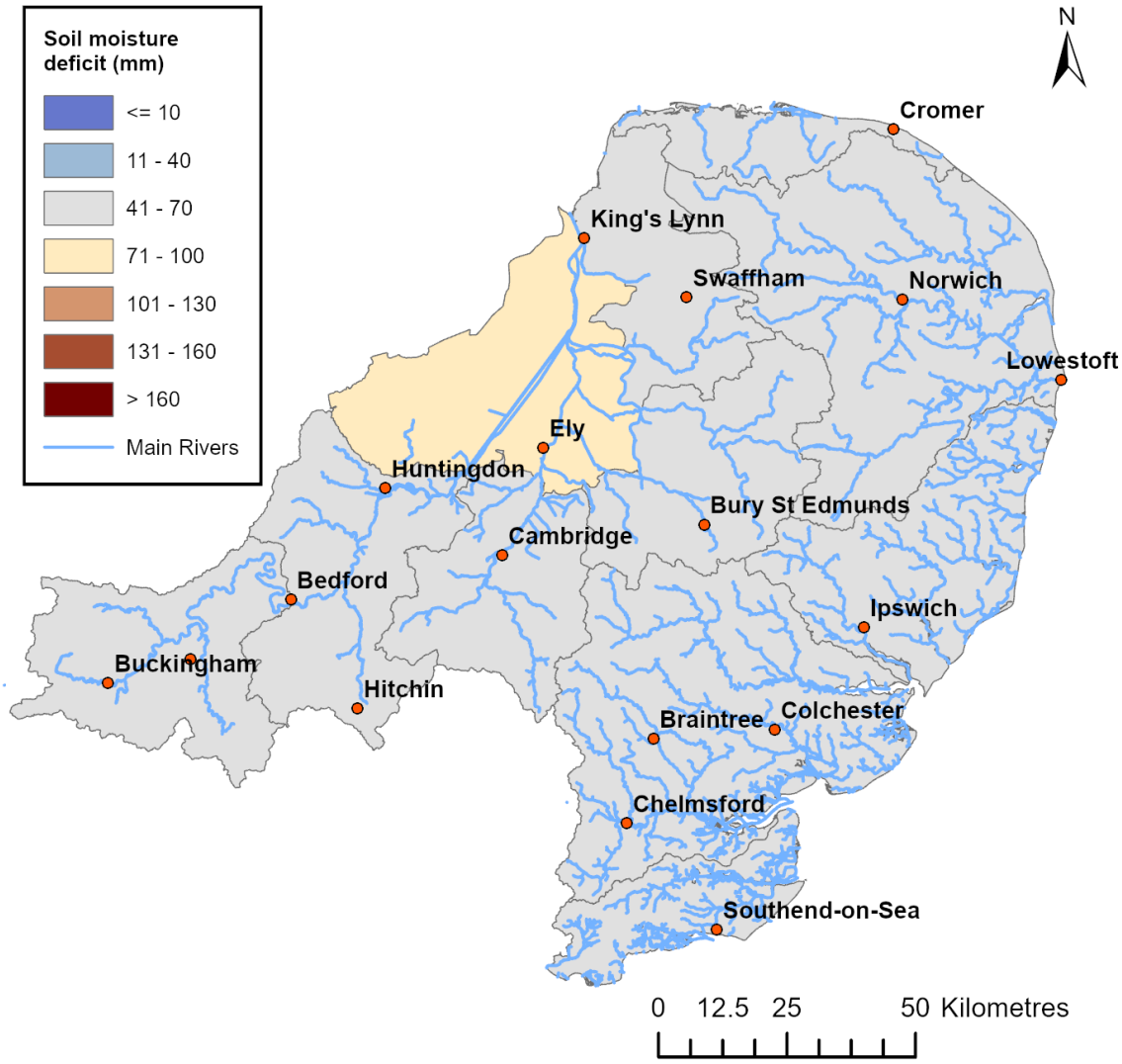


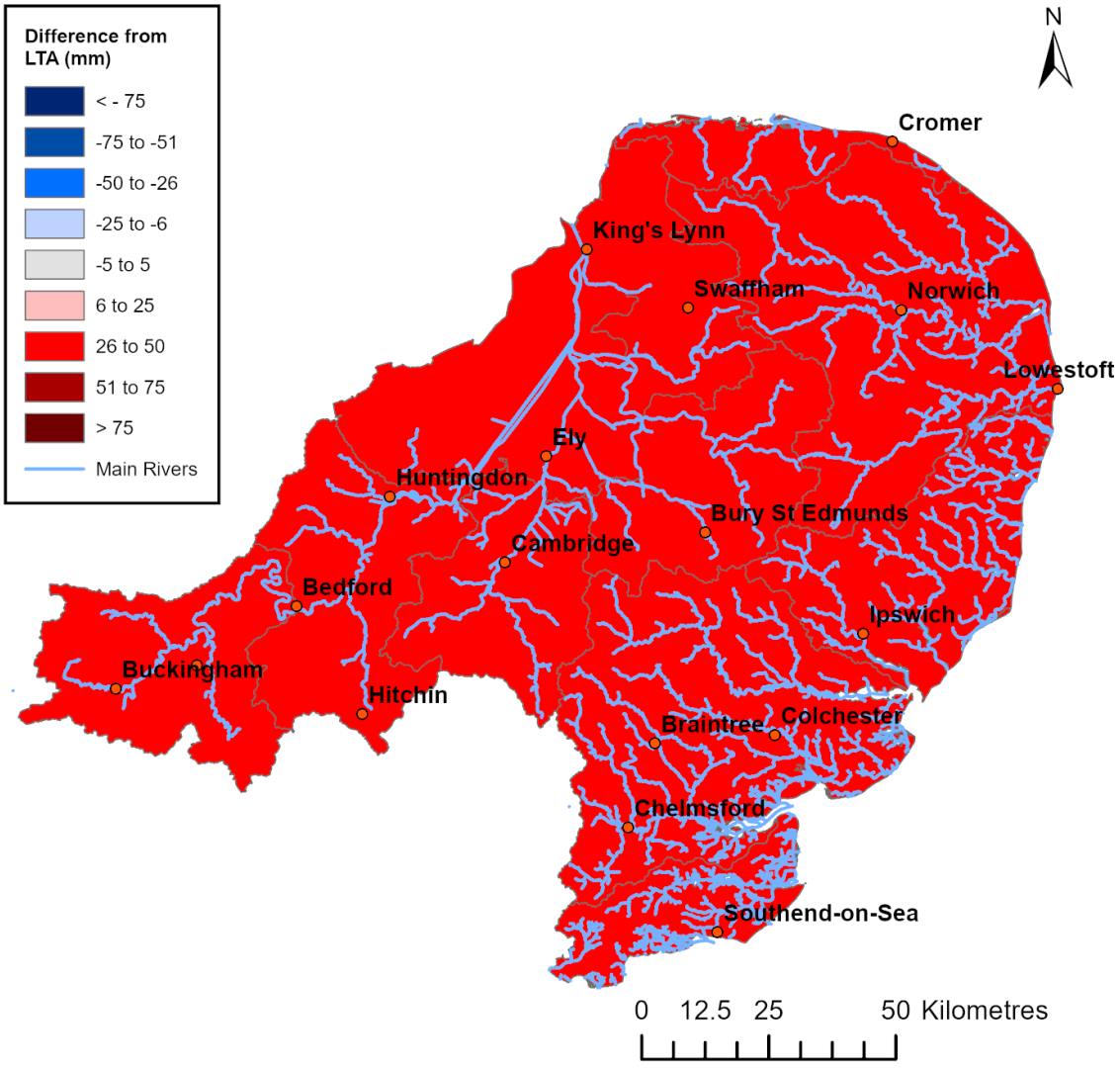
HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

