Monthly water situation report: Lincolnshire and Northamptonshire Area

1 Summary - September 2025

September 2025 saw average to above average rainfall across Lincolnshire and Northamptonshire [LNA]. Precipitation was above 50mm in each of the six hydrological areas, with totals ranging from 101% to 154% of the long-term average [LTA]. The Louth Grimsby and Ancholme and Witham to Chapel Hill hydrological catchments saw above average rainfall for September. As a result of the increased precipitation, in contrast to August 2025, the soil moisture deficit [SMD], averaged across Lincolnshire and Northamptonshire, reduced to 123.7mm, a reduction of 7.4mm compared to the beginning of the month.

River flows displayed a wide range of conditions across Lincolnshire and Northamptonshire with flows ranging from 18% to 235% of the long term average. Six rivers were within the normal flow categorisation, while the Rase at Rase Bishopbridge and Welland at Ashley were notably high and above normal, respectively, and the two most easterly rivers, the Lud at Louth and Lymn at Partney, were noticeably low. Groundwater levels remained stable, and in most case, unchanged, recording either below normal or normal groundwater levels for this time of year.

Reservoirs continued to be drawn down and below target levels. The Trent-Witham-Ancholme transfer scheme operated throughout the majority of the month, while the Gwash-Glen transfer scheme and the Slea augmentation scheme were also in operation throughout September.

1.1 Rainfall

The six hydrological areas of LNA experienced between 51.4mm and 83.5mm of precipitation through September 2025, classified as normal or above for this time of year. LNA experienced 119% of its LTA precipitation for September.

September 2025 has been an outlier in terms of precipitation totals exceeding normal levels for the time of year as the past three to twelve months have been characterised by infrequent precipitation and dry weather. When considering the last three months, precipitation totals across LNA have ranged from 70% to 95% of the LTA, with four of the six hydrological areas receiving below average precipitation totals. This has predominantly been driven by August 2025 which contributed just 17mm to the 138mm total across the last three months.

The last six-month period has been the tenth driest March to September across LNA since records began in 1891, with just 64% of the LTA precipitation (211mm). Exceptionally low precipitation totals have been recorded in Upper Welland and Nene, and notably low totals in

four of the remaining five hydrological areas. Over the last year, LNA has received 78% of the LTA rainfall (501mm), with all hydrological areas recording notably low totals, apart from South Forty Foot and Hobhole which were below normal.

1.2 Soil moisture deficit and recharge

The average SMD across LNA decreased by 7.4mm through September to 123.7mm, as precipitation picked up, when compared to the start of the month. High rainfall events during the middle of the month had meant the SMD reduced to 93.7mm by 24 September, however a dry last week meant the deficit increased as the month concluded. There is an east-west split in SMD across the six hydrological areas, with the eastern areas having an SMD between 131 and 160mm, and the western areas having an SMD between 101mm and 130mm. All six hydrological areas have an SMD that is 26mm to 50mm below the LTA, highlighting the dry weather experienced over the last twelve months.

1.3 River flows

River flows varied between 18% and 235% of their LTA during September 2025. Six rivers were within the normal flow categorisation, while the Rase at Rase Bishopbridge and Welland at Ashley were notably high and above normal, respectively, and the two most easterly rivers, the Lud at louth and Lymn at Partney, were noticeably low. This is an improvement in flows compared to August 2025 in which only four rivers were classified as having normal flow, while five had noticeably low flows and two had exceptionally low flows, for the time of year.

1.4 Groundwater levels

Groundwater levels remained largely unchanged over the month of September. All sites recorded levels at below normal, except Aslackby and Barton which recorded normal groundwater levels for this time of year. Castlethorpe Bridge and Dunholme Road had no data for September 2025.

1.5 Reservoir stocks

Reservoir levels continue to be drawn down below their normal operating curves. Rutland is below Level 1, which is categorised as demand exceeding abstraction potential, however it remains above drought alert levels.

1.6 Environmental impact

The Trent-Witham-Ancholme transfer scheme operated throughout the majority of September, while the Gwash-Glen transfer scheme and the Slea augmentation scheme were also in operation throughout the month.

1.7 Forward look

1.7.1 Probabilistic ensemble projections for river flows at key sites

December 2025: All flow sites are likely to experience below normal to notably low flows.

March 2026: All flow sites are likely to experience below normal flows; however, the likelihood of exceptionally low flows is greater than in December 2025.

1.7.2 Probabilistic ensemble projections for groundwater levels in key aquifers

March 2026: All groundwater sites, excluding Hanthorpe, are likely to experience below normal, or lower, groundwater levels, while Hanthorpe predictions are less conclusive.

September 2026: Groundwater level predictions for twelve months are less conclusive, but levels are likely to be below normal.

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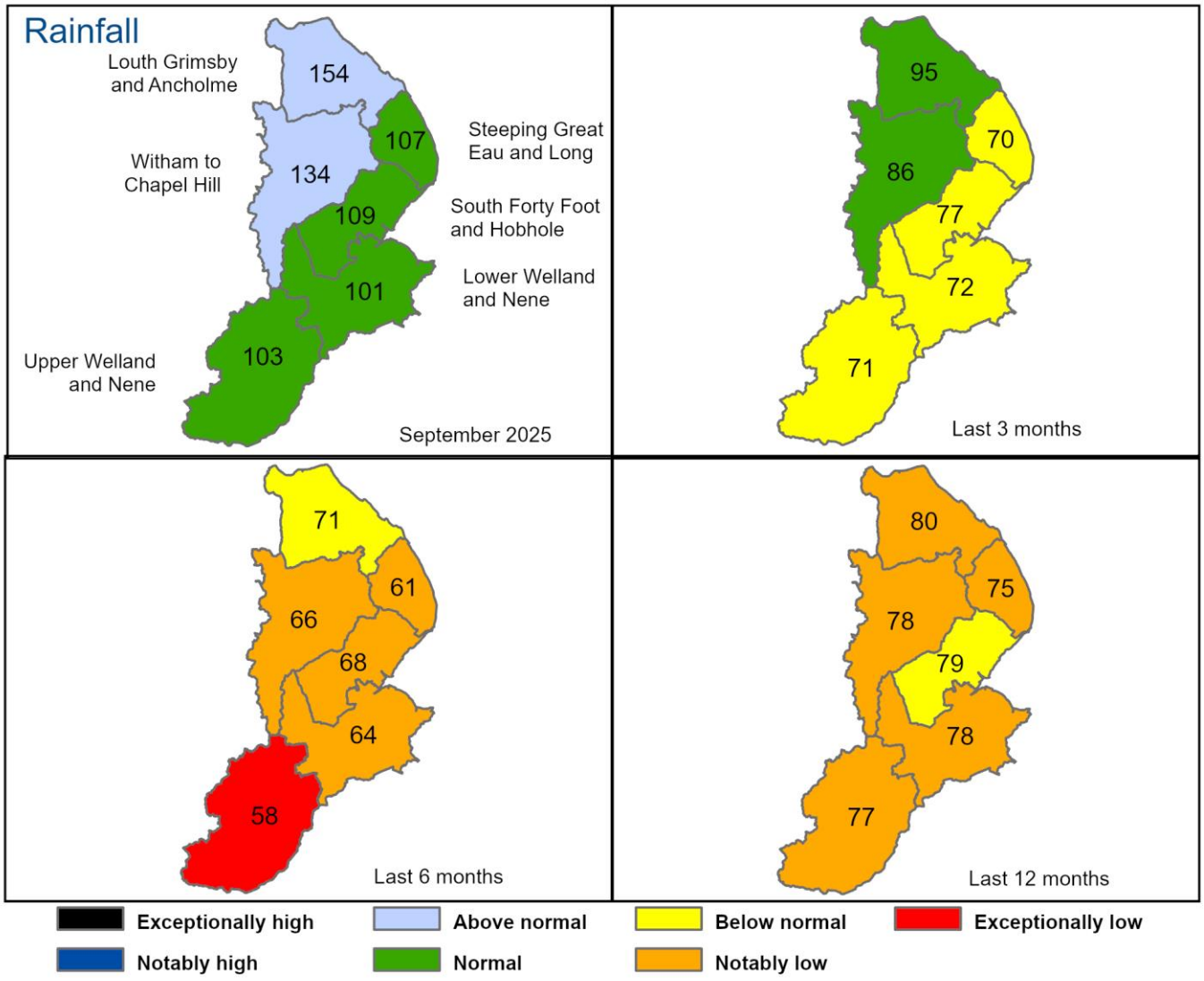
Contact Details: 03708 506 506

