Monthly water situation report: Lincolnshire and Northamptonshire Area

1 Summary - June 2025

Overall, June was another very dry month, continuing the recent pattern of below-average rainfall. Precipitation ranged from 35% to 48% of the long-term-average [LTA], classifying conditions as below normal for the time of year. As a result of this and the preceding dry months, both the three-month and 6-month rainfall maps display notably to exceptionally low totals. Most notably, April to June 2025 was the second driest on record for the Witham to Chapel Hill hydrological area.

The persistent dry and hot weather led to high soil moisture deficits [SMD] throughout June, which ended the month at exceptionally high levels across all hydrological areas. River flows continued to decline, although most flow classifications remained unchanged from the previous month. Groundwater levels also declined, with most classifications staying the same; the main exception was at Dunholme Road, where levels dropped from normal to exceptionally low during June.

Most reservoir levels are currently below target for the time of year, but none are alarmingly low at present. The Trent-Witham-Ancholme transfer scheme operated throughout June, and the Slea Augmentation scheme was switched on around mid-June.

1.1 Rainfall

Like the recent months preceding it, June was a relatively dry month with rainfall varying between 35% to 48% of the LTA. As a result, rainfall was classified as below normal for the time of year across all six hydrological areas. Most of the limited rainfall occurred during the first week of the month.

An east-west split is evident, with western catchments receiving less rainfall than those in the east. April to June 2025 was the second driest on record for the Witham to Chapel Hill hydrological area, the third driest for the Upper Welland and Nene, and the fourth driest for the Grimsby Ancholme Louth hydrological area. For the region as a whole, it was the fourth driest April to June period on record (since 1871). The six-month rainfall map reflects a similar pattern, showing notably to exceptionally low levels with the same east-west contrast. For the area as a whole, January to June 2025 ranks as the seventh driest on record, with individual hydrological areas ranking between the sixth and fifteenth driest for that period. While the 12-month trend still shows mostly normal rainfall totals due to the impacts of a wet winter, below normal to notably low levels are now appearing in the northern parts of the area.

1.2 Soil moisture deficit and recharge

Another hot and dry month saw SMD built up further across all six hydrological areas. The wet end to May and somewhat wet start to June briefly saw SMD decrease to above normal to notably high levels for the time of year. However, once that rain stopped (and the temperatures increased) SMD soon rose back up to exceptionally high levels for the time of year which is where they ended the month of June. For the LNA area, the average SMD by the end of June was 130mm, a significant increase from 108mm at the end of May.

1.3 River flows

River flows varied between 13% to 87% of their LTA, classifying flows as exceptionally low to normal for the time of year. The normal flows are mostly observed in the south-west of the area. Most flow classification are unchanged, with the exception of Wansford on the Nene (moving from below normal to notably low) and Kates Bridge plus King Street on the Glen (moving from normal to below normal). Langworth on the Barlings Eau remains the only site recording exceptionally low levels for the time of year.

1.4 Groundwater levels

Groundwater levels ranged from normal to exceptionally low for the time of year, with most sites remaining unchanged from the previous month. The most notable change occurred in the Lincolnshire Limestone at Dunholme Road, where levels dropped from normal at the end of May to exceptionally low by the end of June. Similarly, Grange de Lings, also on the Lincolnshire Limestone, reported exceptionally low levels for June. Grange Farm, another Lincolnshire Limestone site, declined from normal to below normal levels during the month. For the chalk aquifers we report on, classifications remained the same as in May, although a general seasonal decline was observed, resulting in levels now ranging from the lower end of normal to below normal.

1.5 Reservoir stocks

Due to a warm and dry June, reservoir stocks continued to decline across the region. All reservoirs are now below their target levels, except for Pitsford, which remains just at target. Although below target, no reservoir levels are currently at alarmingly low levels.

1.6 Environmental impact

The Trent-Witham-Ancholme transfer scheme has been in operation throughout June, pumping water both from the Trent into the Witham and from the Witham into the Ancholme. The Slea augmentation scheme commenced pumping on the 20 June and has been pumping

continuously since then. The Gwash-Glen Transfer scheme remains off. During June there was 27 Hands-Off-Flows/Hands-Off-Levels active across the area. There was no flood alerts or warnings issued.

1.7 Forward look

1.7.1 Probabilistic ensemble projections for river flows at key sites

August 2025: North Brook and Wansford are both showing an increased probability of lower than normal flows. Nene Northampton is showing a slightly increased probability of normal flows.

December 2025: All sites are showing an increased probability of below normal flows.

1.7.2 Probabilistic ensemble projections for groundwater levels in key aquifers

September 2025: Hanthorpe and Barton are showing an increased probability of below normal levels. Grainsby is showing an increased probability of normal levels

March 2026: All sites are showing a greatly increased probability of lower than normal levels.

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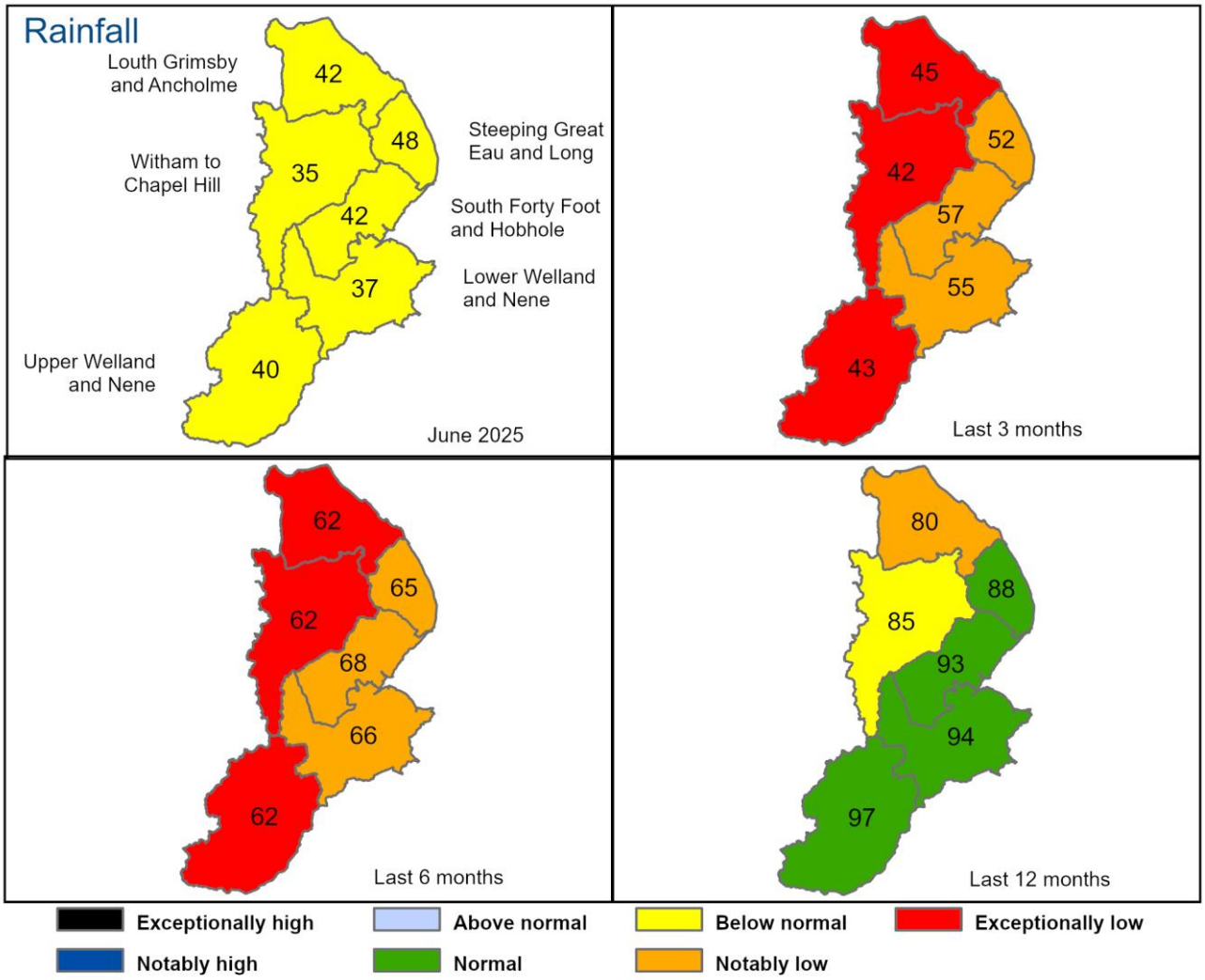
Contact Details: 03708 506 506

2 Rainfall

2.1 Rainfall map

Figure 2.1: Total rainfall for hydrological areas across Lincolnshire and Northamptonshire, 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.