3 Soil moisture deficit

3.1 Soil moisture deficit maps

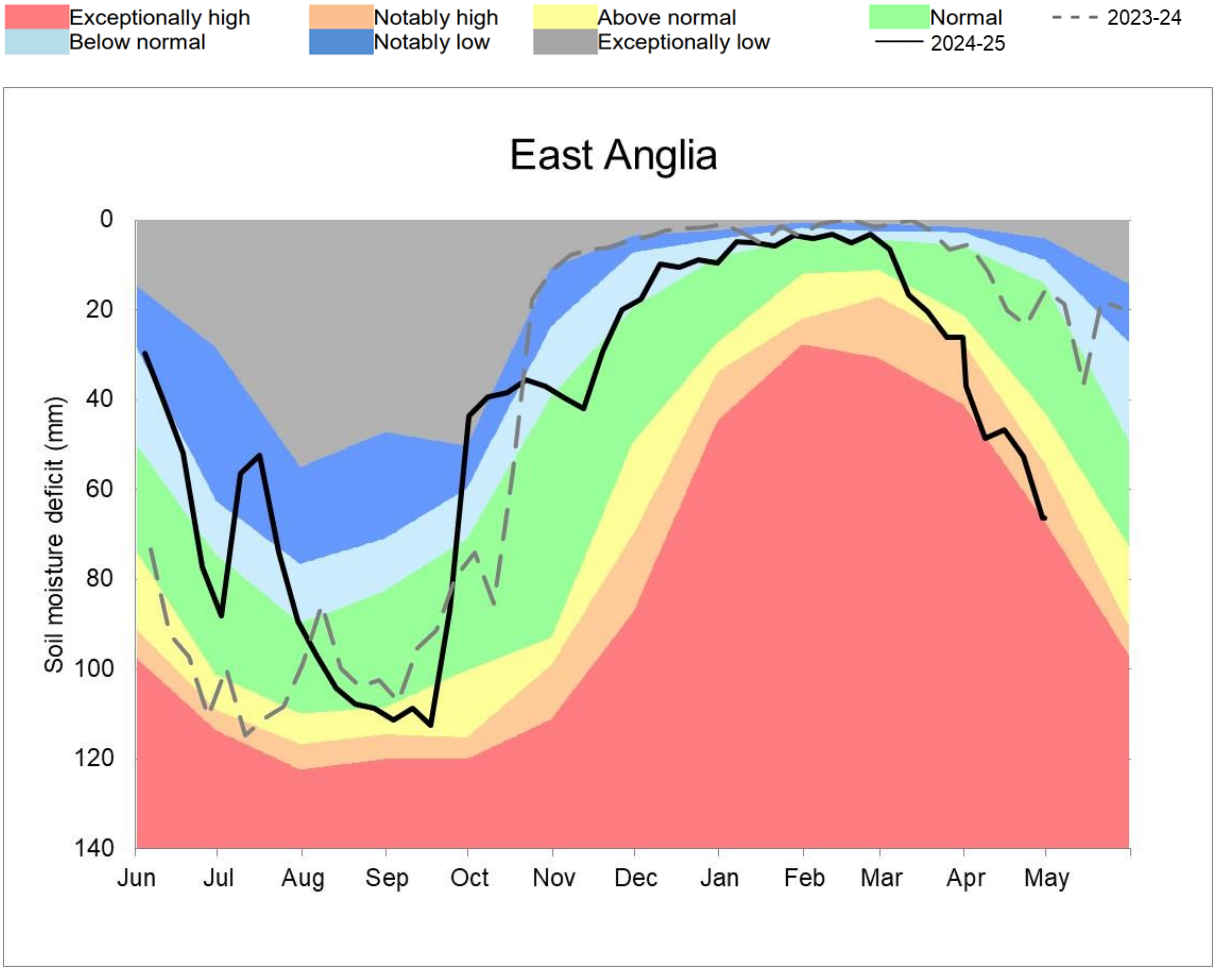
Figure 3.1: Soil moisture deficit values for 30 April 2025. Values based on the weekly MORECS data for real land use.





3.2 Soil moisture deficit chart

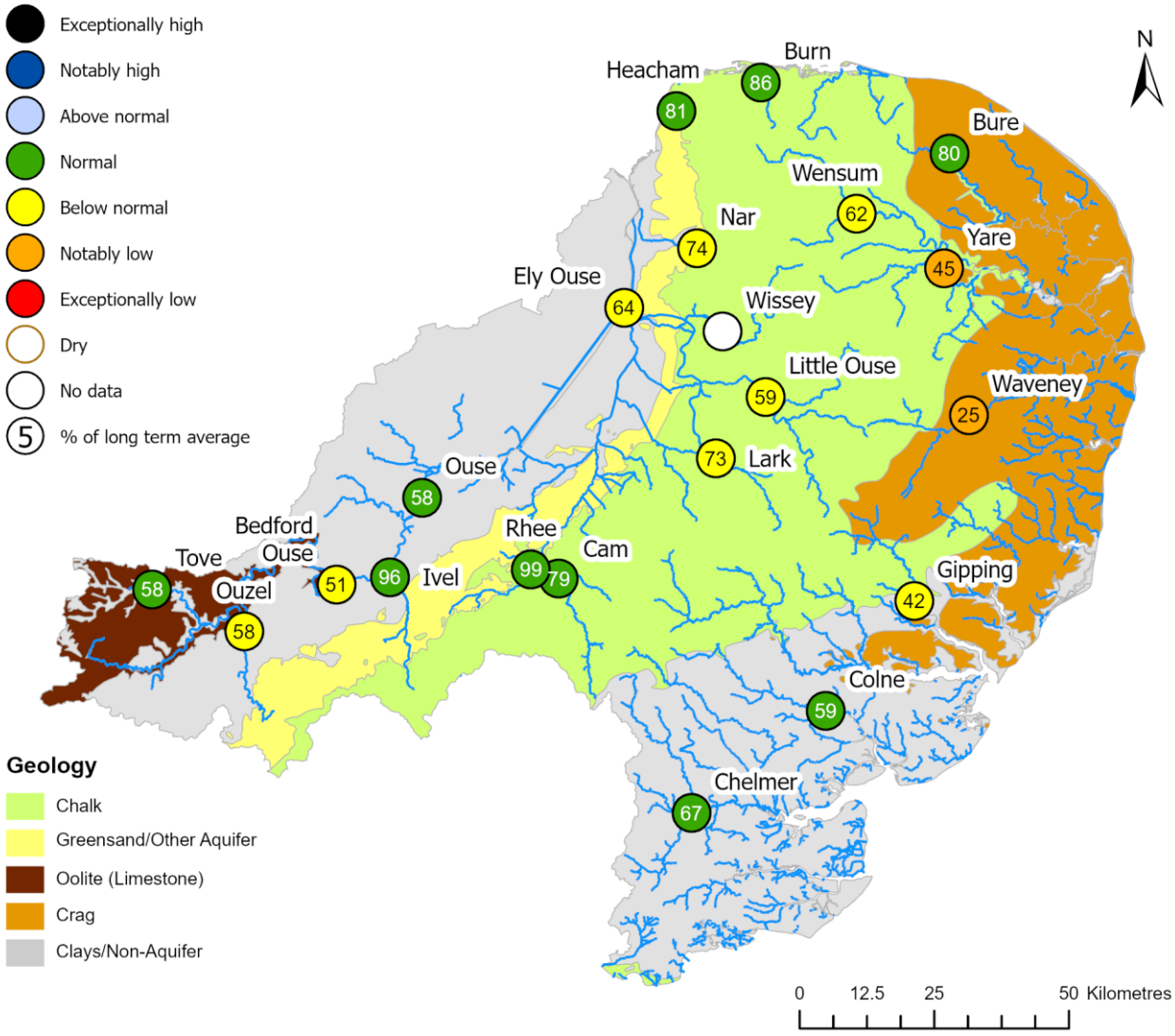
Figure 3.2: Latest soil moisture deficit compared to an analysis of historic 1961 to 1990 long term data set. Weekly MORECS data for real land use.