2 Rainfall

2.1 Rainfall map

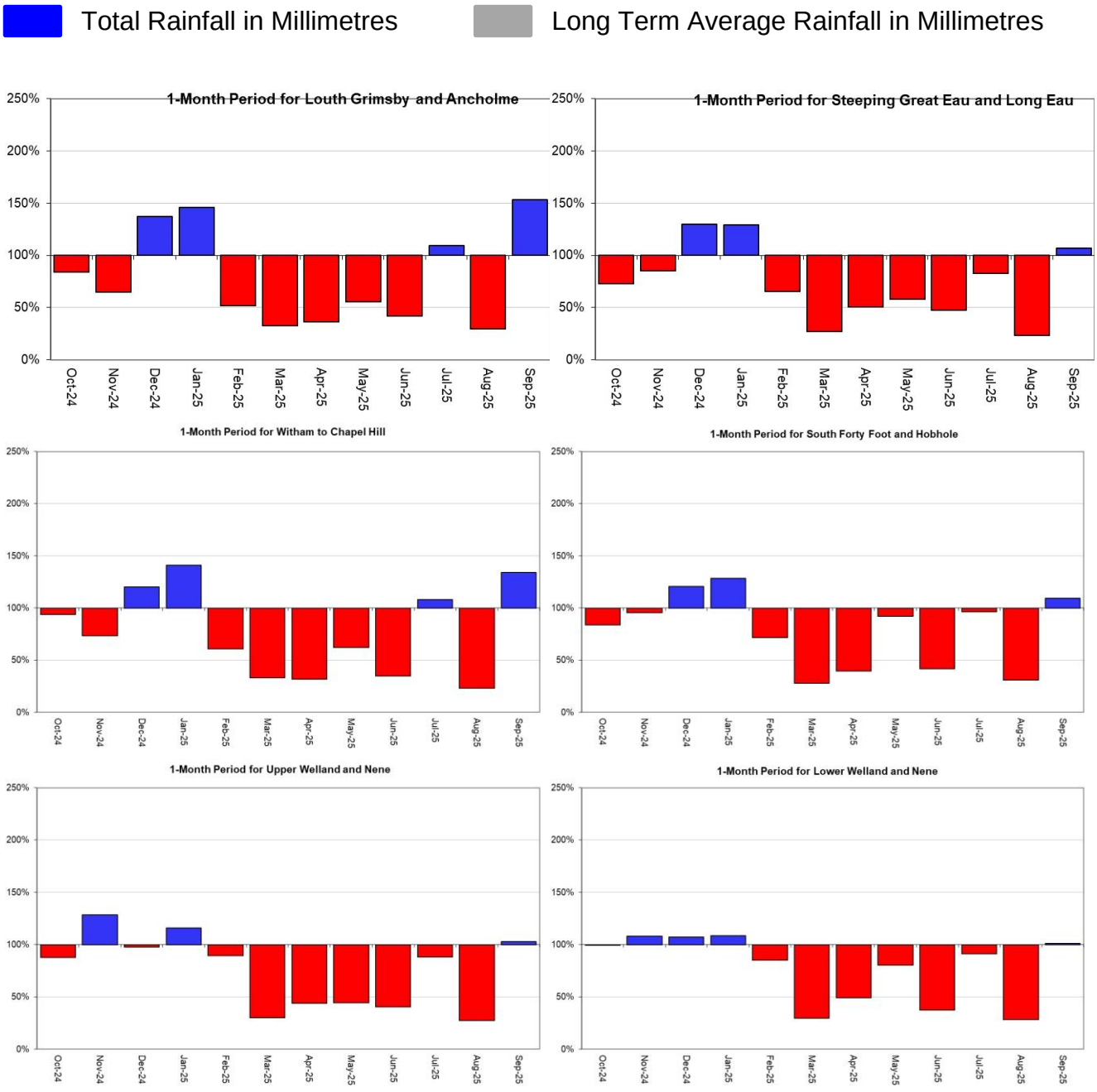
Figure 2.1: Total rainfall for hydrological areas across Lincolnshire and Northamptonshire, expressed as a percentage of long term average rainfall for the current month (up to 30 September 2025), the last 3 months, the last 6 months, and the last 12 months. Category classes are based on an analysis 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. © Ordnance Survey Crown Copyright and Database Rights (2025) AC0000807064.

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.

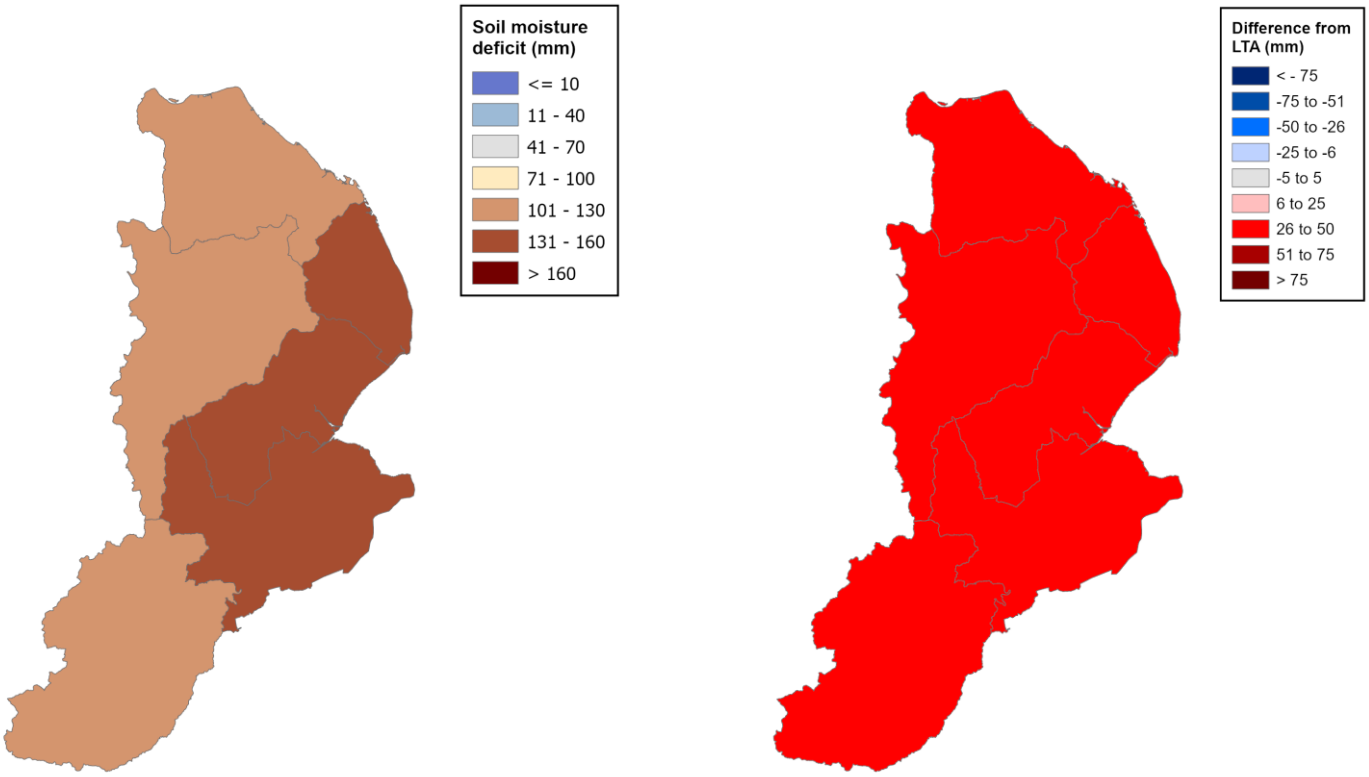


HadUK rainfall data. (Source: Met Office. Crown copyright, 2025)