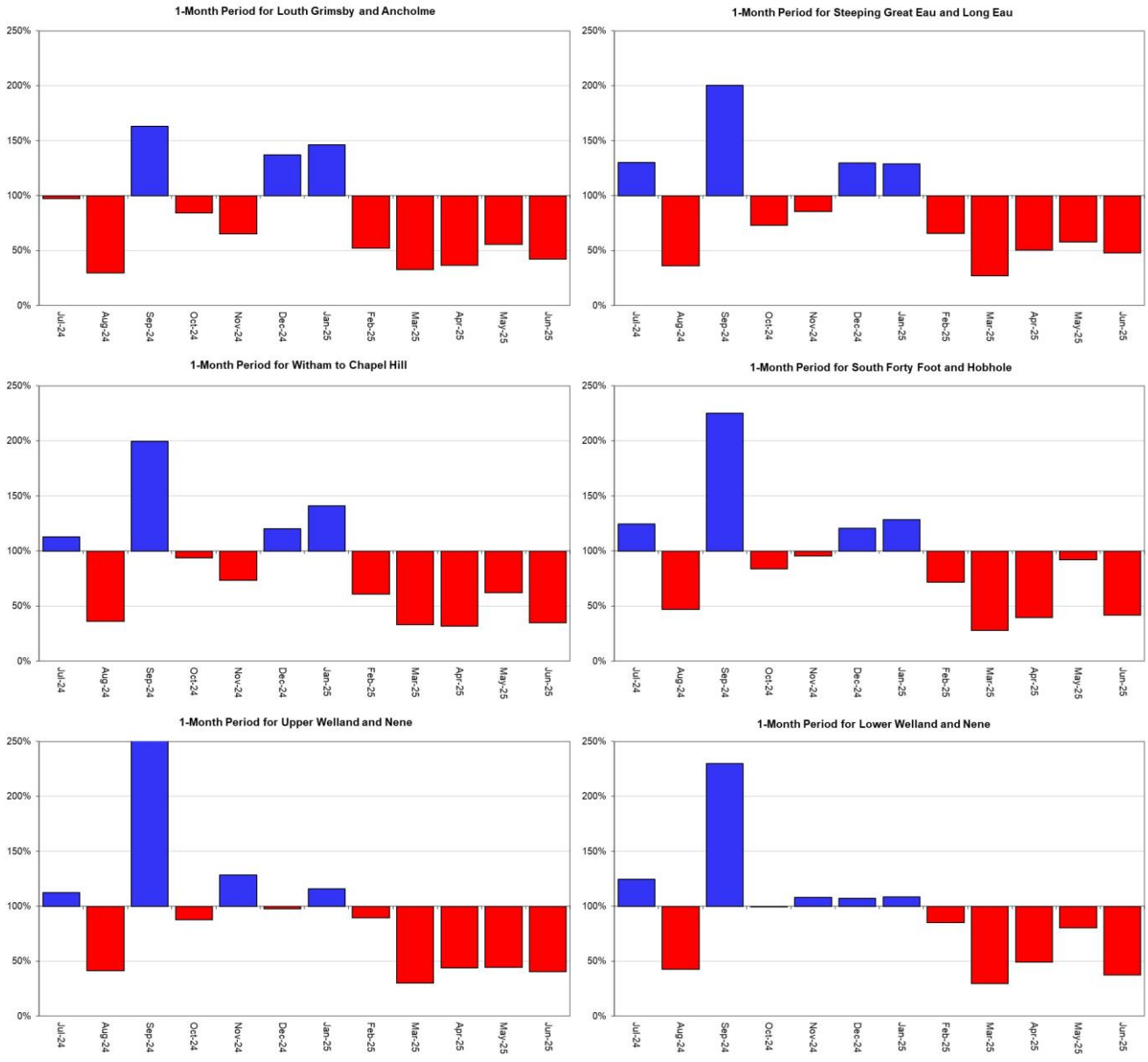


HadUK data based on the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Crown copyright. All rights reserved.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