4 River flows

4.1 River flows map

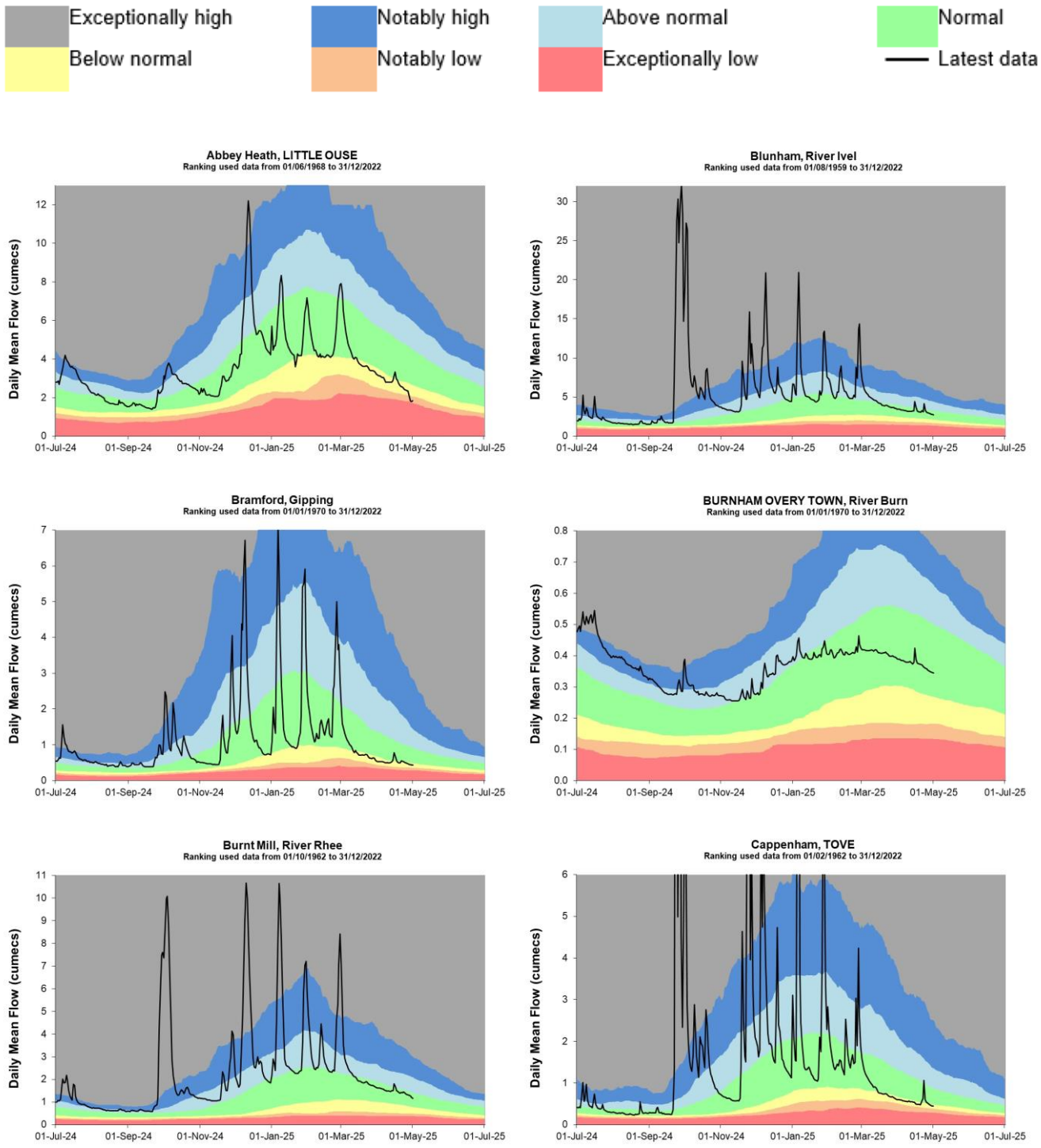
Figure 4.1: Monthly mean river flow for indicator sites for April 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic April monthly means Table available in the appendices with detailed information.

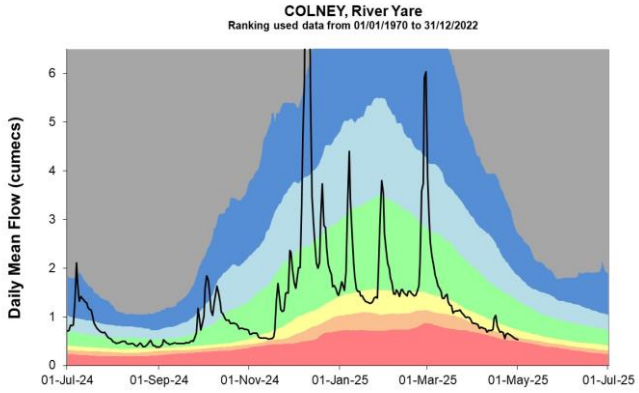


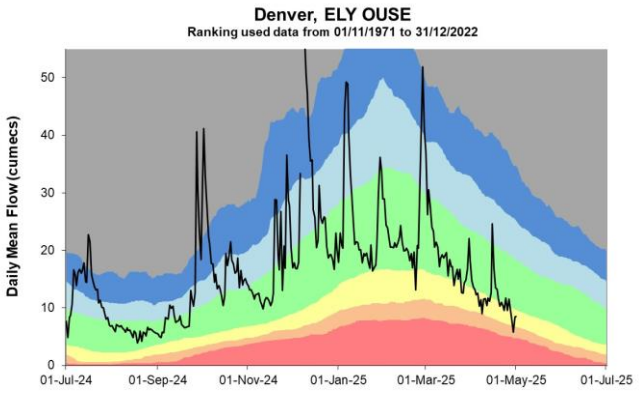
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

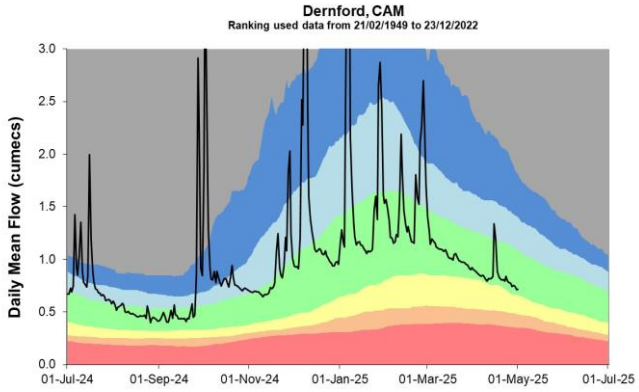
4.2 River flow charts

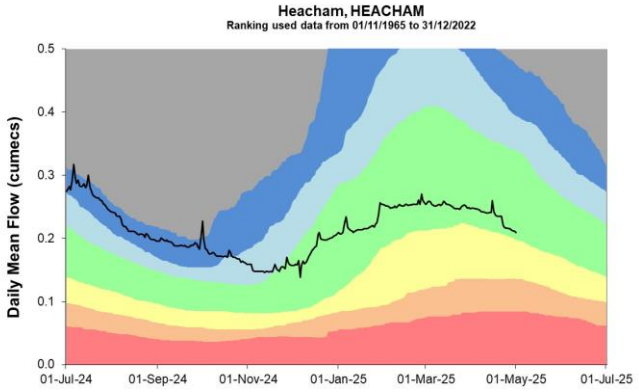
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

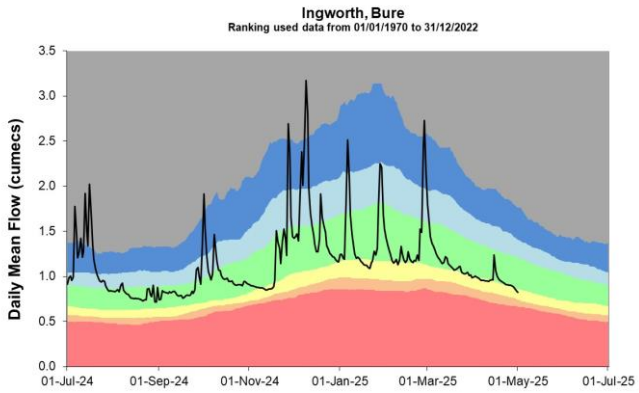


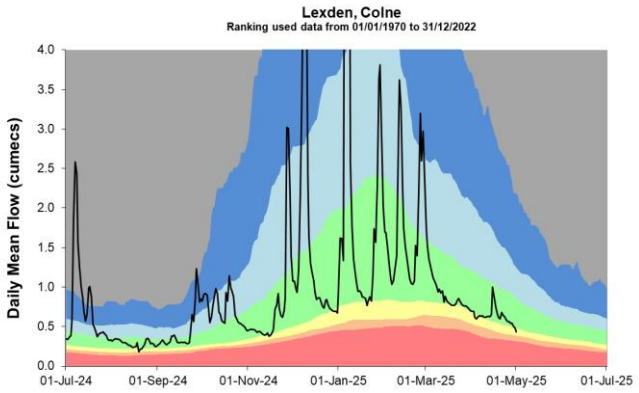

COLNEY, River Yare
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
0
1
2
3
4
5
6
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