3 Soil moisture deficit

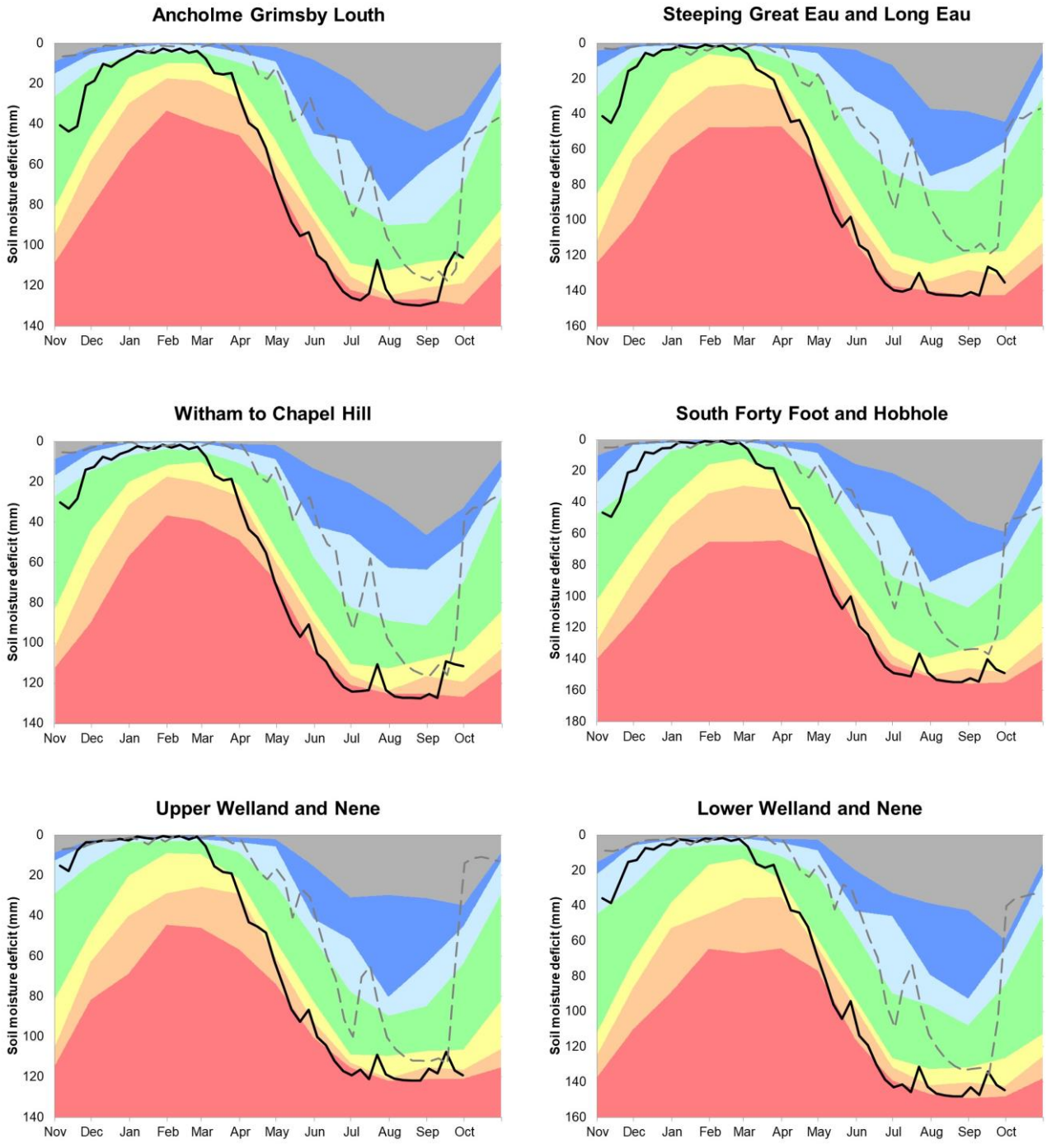
3.1 Soil moisture deficit map

Figure 3.1:Left map shows Soil moisture deficits for weeks ending 30 September 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.

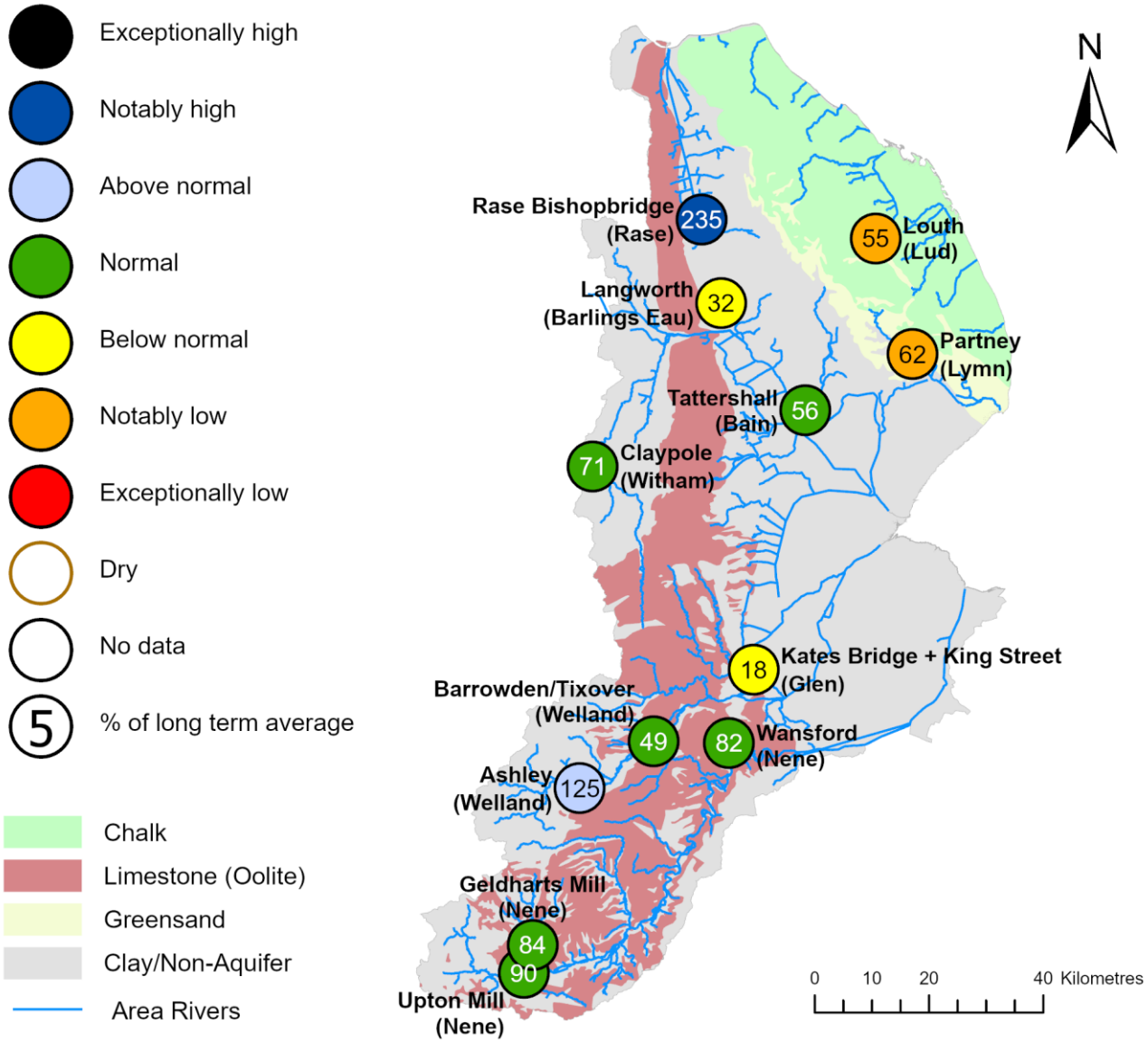


(Source: Met Office. Crown copyright, 2025). © Ordnance Survey Crown Copyright and Database Rights (2025) AC0000807064.