Total Rainfall in Millimetres Long Term Average Rainfall in Millimetres

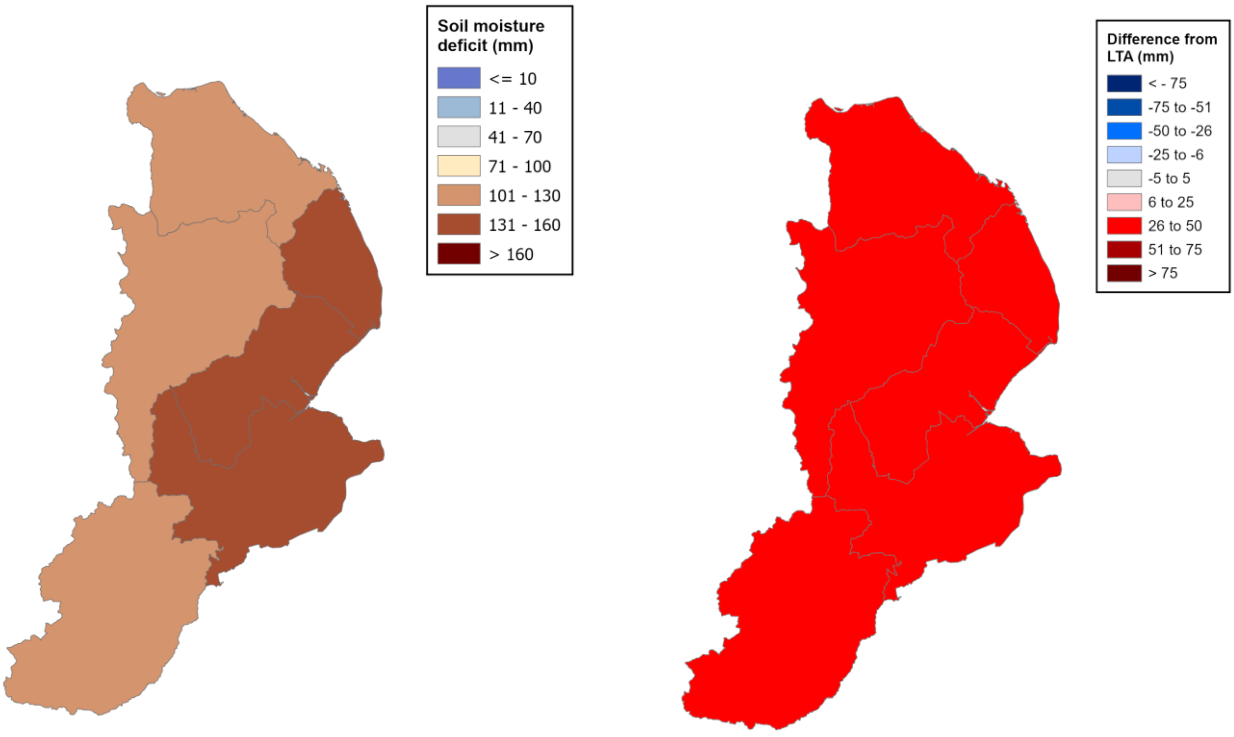


HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

3 Soil moisture deficit

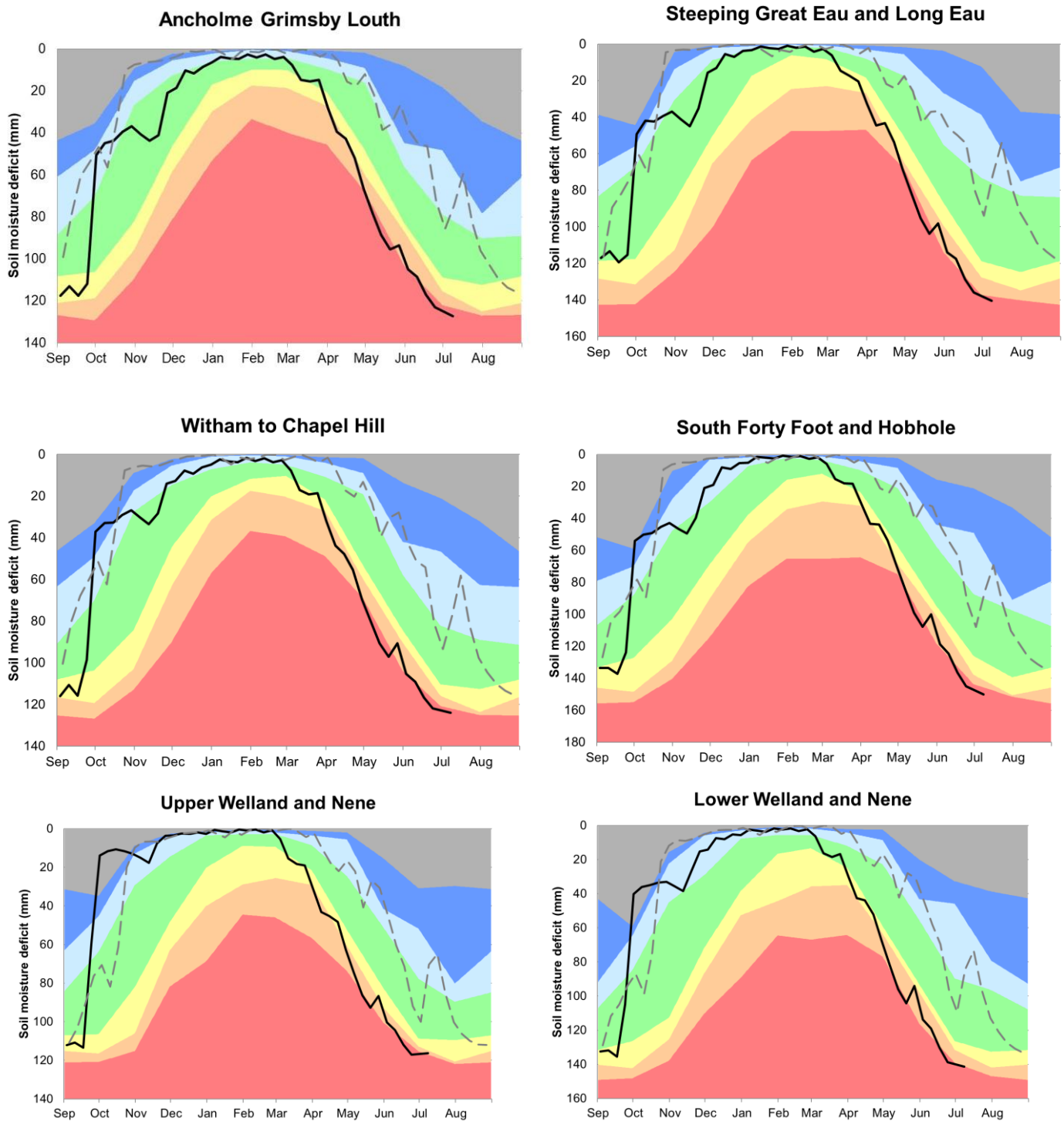
3.1 Soil moisture deficit map

Figure 3.1:Left map shows Soil moisture deficits for weeks ending 30 June 2025. Right map shows the difference (mm) of the actual soil moisture deficit from the 1991 to 2020 long term average soil moisture deficits. MORECS data for real land use.



3.2 Soil moisture deficit charts

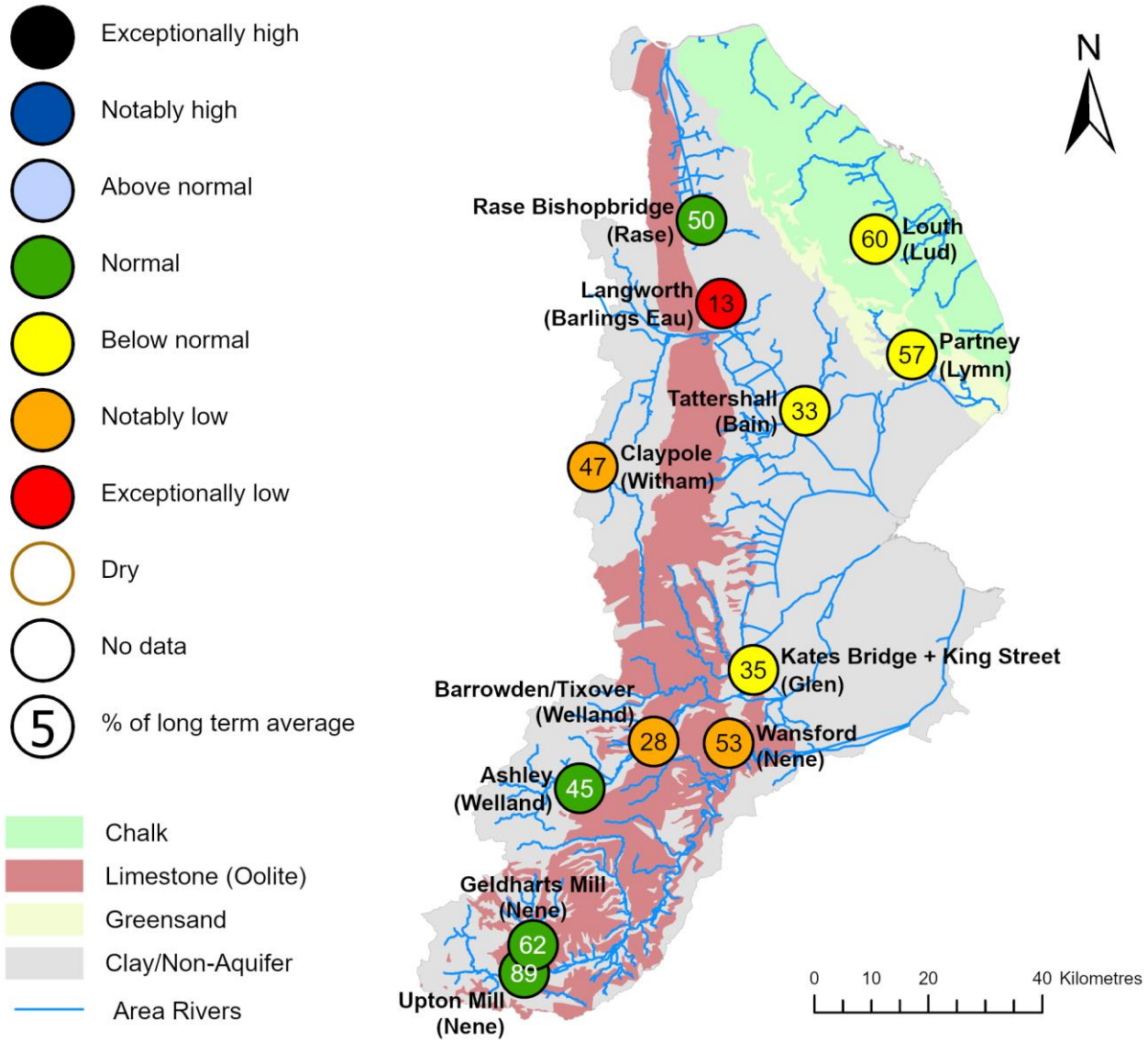
Figure 3.2: Latest soil moisture deficit compared to previous year, maximum, minimum, and 1991 to 2020 long term average. Weekly MORECS data for real land use.