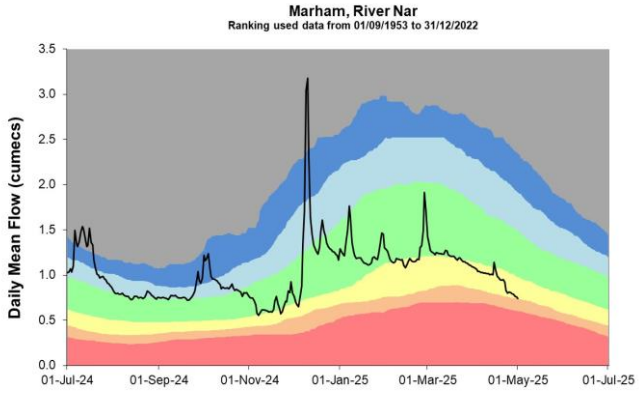

Denver, ELY OUSE
Ranking used data from 01/11/1971 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

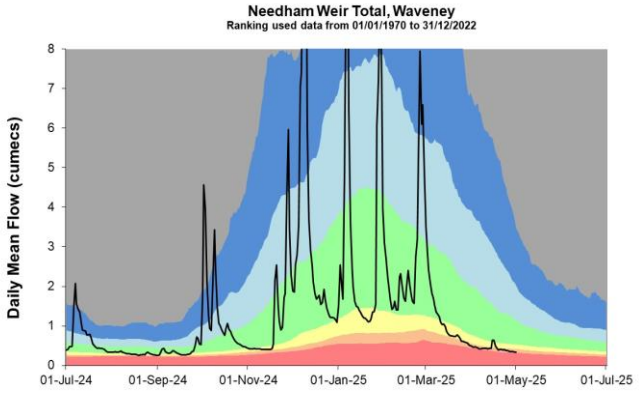

Dernford, CAM
Ranking used data from 21/02/1949 to 23/12/2022
Daily Mean Flow (cumecs)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

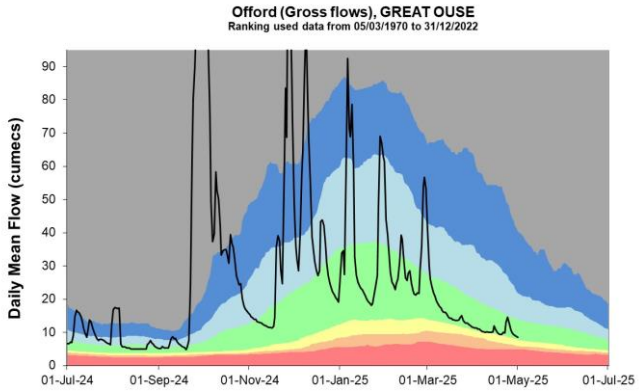

Heacham, HEACHAM
Ranking used data from 01/11/1965 to 31/12/2022
Daily Mean Flow (cumecs)
0.0
0.1
0.2
0.3
0.4
0.5
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

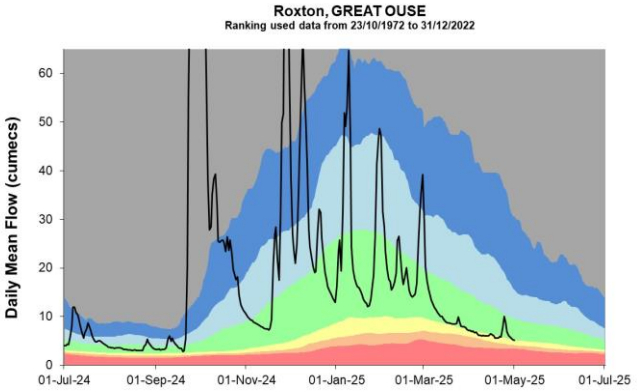

Ingworth, Bure
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

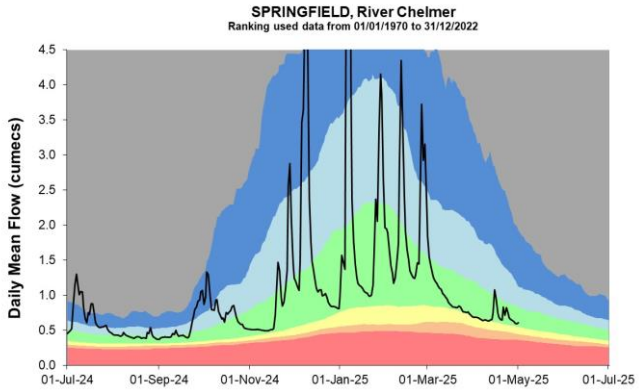

Lexden, Colne
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

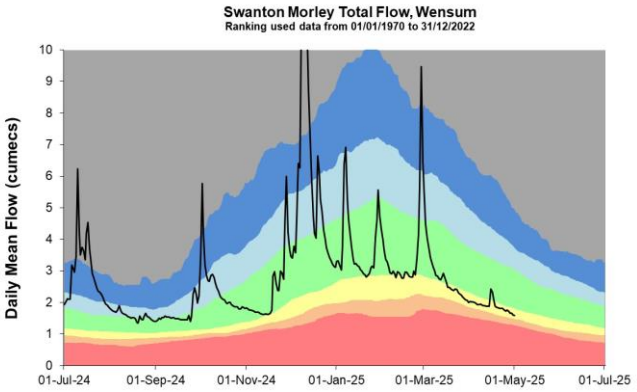

Marham, River Nar
Ranking used data from 01/09/1953 to 31/12/2022
Daily Mean Flow (cumecs)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

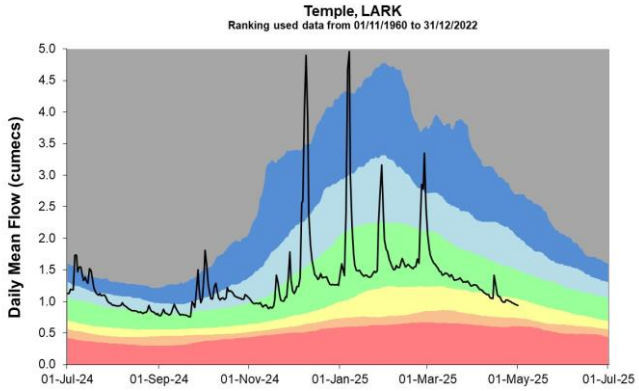

Needham Weir Total, Waveney
Ranking used data from 01/01/1970 to 31/12/2022
Daily Mean Flow (cumecs)
0
1
2
3
4
5
6
7
8
01-Jul-24
01-Sep-24
01-Nov-24
01-Jan-25
01-Mar-25
01-May-25
01-Jul-25