4 River flows

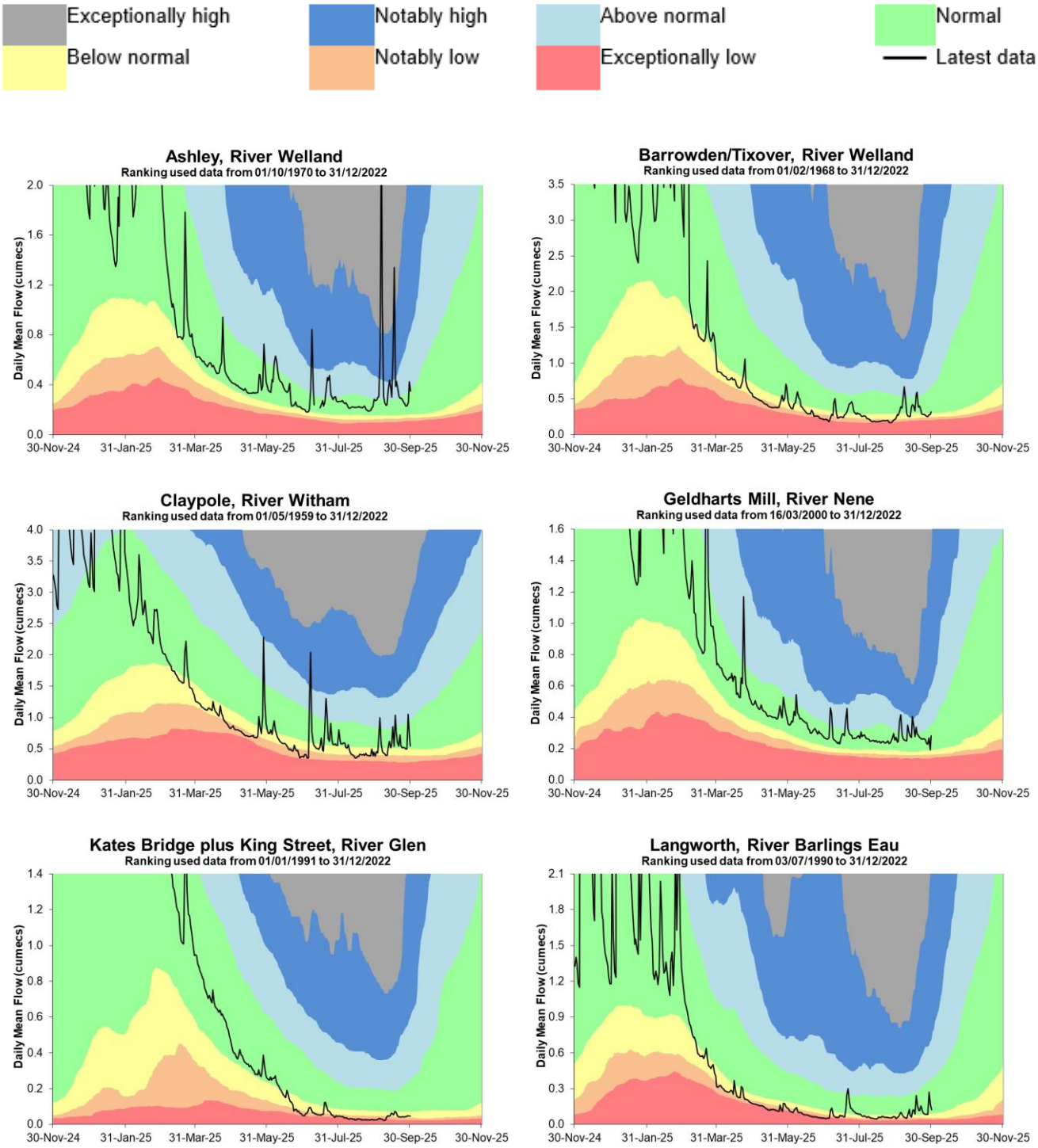
4.1 River flows map

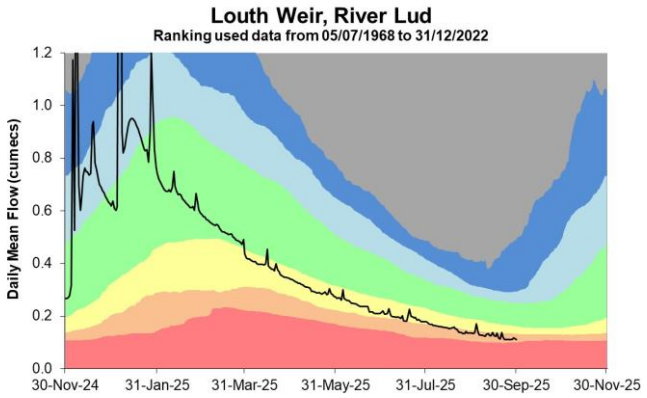
Figure 4.1: Monthly mean river flow for indicator sites for September 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic September monthly means Table available in the appendices with detailed information.

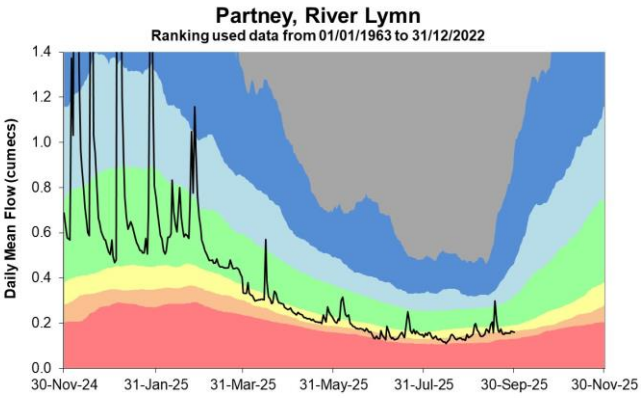


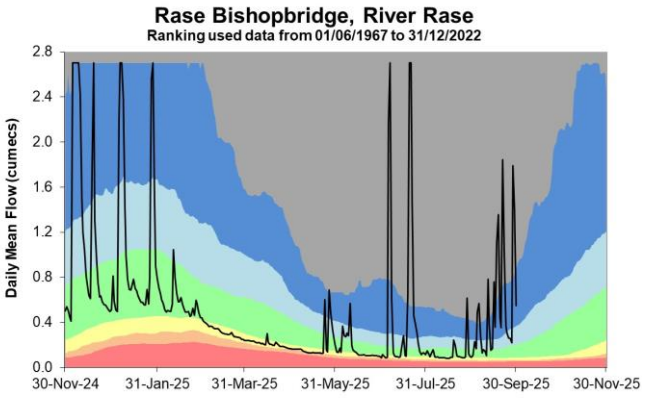
4.2 River flow charts

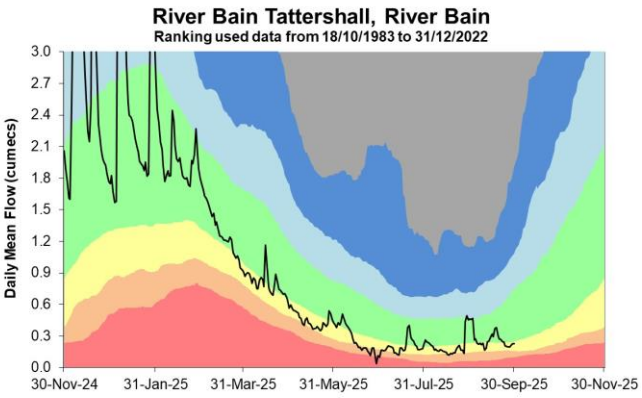
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