4 River flows

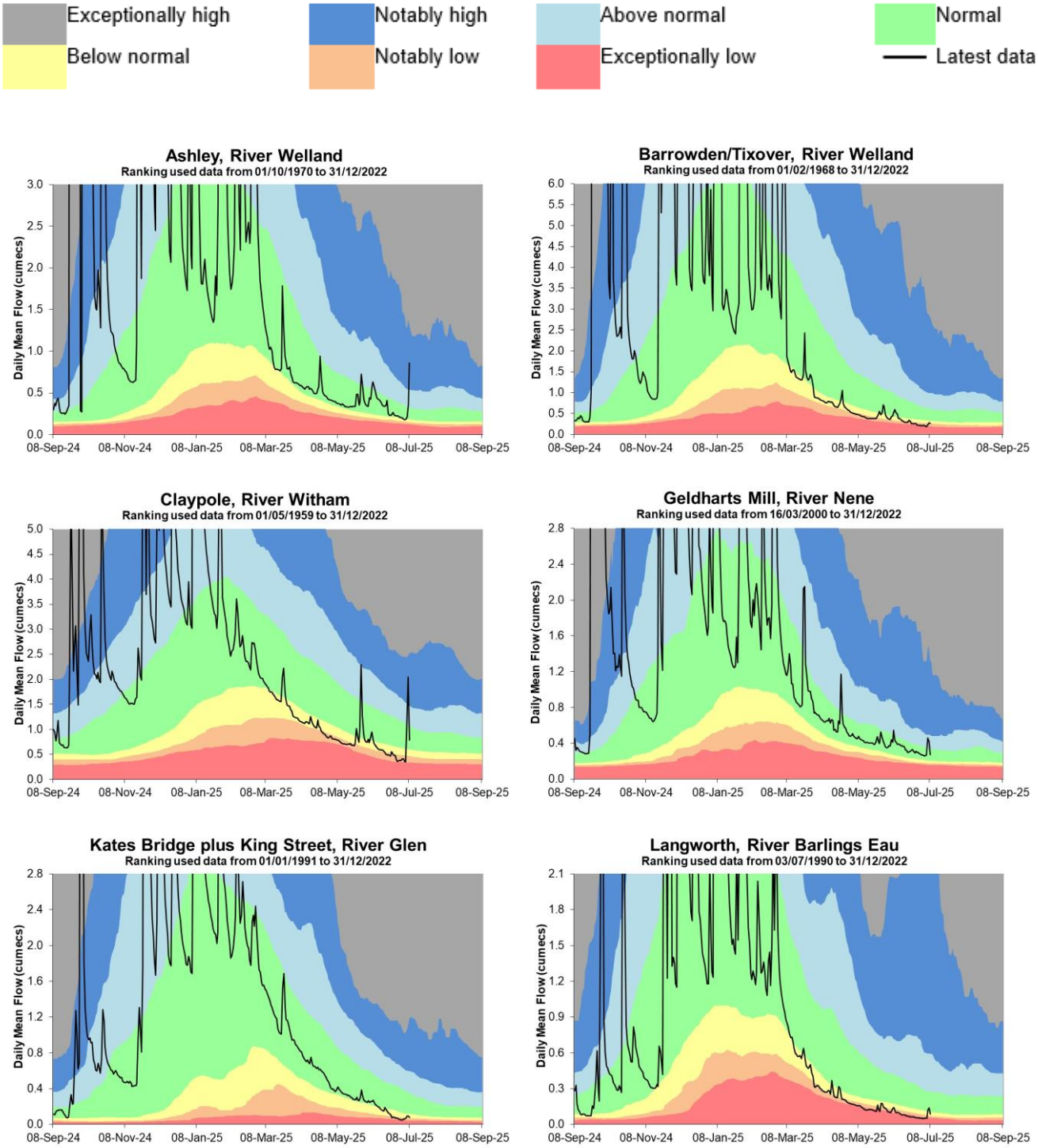
4.1 River flows map

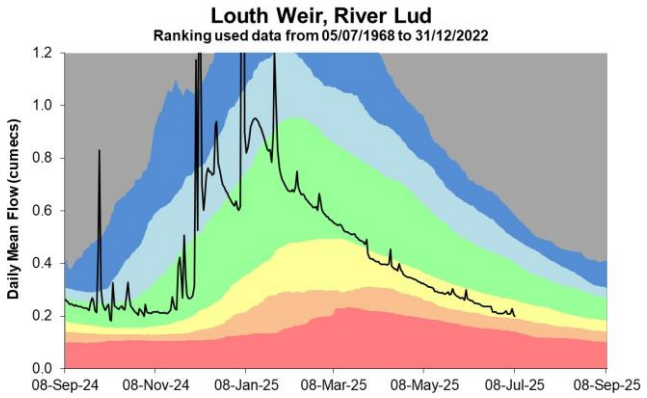
Figure 4.1: Monthly mean river flow for indicator sites for June 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic June monthly means Table available in the appendices with detailed information.

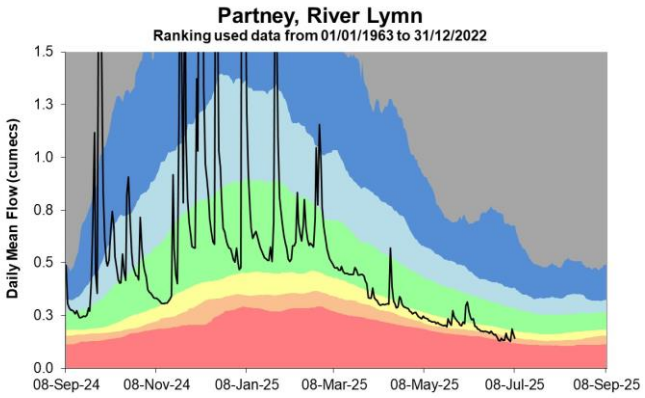


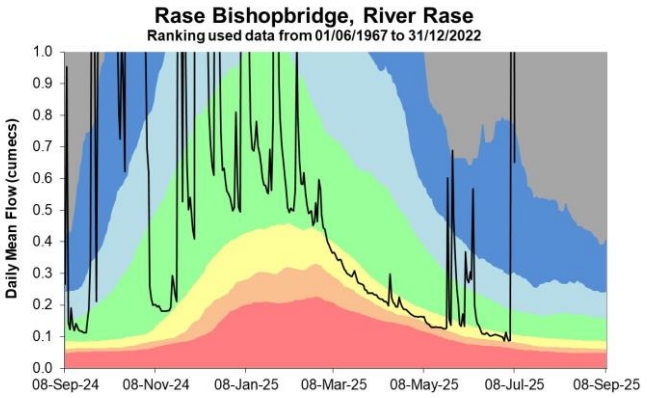
4.2 River flow charts

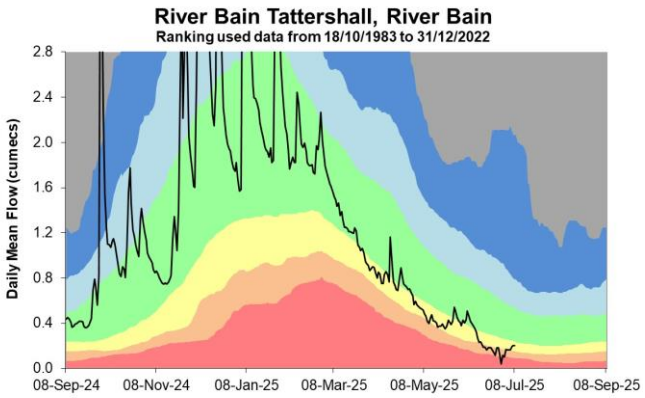
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