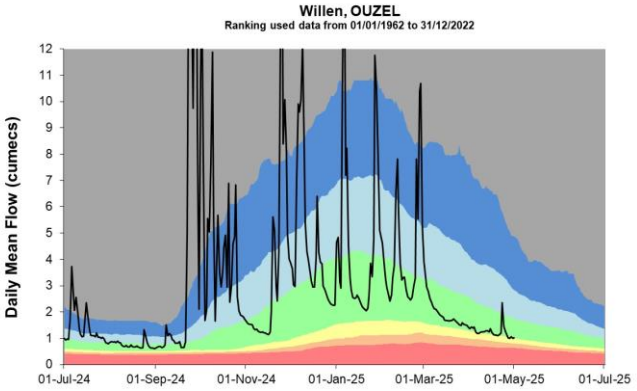










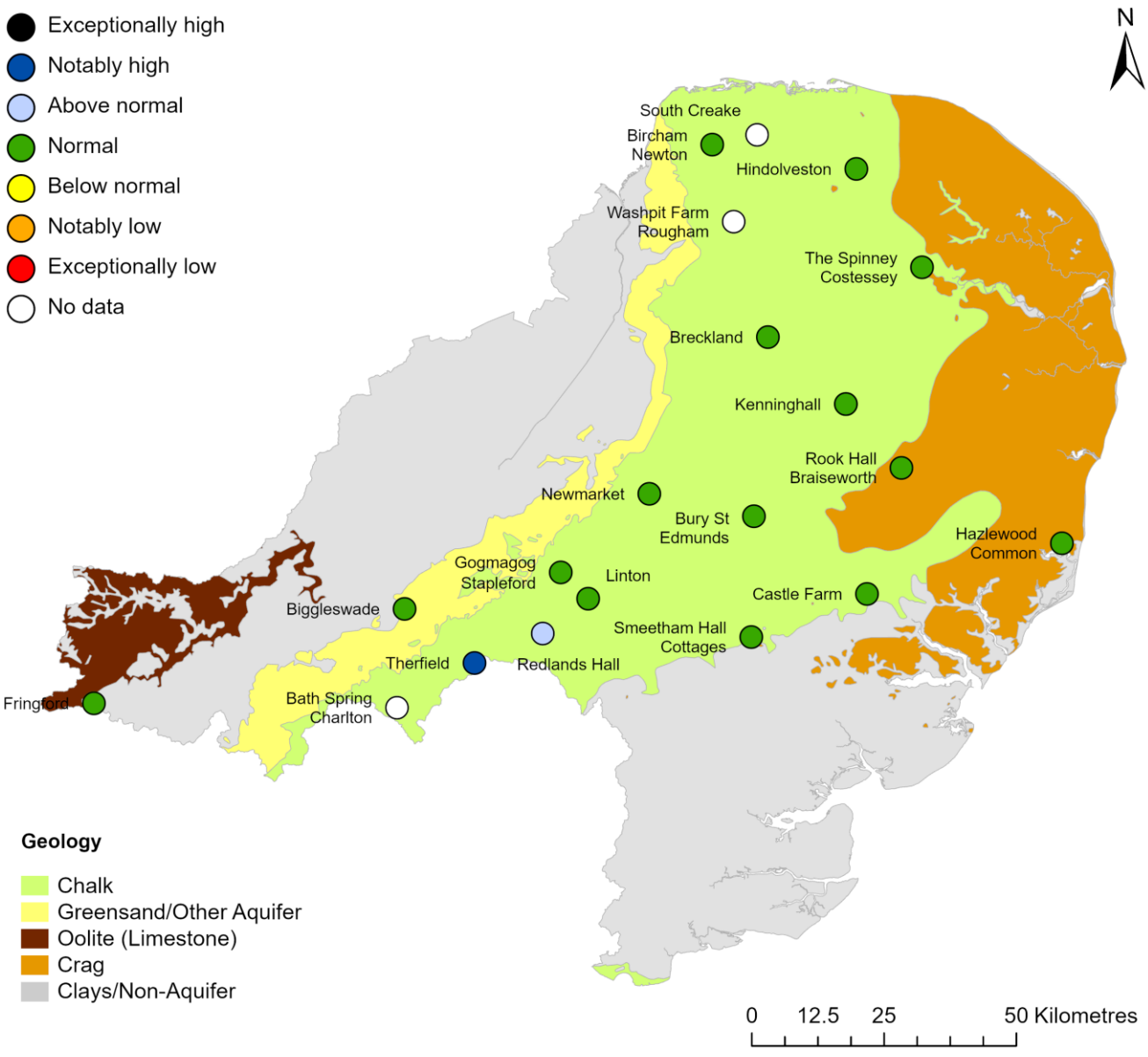


Source: Environment Agency.

5 Groundwater levels

5.1 Groundwater levels map

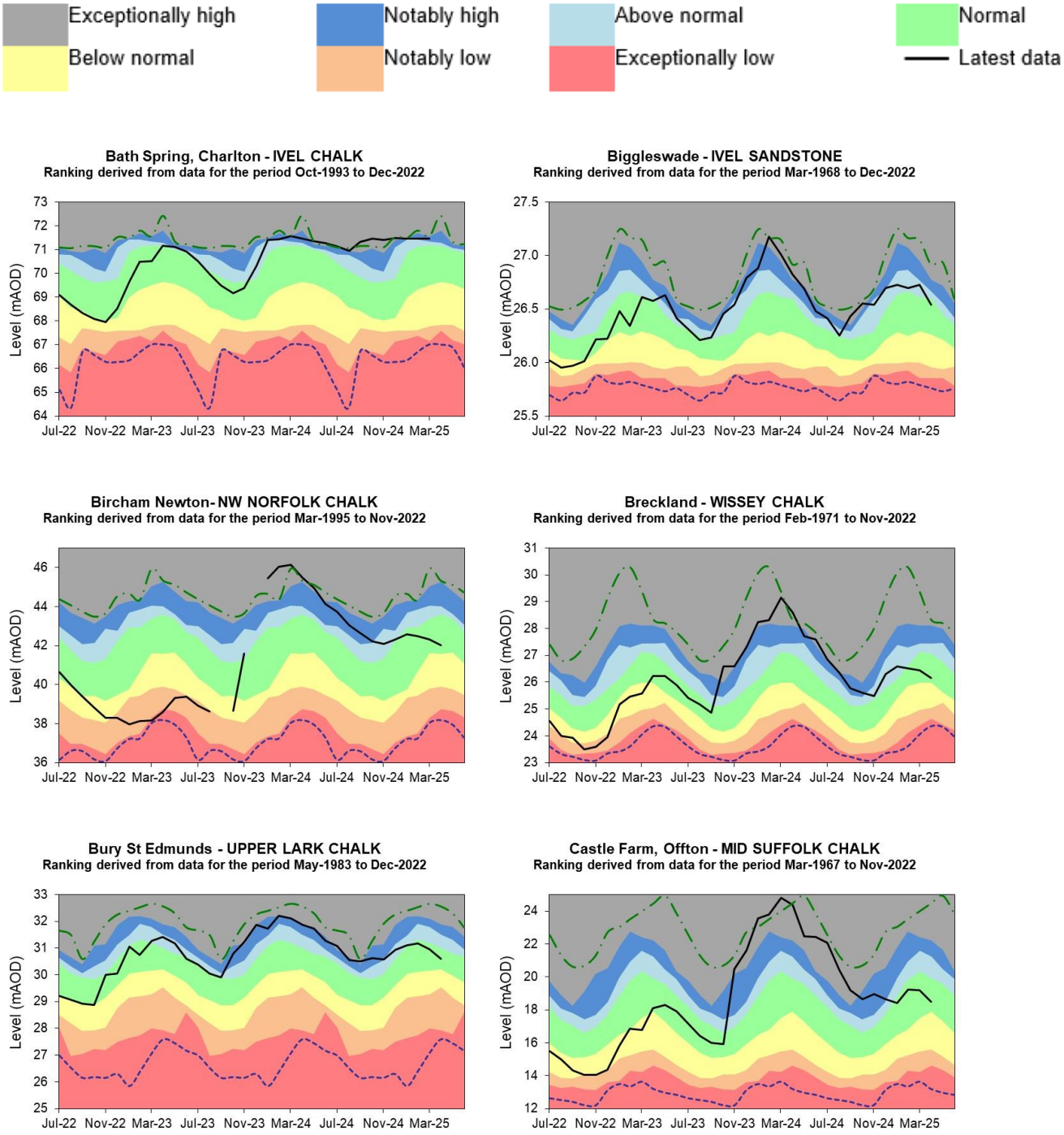
Figure 5.1: Groundwater levels for indicator sites at the end of April 2025, classed relative to an analysis of respective historic April levels. Table available in the appendices with detailed information.