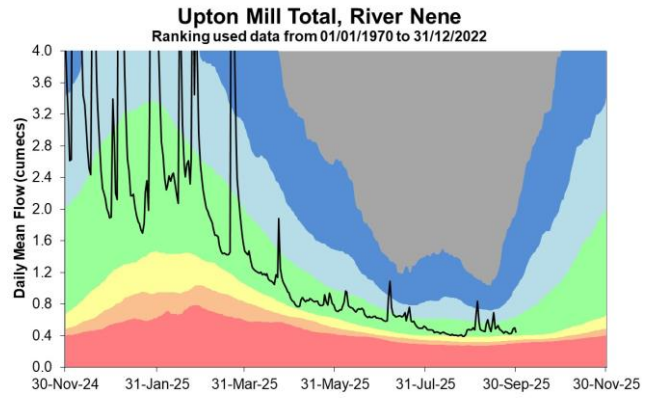


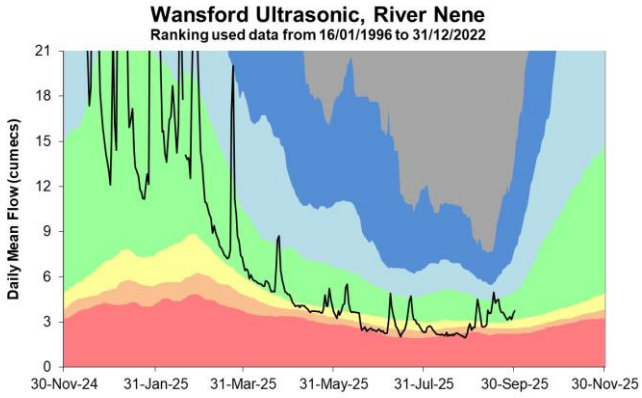










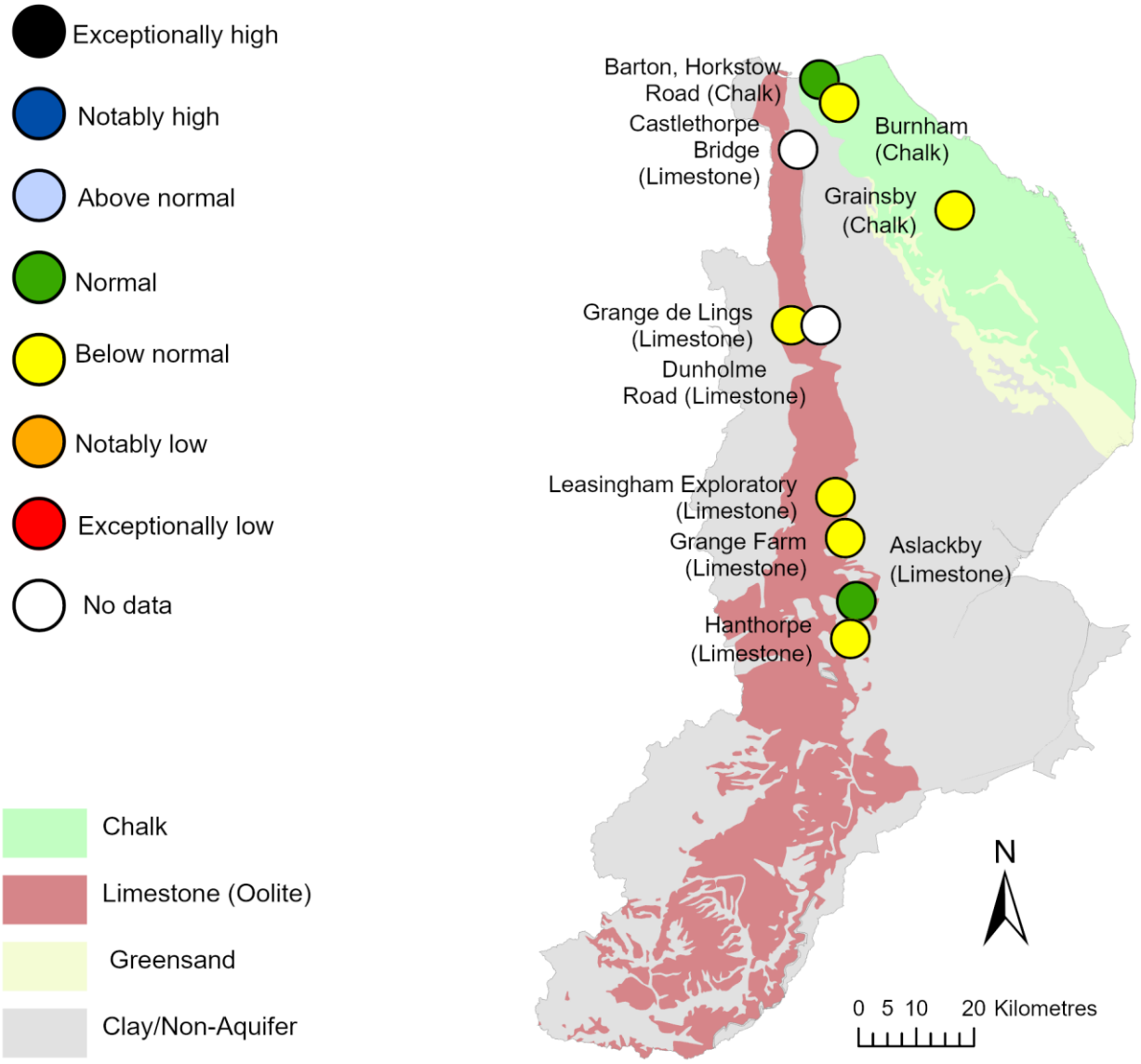


Source: Environment Agency.