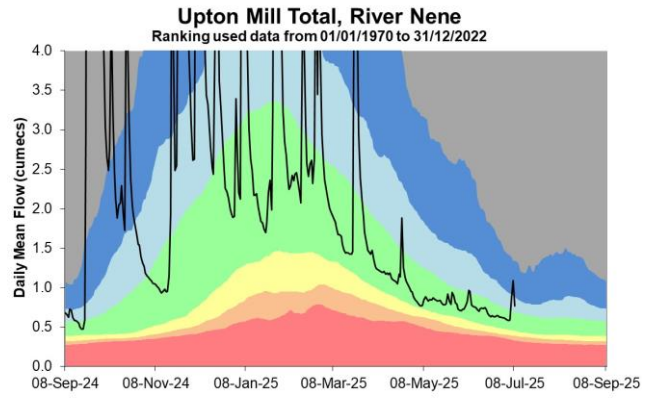


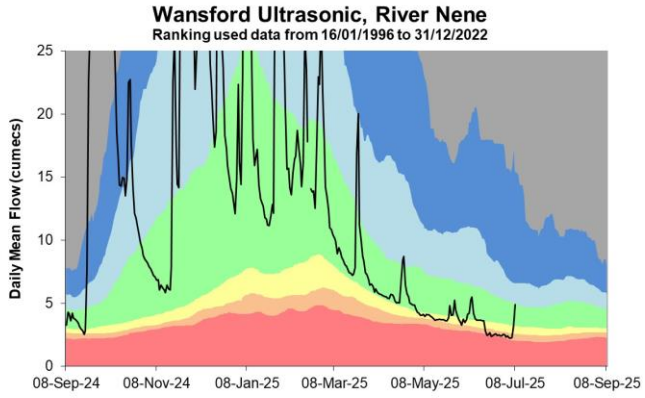










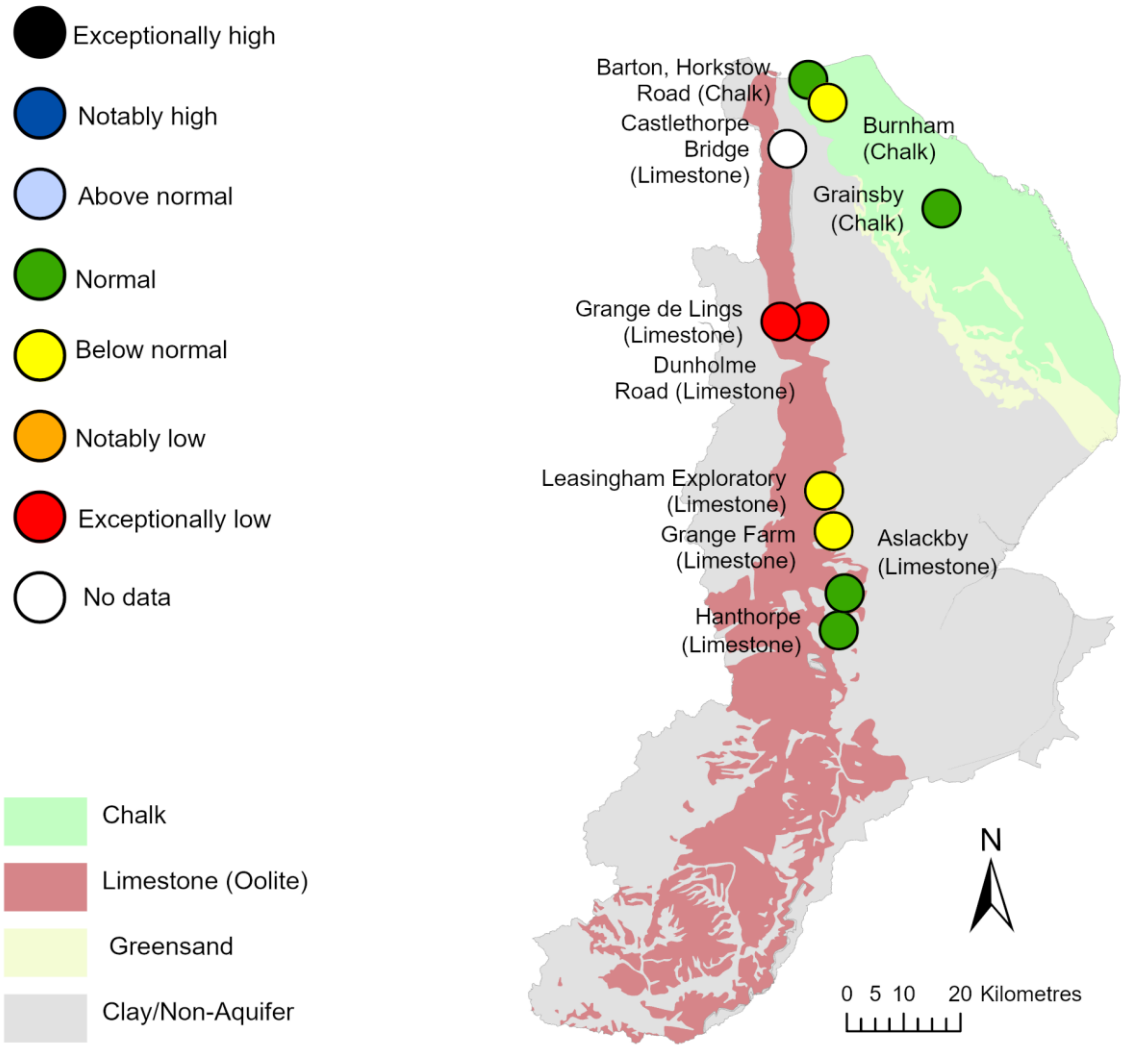


Source: Environment Agency.