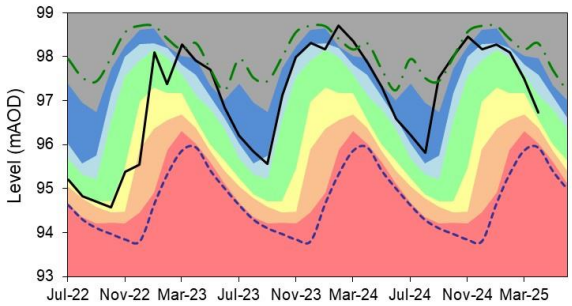
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

5.2 Groundwater level charts

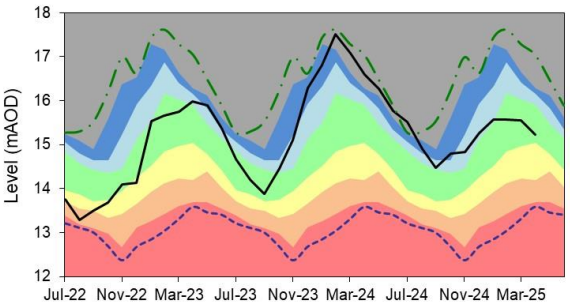
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.



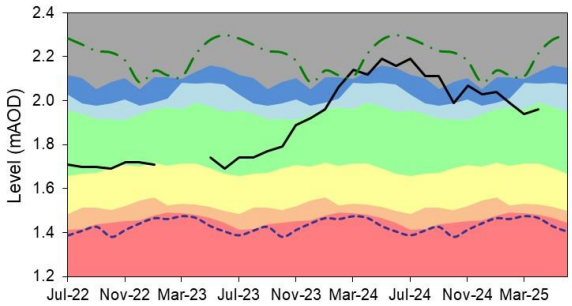
Fringford - GREAT OOLITE
Ranking derived from data for the period Sep-1980 to Dec-2022



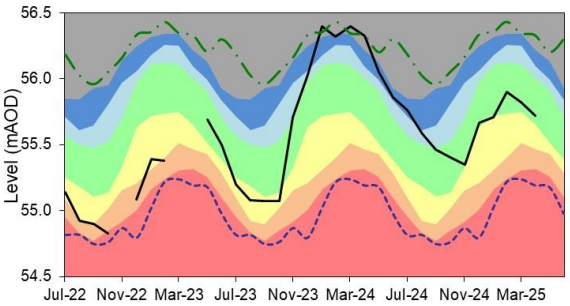
Gog Magog, Stapleford - CAM CHALK
Ranking derived from data for the period Jan-1980 to Dec-2022



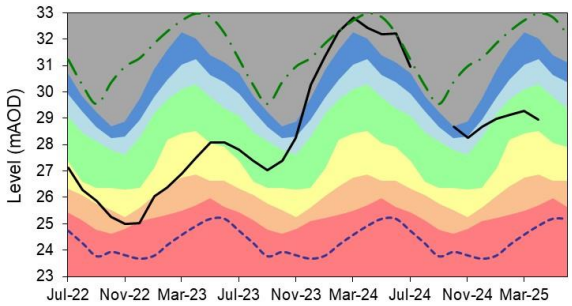
Hazlewood Common - SUFFOLK CRAG
Ranking derived from data for the period Oct-1988 to Nov-2022



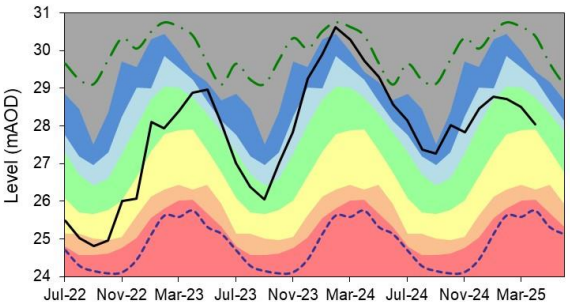
Hindolveston - NORFOLK CHALK
Ranking derived from data for the period Sep-1984 to Nov-2022



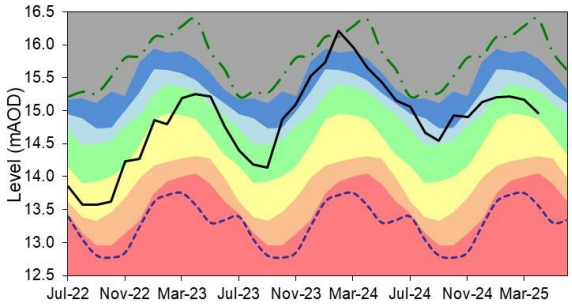
Kenninghall - LITTLE OUSE CHALK
Ranking derived from data for the period Aug-1973 to Dec-2022



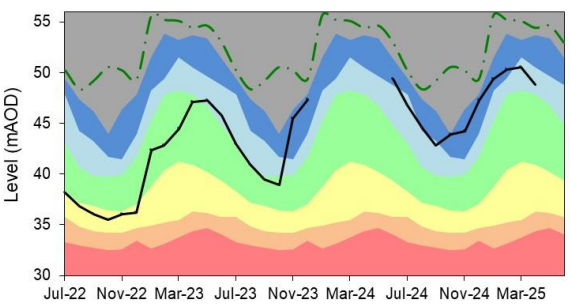
Linton- CAM CHALK
Ranking derived from data for the period Jan-1980 to Dec-2022

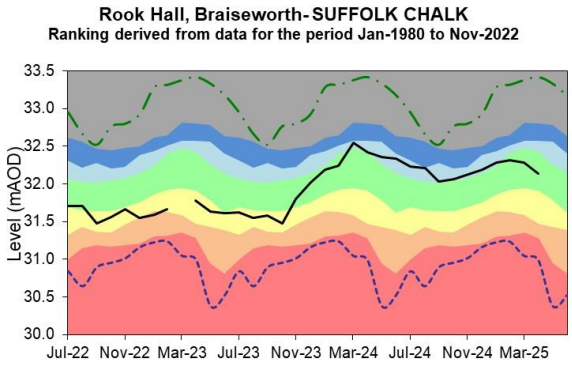


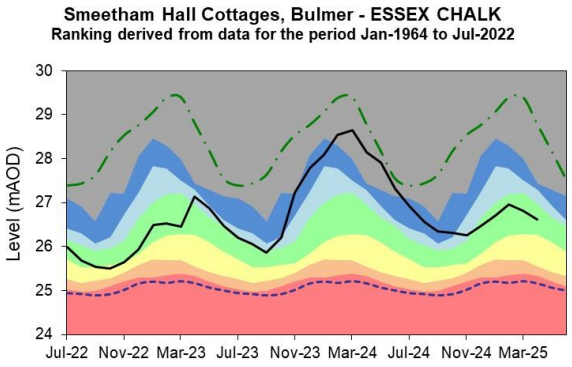
Newmarket - SNAIL CHALK
Ranking derived from data for the period Feb-1983 to Dec-2022

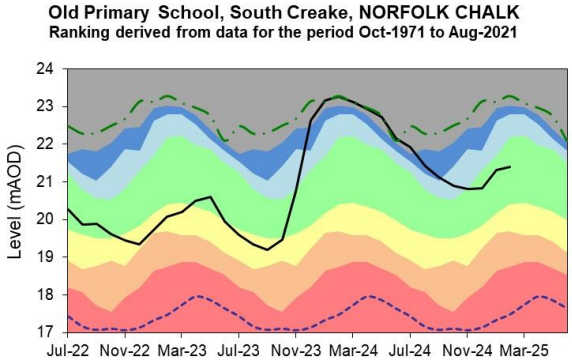


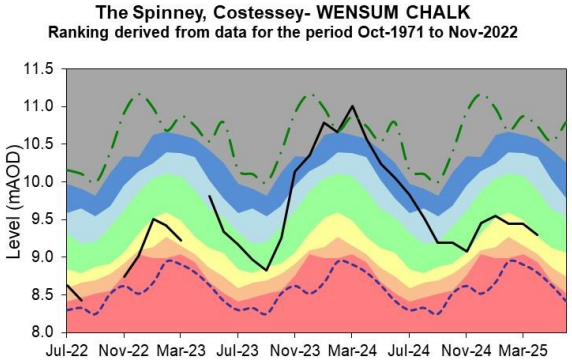
Redlands Hall, Ickleton - CAM CHALK
Ranking derived from data for the period Aug-1963 to Dec-2022