5 Groundwater levels

5.1 Groundwater levels map

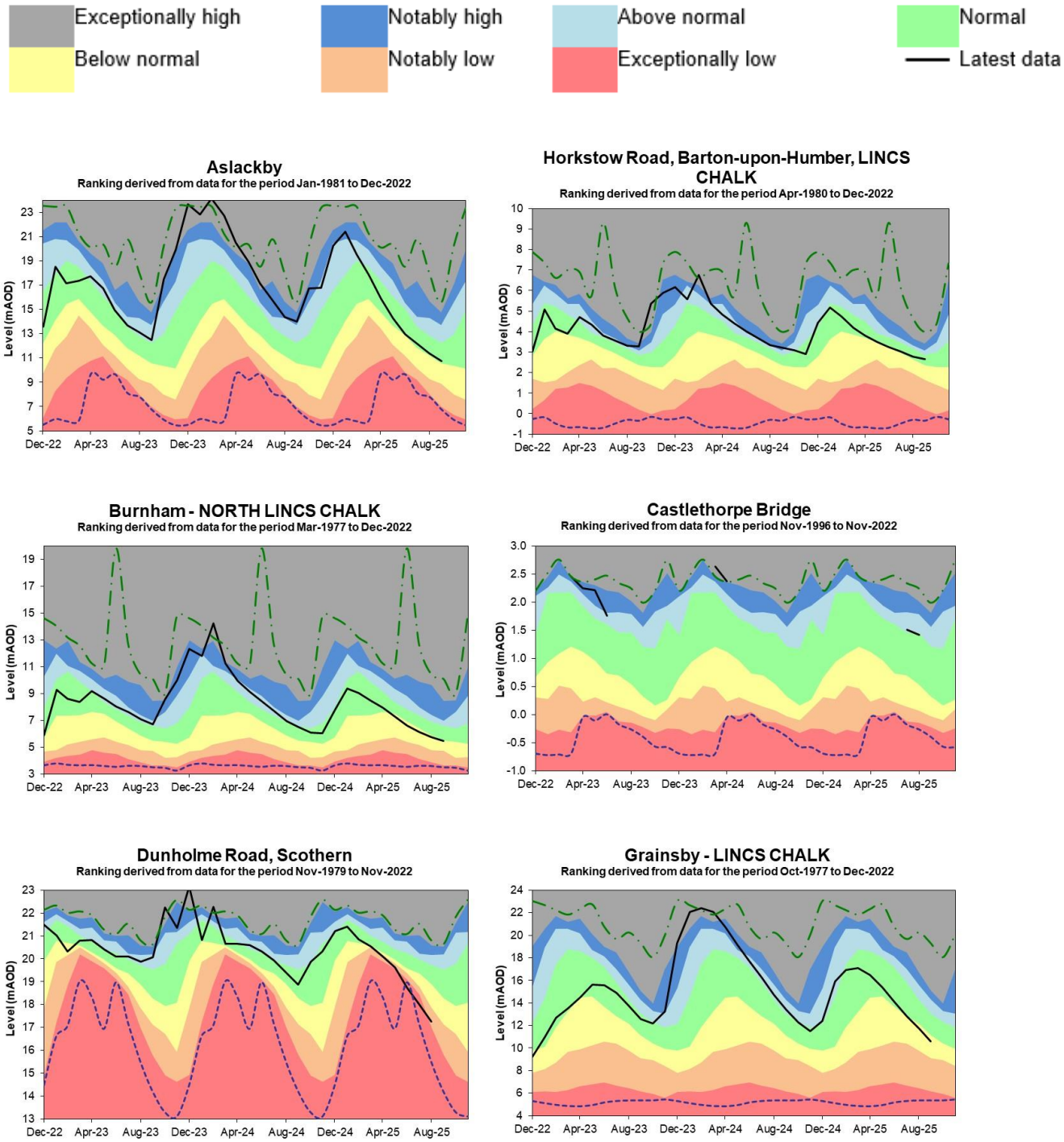
Figure 5.1: Groundwater levels for indicator sites at the end of September 2025, classed relative to an analysis of respective historic September levels. Table available in the appendices with detailed information.

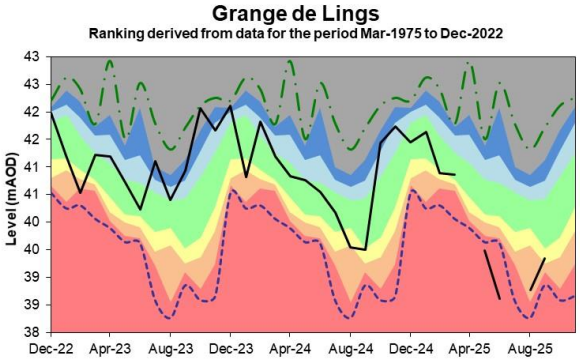


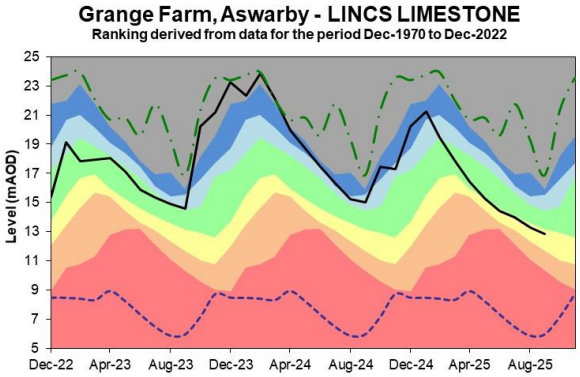
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. © Ordnance Survey Crown Copyright and Database Rights (2025) AC0000807064.

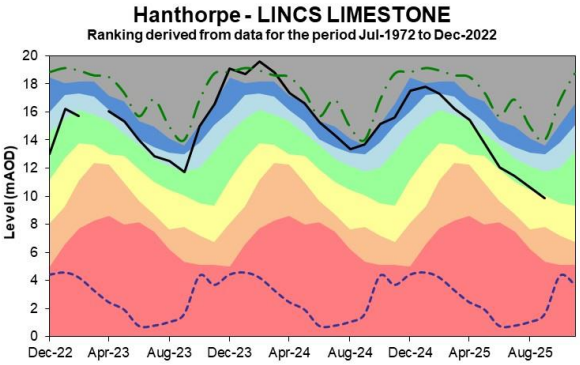
5.2 Groundwater level charts

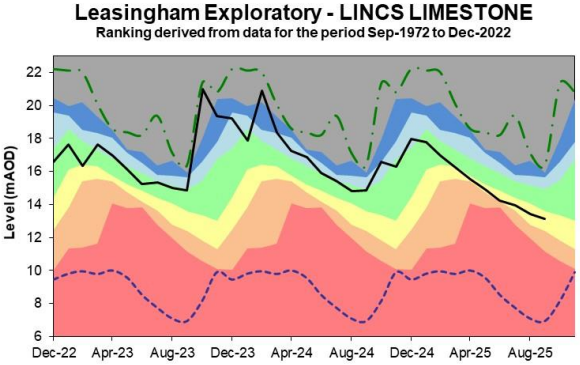
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.