5 Groundwater levels

5.1 Groundwater levels map

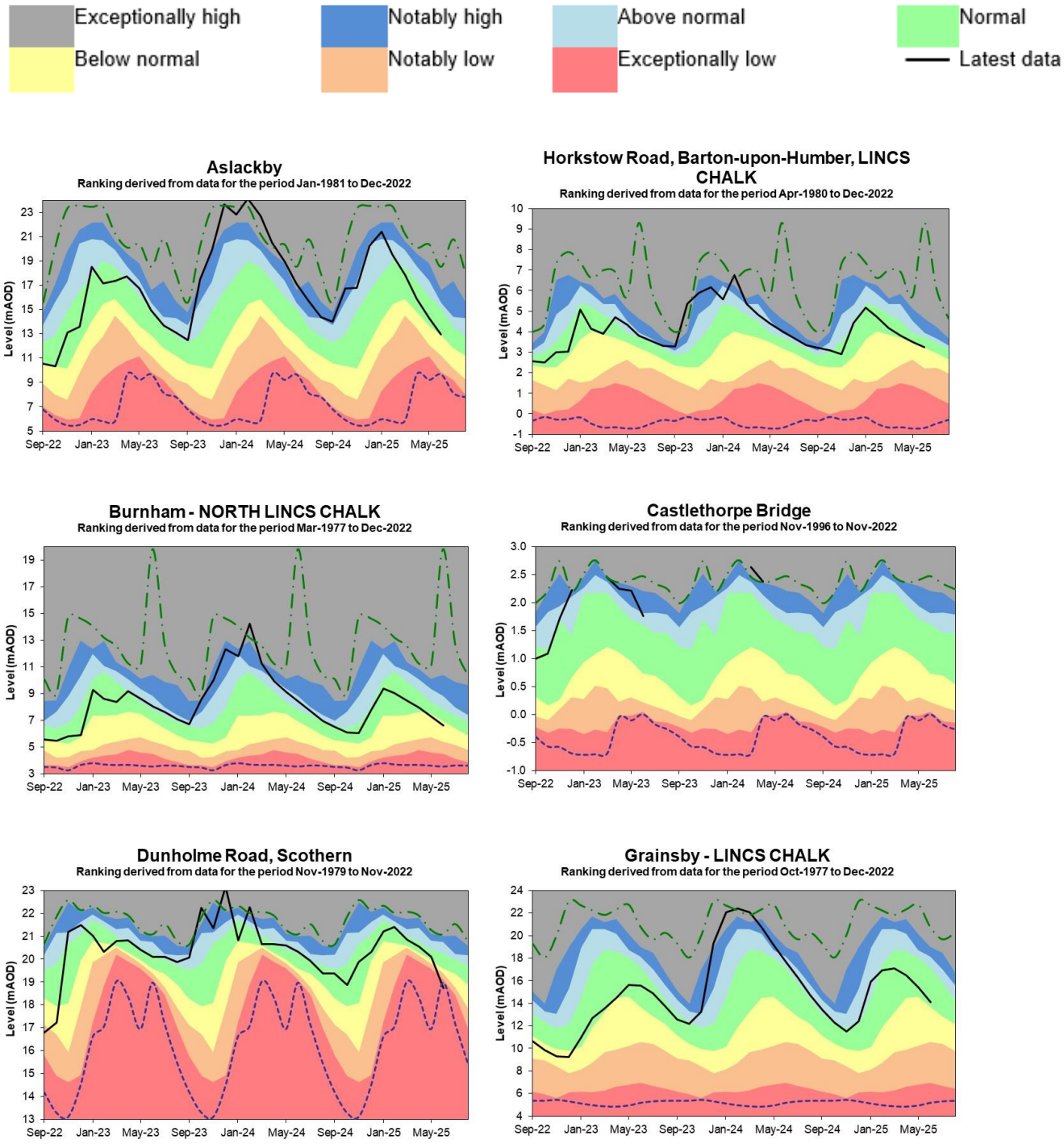
Figure 5.1: Groundwater levels for indicator sites at the end of June 2025, classed relative to an analysis of respective historic June levels. Table available in the appendices with detailed information.

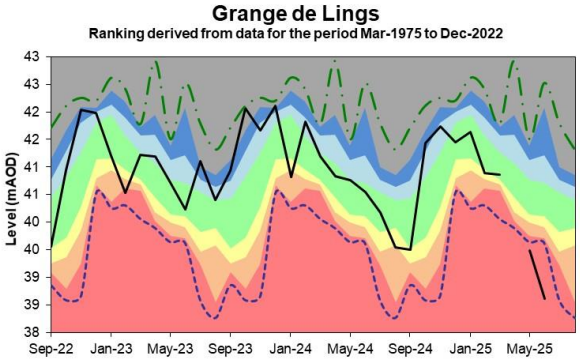


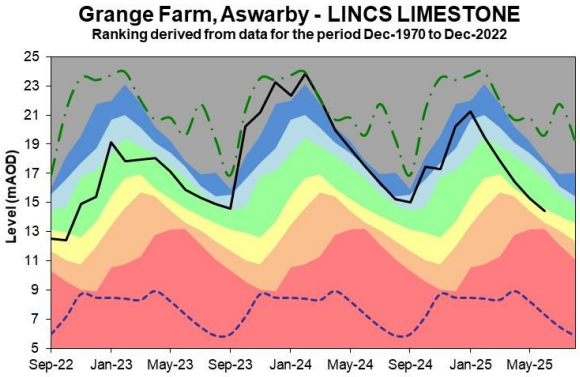
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

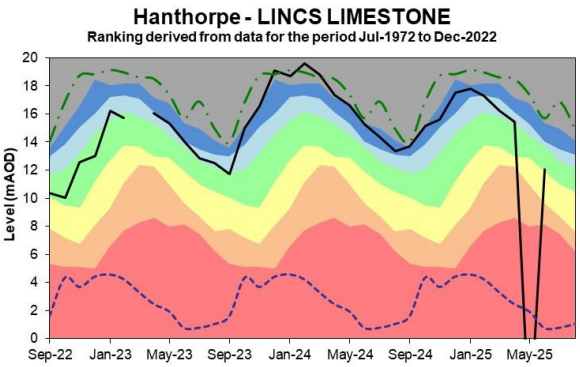
5.2 Groundwater level charts

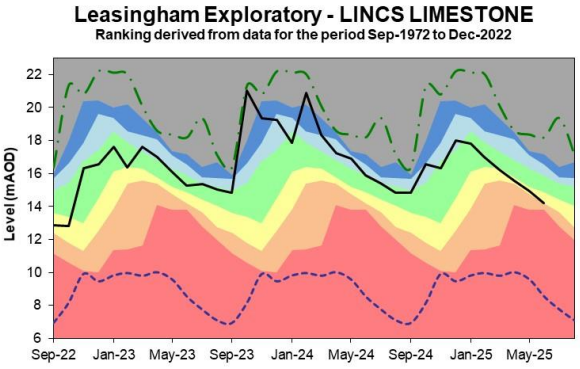
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.