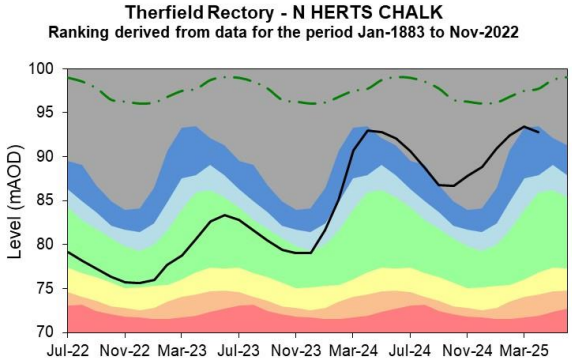


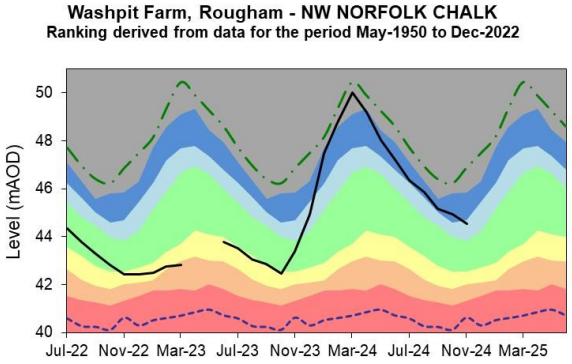








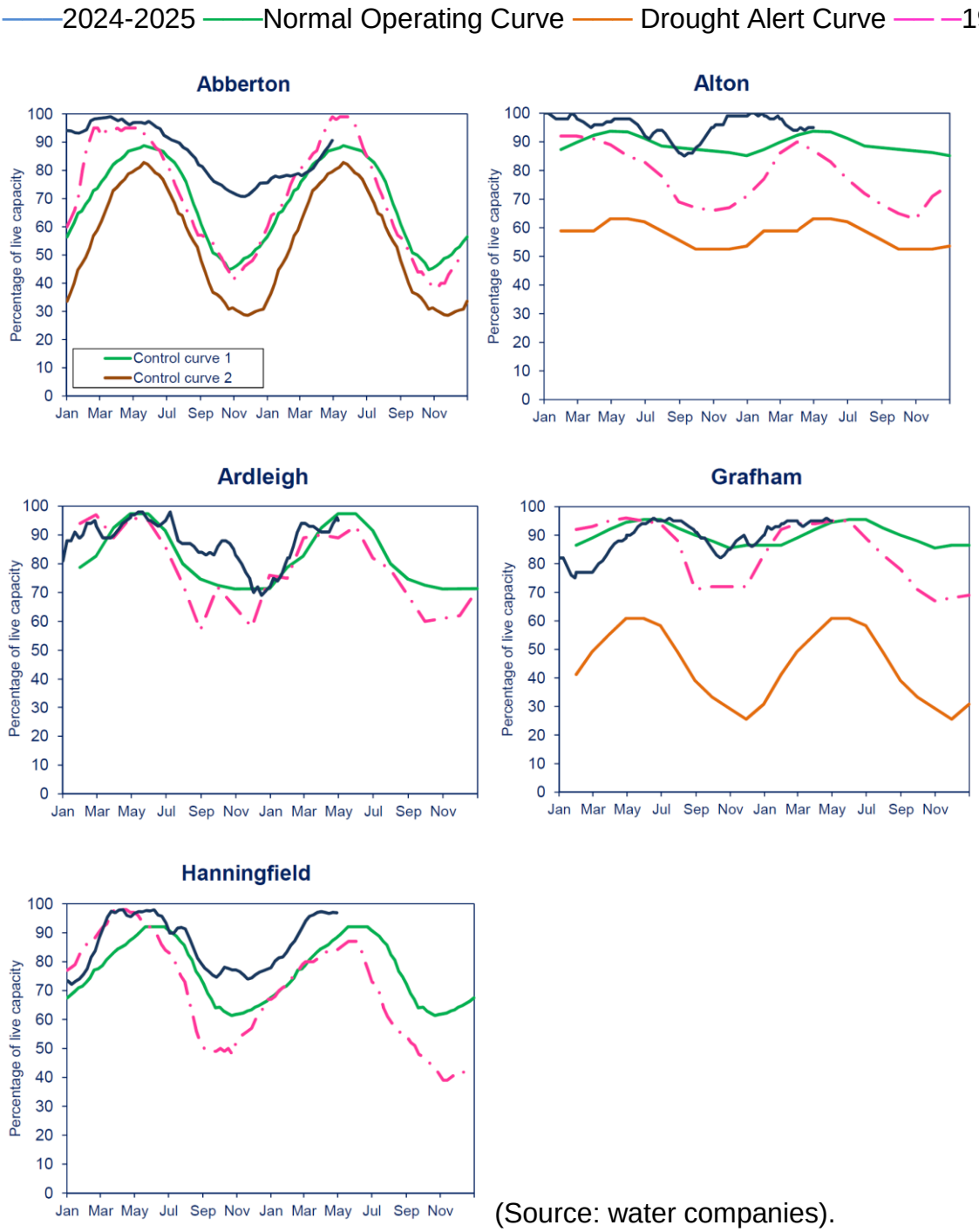




Source: Environment Agency, 2025.

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.

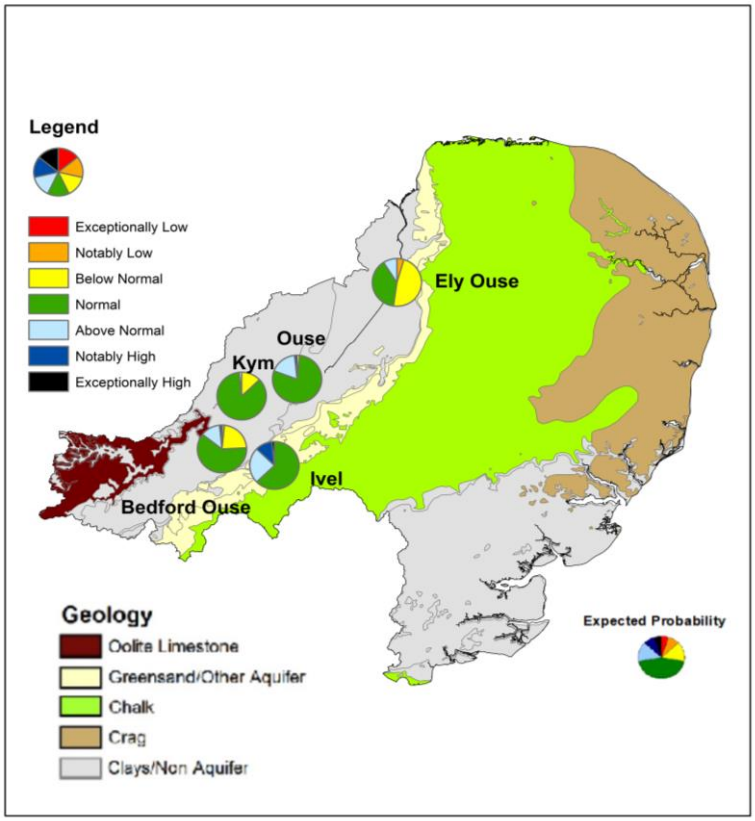


(Source: water companies).