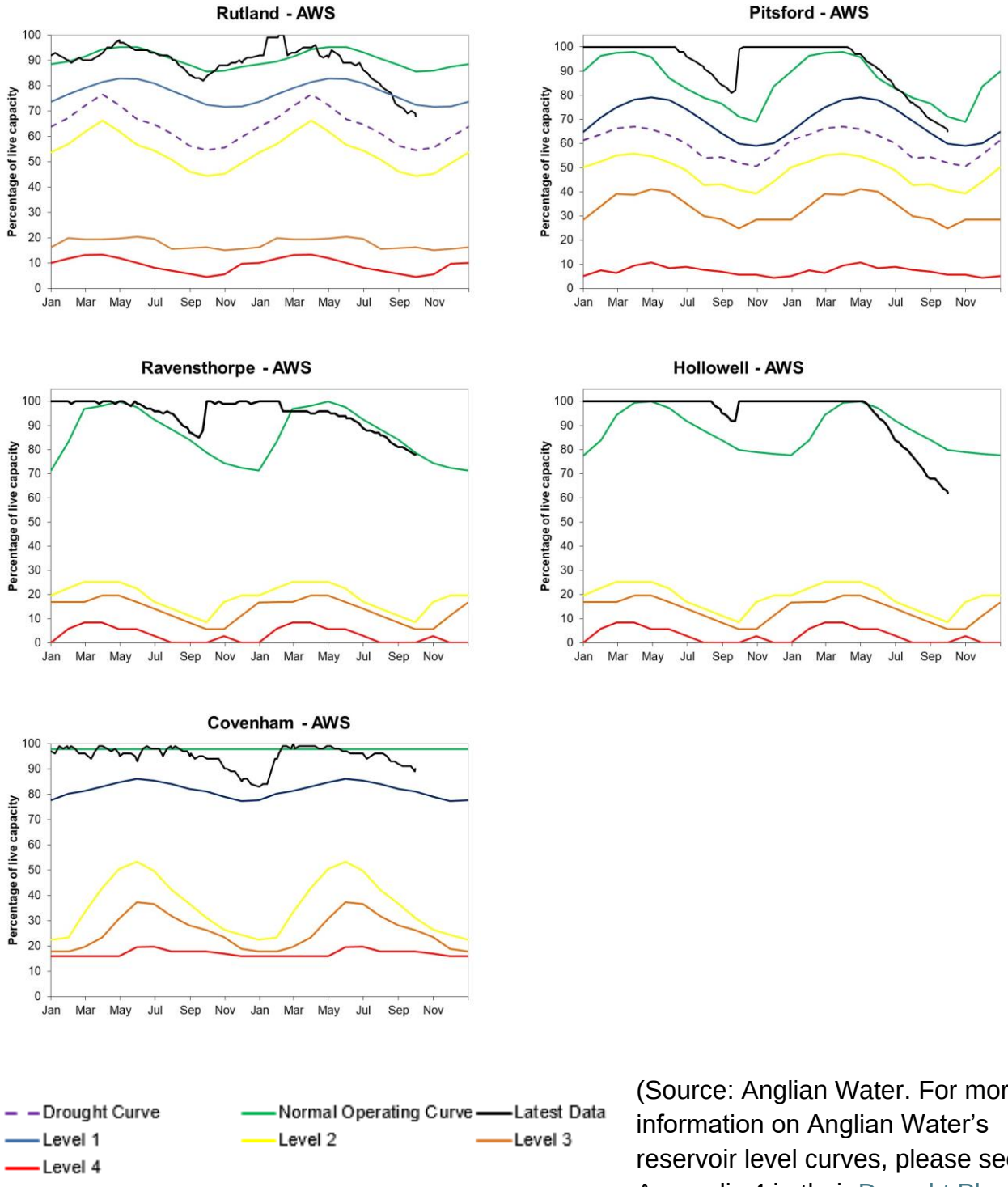




Source: Environment Agency, 2025.

6 Reservoir stocks

Figure 6.1: End of month regional reservoir stocks compared to the normal operating curve and Drought curves

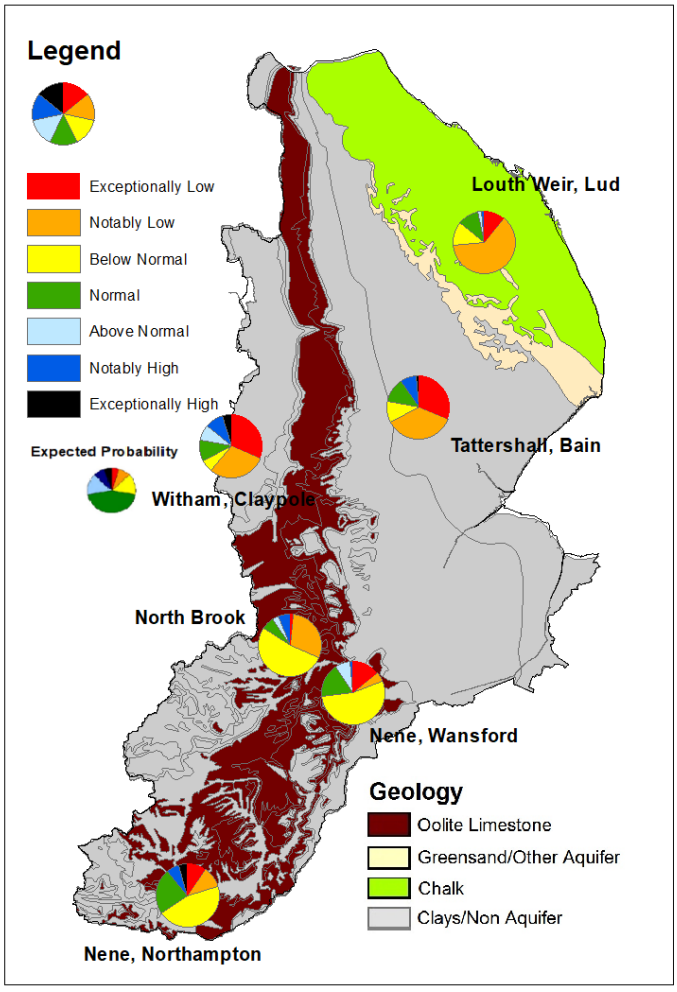


(Source: Anglian Water. For more information on Anglian Water's reservoir level curves, please see Appendix 4 in their Drought Plan).

7 Forward Look

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

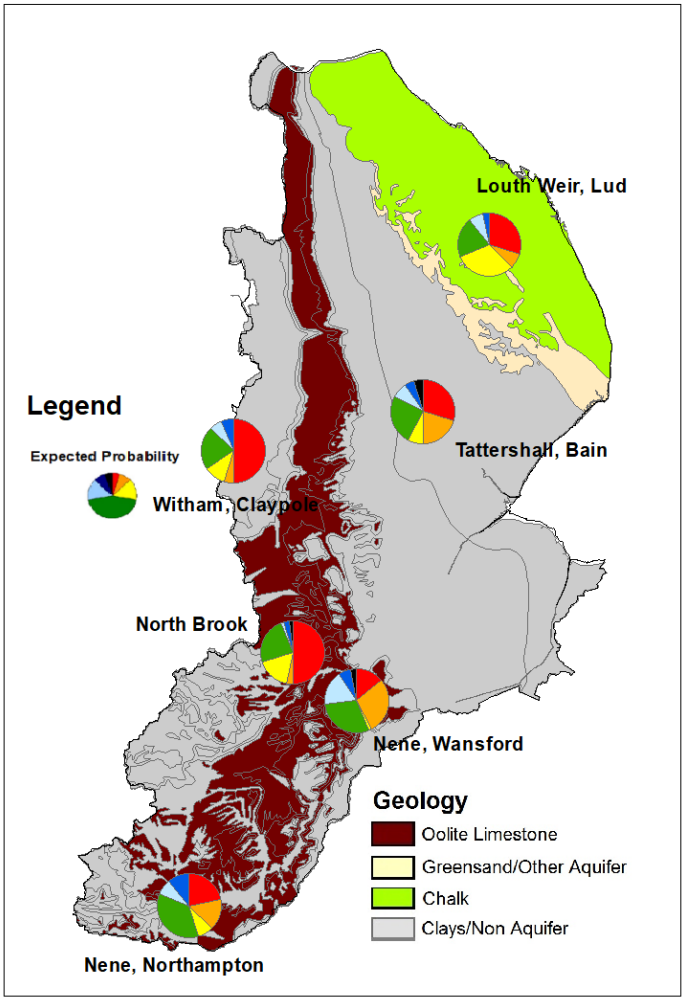
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those 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. © Ordnance Survey Crown Copyright and Database Rights (2025) AC0000807064.