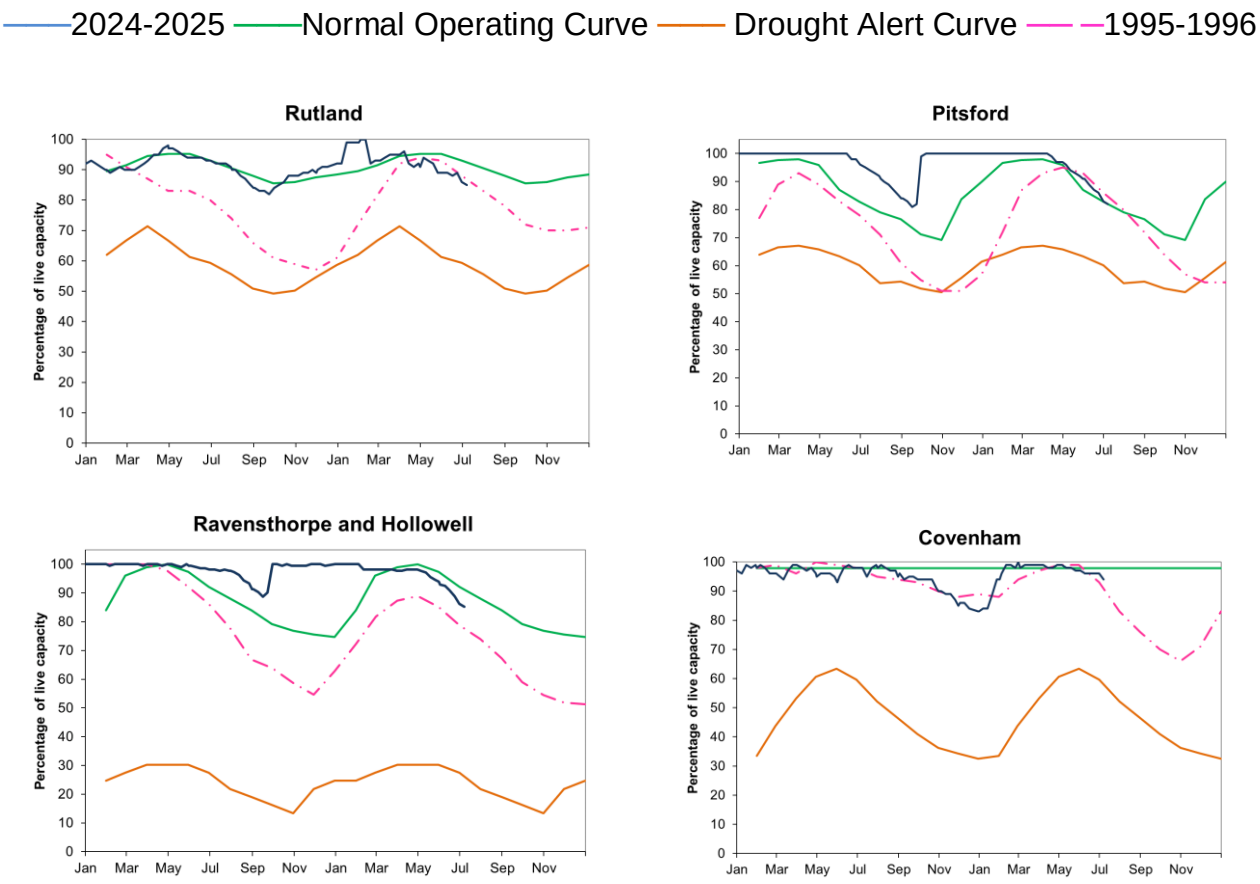




Source: Environment Agency, 2025.

6 Reservoir stocks

Figure 6.1: End of month regional reservoir stocks compared to the normal operating curve,

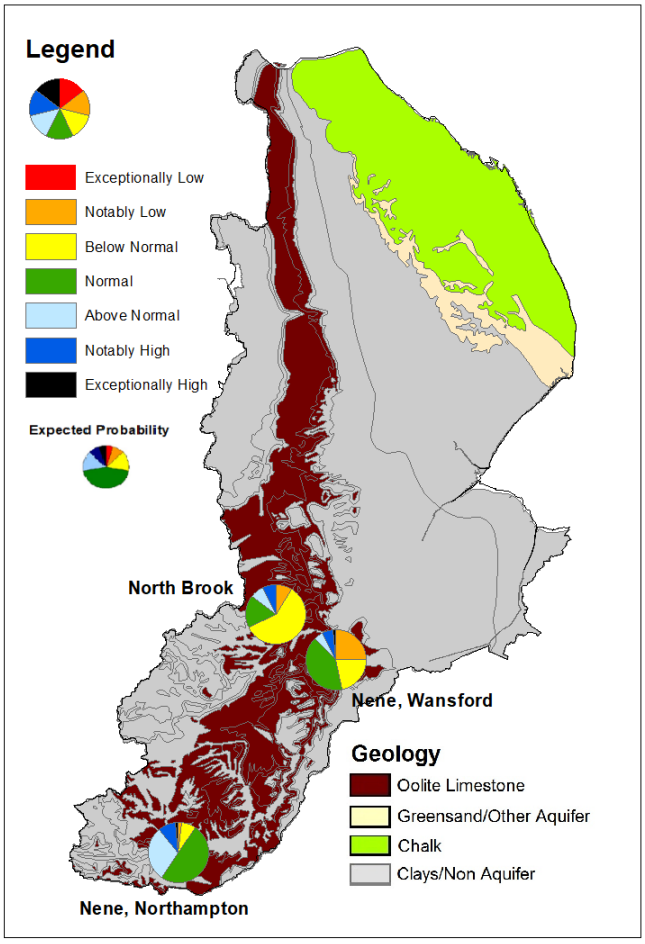


(Source: water companies).

7 Forward Look

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

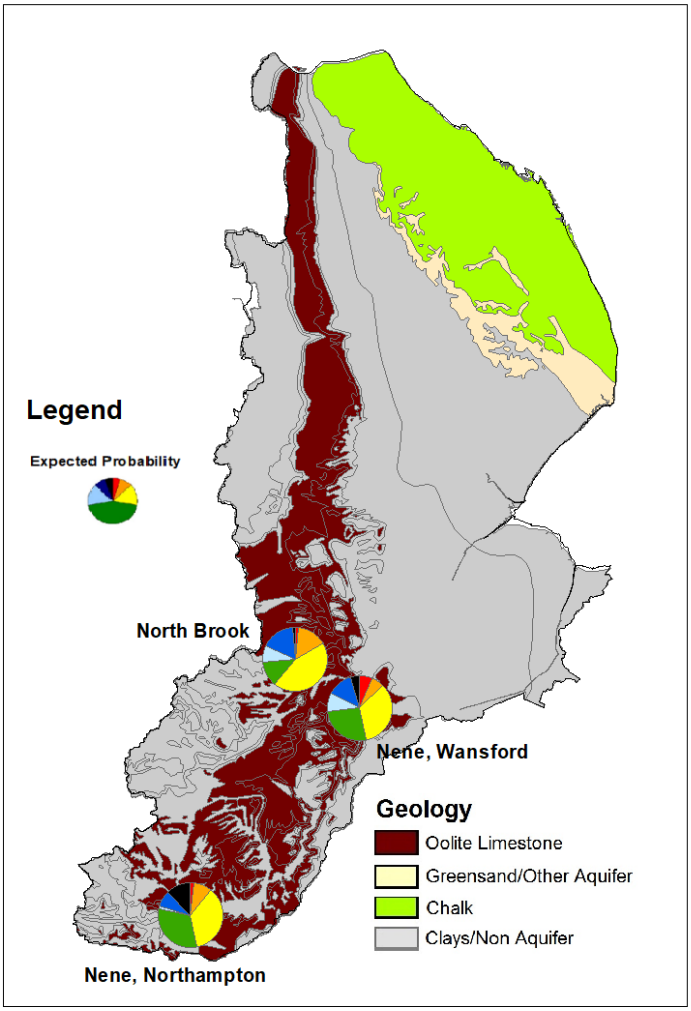
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those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

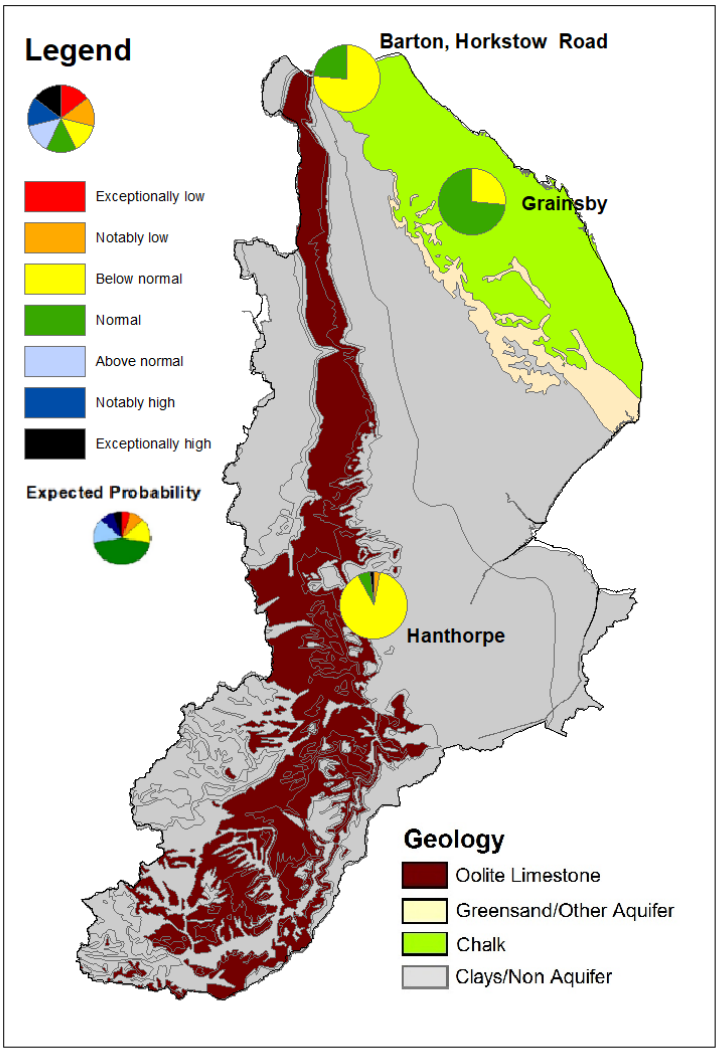
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those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