7 Forward look

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

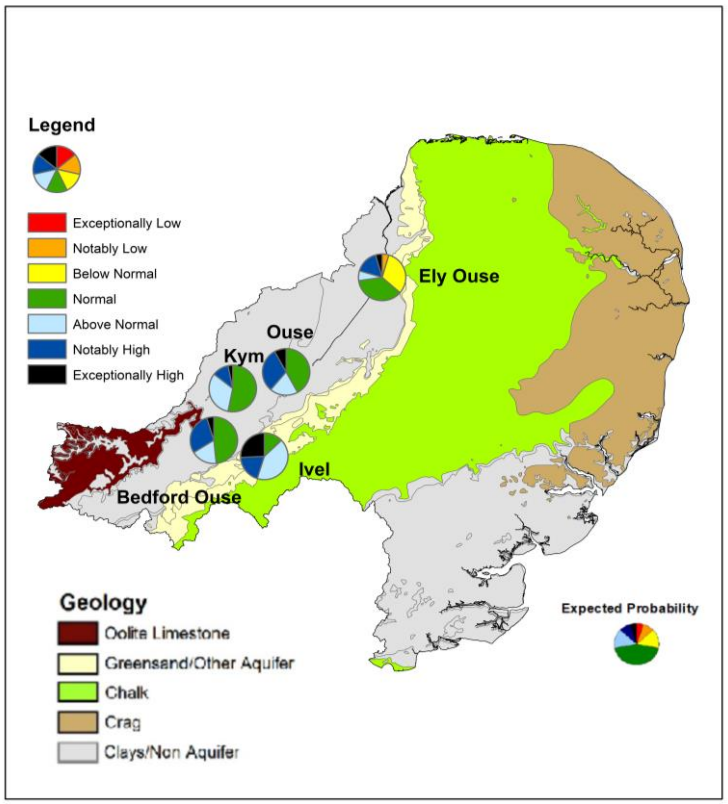
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those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

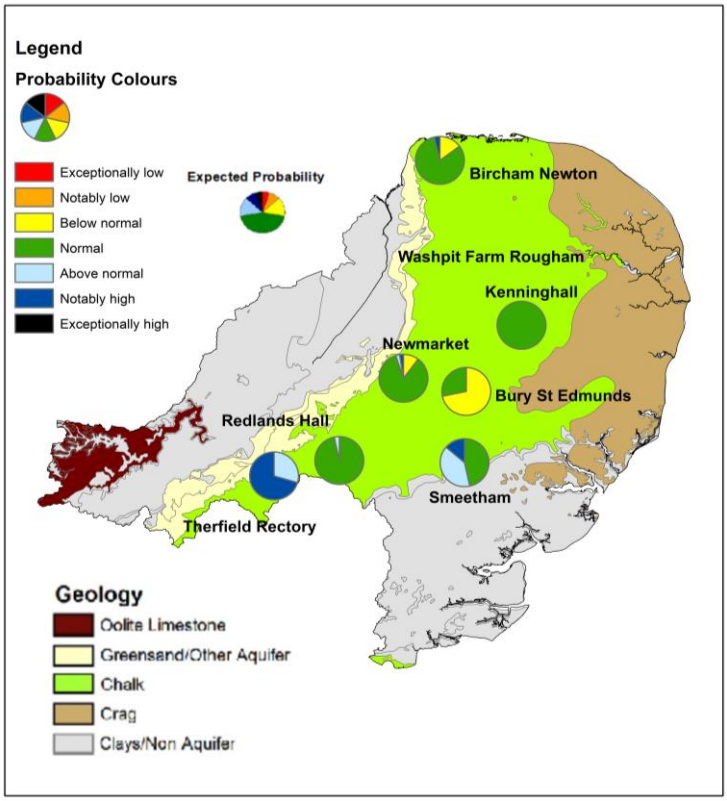
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those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

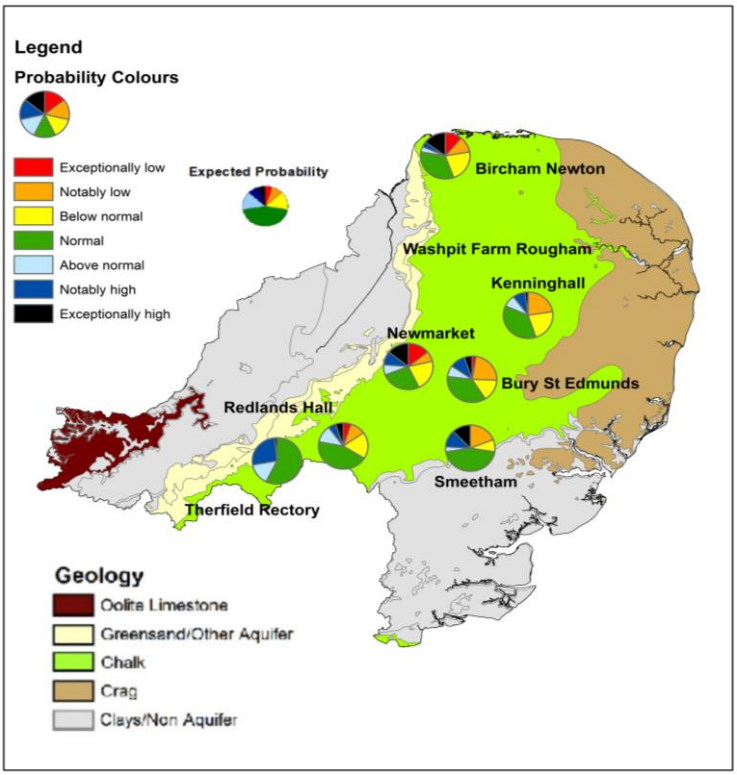
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those 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) Geological map reproduced with kind permission from UK Groundwater Forum, BGS © NERC. Crown copyright. All rights reserved. Environment Agency, 100026380, 2025

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 1961 to 1990. 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	Apr 2025 rainfall % of long term average 1961 to 1990	Apr 2025 band	Feb 2025 to April cumulative band	Nov 2024 to April cumulative band	May 2024 to April cumulative band
Broadland Rivers	29	Notably Low	Exceptionally low	Notably low	Below normal
Cam	66	Normal	Notably low	Below normal	Normal
Central Area Fenland	57	Normal	Notably low	Below normal	Normal
East Suffolk	39	Below Normal	Notably low	Below normal	Normal
Little Ouse And Lark	41	Below Normal	Notably low	Below normal	Normal
Lower Bedford Ouse	57	Normal	Notably low	Normal	Above normal
North Essex	59	Normal	Notably low	Below normal	Normal
North Norfolk	30	Notably Low	Exceptionally low	Notably low	Normal
Nw Norfolk And Wissey	37	Notably Low	Notably low	Below normal	Normal
South Essex	70	Normal	Notably low	Below normal	Below normal

Upper Bedford Ouse	51	Below Normal	Notably low	Normal	Notably high

9.2 River flows table

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

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

9.3 Groundwater table

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

Redlands Hall, Ickleton	Cam Chalk	Above 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	Normal	Below normal
Washpit Farm, Rougham	North West Norfolk Chalk	No Data	No Data
Therfield Rectory	Upper Lee Chalk	Notably high	Exceptionally 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	0	0	0	0
Notably low	2	0	0	0	5
Below normal	23	13	0	2	48
Normal	61	85	63	79	39
Above normal	13	2	24	18	9
Notably high	2	0	11	2	0
Exceptionally high	0	0	2	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	0
Notably low	0	0	0	0	5
Below normal	0	0	0	0	32
Normal	48	53	13	42	36
Above normal	18	32	42	19	7
Notably high	29	11	19	31	16
Exceptionally high	5	3	26	8	5

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	10.3	14.8	0.0	71.8	0.0
Normal	0.0	96.6	84.6	81.5	100.0	28.2	46.6
Above normal	29.5	3.4	2.6	0.0	0.0	0.0	39.7
Notably high	70.5	0.0	2.6	3.7	0.0	0.0	13.8
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	5.1	14.3	11.1	0.0	2.6	0.0
Notably low	0.0	10.2	7.1	11.1	22.4	23.1	19.0
Below normal	0.0	18.6	21.4	22.2	22.4	15.4	8.6
Normal	57.4	44.1	26.2	33.3	36.7	35.9	44.8
Above normal	14.8	11.9	7.1	3.7	8.2	7.7	3.4
Notably high	26.2	5.1	9.5	3.7	8.2	10.3	12.1
Exceptionally high	1.6	5.1	14.3	14.8	2.0	5.1	12.1