7.2 Probabilistic ensemble projection of river flows at key sites in March 2026

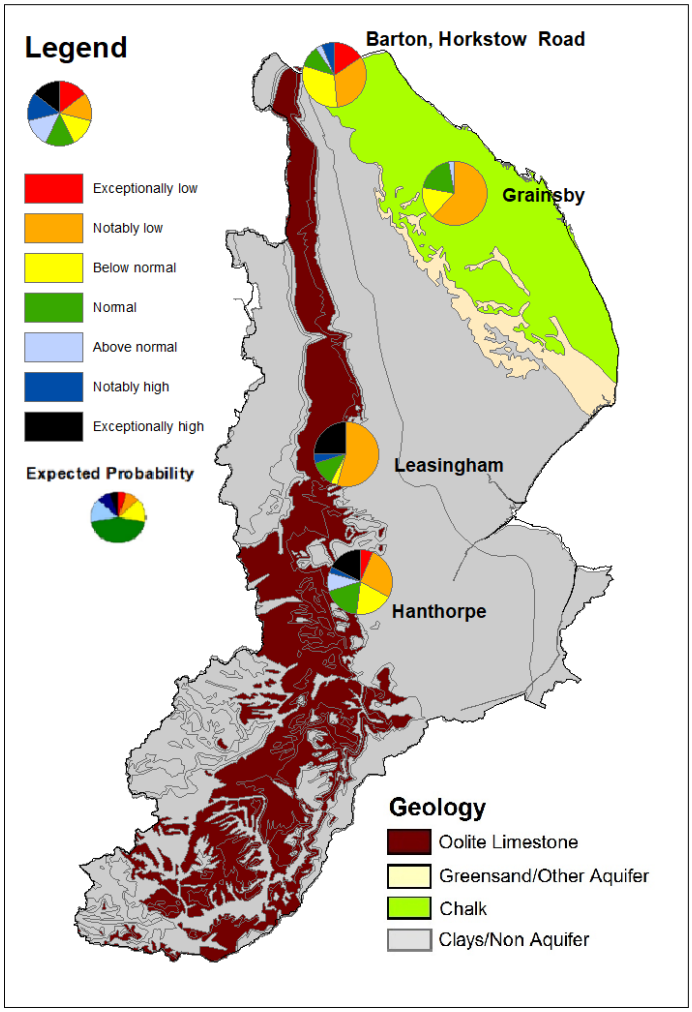
Table available in the appendices with detailed information. Exceptionally high or low levels are those which would typically occur 5% of the time within the historic record. Notably high or low levels are those which would typically occur 8% of the time. Above normal or below normal levels are those 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 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. © Ordnance Survey Crown Copyright and Database Rights (2025) AC0000807064.

7.3 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. © Ordnance Survey Crown Copyright and Database Rights (2025) AC0000807064.

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

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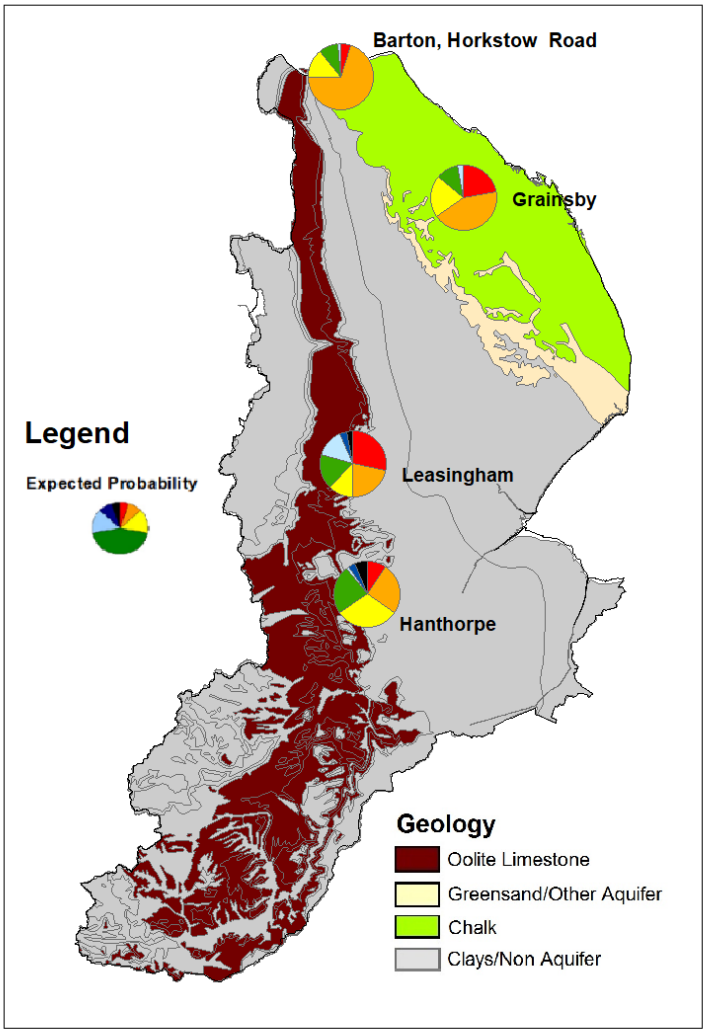

Pie charts indicate probability, based on climatology, of the groundwater level at each site being, for example, exceptionally low for the time of year. (Source: Environment Agency)

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	Sep 2025 rainfall % of long term average 1991 to 2020	Sep 2025 band	Jul 2025 to September cumulative band	Apr 2025 to September cumulative band	Oct 2024 to September cumulative band
Louth Grimsby And Ancholme	154	Above Normal	Normal	Below normal	Notably low
Lower Welland And Nene	101	Normal	Below normal	Notably low	Notably low
South Forty Foot And Hobhole	109	Normal	Below normal	Notably low	Below normal
Steeping Great Eau And Long Eau	107	Normal	Below normal	Notably low	Notably low
Upper Welland And Nene	103	Normal	Below normal	Exceptionally low	Notably low
Witham To Chapel Hill	134	Above Normal	Normal	Notably low	Notably low

9.2 River flows table

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

Upton Mill Total	Nene (Kislingbury Branch)	Nene Kislingbury Bridge	Normal	Normal
Wansford Combined	Nene (Wollaston To Wansford)	Nene Wansford	Normal	Exceptionally low

9.3 Groundwater table

Site name	Aquifer	End of Sep 2025 band	End of Aug 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		Normal
Dunholme Road, Scothern	Grimsby Ancholme Louth Limestone		Notably low
Grainsby	Grimsby Ancholme Louth Chalk	Below normal	Below normal
Grange De Lings	Grimsby Ancholme Louth Limestone	Below normal	Notably low
Grange Farm, Aswarby	Limestone (mudstone - Peterborough Member)	Below normal	Below normal

Hanthorpe	Limestone (Cornbrash Formation)	Below normal	Normal
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 December 2025

Percentage of pie chart for each band

Site	Nene Nton	Nene Wansford	North Brook
Exceptionally low	9.4	14.1	1.6
Notably low	10.9	4.7	29.7
Below normal	45.3	54.7	53.1
Normal	23.4	17.2	6.3
Above normal	0.0	7.8	3.1
Notably high	6.3	1.6	6.3
Exceptionally high	4.7	0.0	0.0

9.4.2 Probabilistic ensemble projection of river flows at key sites in March 2026

Percentage of pie chart for each band

Site	Nene Nton	Nene Wansford	North Brook
Exceptionally low	21.9	14.1	50.0
Notably low	15.6	28.1	3.1
Below normal	7.8	1.6	17.2
Normal	35.9	29.7	23.4
Above normal	7.8	17.2	1.6
Notably high	10.9	6.3	3.1
Exceptionally high	0.0	3.1	1.6

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

Percentage of pie chart for each band

Site	Grainsby	Hanthorpe	Horkstow
Exceptionally low	0.0	6.3	15.6
Notably low	62.5	26.6	32.8
Below normal	15.6	18.8	31.3
Normal	18.8	18.8	10.9
Above normal	3.1	9.4	3.1
Notably high	0.0	3.1	6.3
Exceptionally high	0.0	17.2	0.0

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

Percentage of pie chart for each band

Site	Grainsby	Hanthorpe	Horkstow
Exceptionally low	21.9	9.4	4.7
Notably low	43.8	25.0	70.3
Below normal	20.3	31.3	14.1
Normal	10.9	23.4	9.4
Above normal	3.1	1.6	1.6
Notably high	0.0	3.1	0.0
Exceptionally high	0.0	6.3	0.0