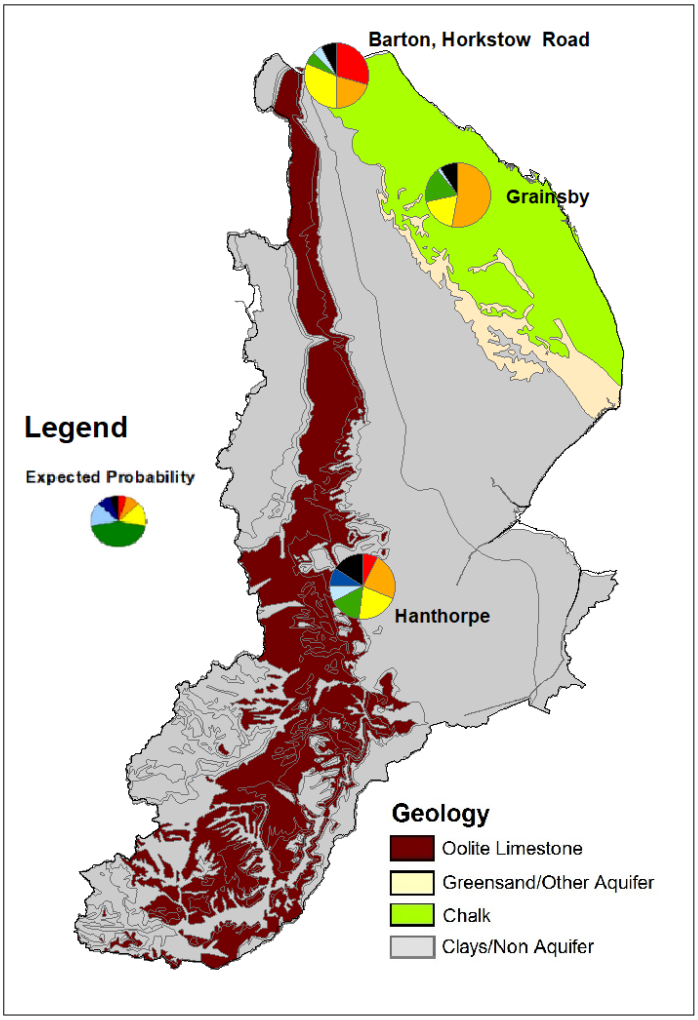
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those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

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	Jun 2025 rainfall % of long term average 1991 to 2020	Jun 2025 band	Apr 2025 to June cumulative band	Jan 2025 to June cumulative band	Jul 2024 to June cumulative band
Louth Grimsby And Ancholme	42	Below Normal	Exceptionally low	Exceptionally low	Notably low
Lower Welland And Nene	37	Below Normal	Notably low	Notably low	Normal
South Forty Foot And Hobhole	42	Below Normal	Notably low	Notably low	Normal
Steeping Great Eau And Long Eau	48	Below Normal	Notably low	Notably low	Normal
Upper Welland And Nene	40	Below Normal	Exceptionally low	Exceptionally low	Normal
Witham To Chapel Hill	35	Below Normal	Exceptionally low	Exceptionally low	Below normal

9.2 River flows table

Site name	River	Catchment	Jun 2025 band	May 2025 band
Ashley	Welland Mkt.harb-rockinghm	Welland Rockingham	Normal	Normal
Barrowden/tixover	Welland (rockingham To Stamford)	Welland Stamford	Notably low	Notably low
Claypole	Upper Witham	Witham Bargate Upper	Notably low	Notably low
Geldharts Mill	Nene (brampton Branch)	Nene Brampton Bridge	Normal	Normal
Kates Bridge Plus King Street	Glen (an)	Welland and Glen	Below normal	Normal
Langworth	Barlings Eau	Barlings Eau	Exceptionally low	Exceptionally low
Louth Weir	Lud	Louth Canal	Below normal	Below normal
Partney	Lymn & Steeping	Lymn Steeping	Below normal	Below normal
Rase Bishopbridge	Ancholme	Ancholme W Mid	Normal	Normal
River Bain Tattershall	Bain	Bain	Below normal	Below normal

Upton Mill Total	Nene (kislingbury Branch)	Nene Kislingbry Bridge	Normal	Normal
Wansford Combined	Nene (wollaston To Wansford)	Nene Wansford	Notably low	Below normal

9.3 Groundwater table

Site name	Aquifer	End of Jun 2025 band	End of May 2025 band
Aslackby	Limestone (cornbrash Formation)	Normal	Normal
Barton-upon-humber	Grimsby Ancholme Louth Chalk	Normal	Normal
Burnham	Grimsby Ancholme Louth Chalk	Below normal	Below normal
Castlethorpe Bridge	Grimsby Ancholme Louth Limestone		
Dunholme Road, Scothern	Grimsby Ancholme Louth Limestone	Exceptionally low	Normal
Grainsby	Grimsby Ancholme Louth Chalk	Normal	Normal
Grange De Lings	Grimsby Ancholme Louth Limestone	Exceptionally low	Exceptionally low
Grange Farm, Aswarby	Limestone (mudstone - Peterborough Member)	Below normal	Normal

Hanthorpe	Limestone (cornbrash Formation)	Normal	Exceptionally low
Leasingham Exploratory	Limestone (rutland Formation)	Below normal	Below normal

9.4 Ensemble projections tables

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

Percentage of pie chart for each band

Site	Nene Nton	Nene Wansford	North Brook
Exceptionally low	0.0	0.0	0.0
Notably low	1.6	25.0	8.6
Below normal	7.8	21.9	59.3
Normal	50.0	40.6	17.3
Above normal	29.7	4.7	7.4
Notably high	9.4	6.3	7.4
Exceptionally high	1.6	1.6	0.0

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

Percentage of pie chart for each band

Site	Nene Nton	Nene Wansford	North Brook
Exceptionally low	1.6	6.3	1.4
Notably low	9.4	6.3	15.3
Below normal	35.9	34.4	44.4
Normal	31.3	26.6	12.5
Above normal	1.6	9.4	8.3
Notably high	7.8	12.5	16.7
Exceptionally high	12.5	4.7	1.4

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

Percentage of pie chart for each band

Site	Grainsby	Hanthorpe	Horkstow
Exceptionally low	0.0	0.0	0.0
Notably low	0.0	3.1	0.0
Below normal	26.6	89.1	76.6
Normal	73.4	6.3	23.4
Above normal	0.0	0.0	0.0
Notably high	0.0	0.0	0.0
Exceptionally high	0.0	1.6	0.0

9.4.4 Probabilistic ensemble projection of groundwater levels at key sites in March 2025

Percentage of pie chart for each band

Site	Grainsby	Hanthorpe	Horkstow
Exceptionally low	0.0	7.8	29.7
Notably low	53.1	23.4	20.3
Below normal	18.8	20.3	31.3
Normal	17.2	15.6	6.3
Above normal	1.6	7.8	4.7
Notably high	0.0	9.4	0.0
Exceptionally high	9.4	15.6	7.8