Monthly water situation report: Yorkshire Area

1 Summary - March 2026

Rainfall across Yorkshire was average for the time of year. Soils remained wet throughout the month. Flows were mostly within normal range and responded to two short periods when high rainfall totals occurred. Reservoirs levels were close to full capacity.

1.1 Rainfall

Monthly rainfall totals were in the normal range for most catchments with exception of the Derwent which was just below normal range for March, between 69% and 119% of the long term average (LTA). The legacy of the rain from the start of the year resulted in the Don still ranking the forth wettest January to March in a rainfall record starting in 1871.

Most of the month was categorised by low daily rainfall totals. However, there were two short periods where higher rainfall totals were recorded. The first of these occurred on day 12, where widespread rainfall occurred across Yorkshire. On this day the highest of the rainfall totals were in the upper reaches of the Swale, Ure, Nidd, Wharfe and Aire. Daily rainfall totals at our key indicator site, Arkle Town, located in the Swale catchment recorded 53mm.

The second wet period occurred on day 24, again widespread across Yorkshire's catchments but to a lesser extent. The largest daily rainfall totals occurred in the Ure, Wharfe and Upper Calder, which had from 34mm to 59mm, around 30% of the monthly LTA.

1.2 Soil moisture deficit and recharge

During March the soil moisture was typical for the time of year. Across Yorkshire soils were classified as wet for all the reporting weeks with little variation across each catchment.

1.3 River flows

Monthly mean river flows in Yorkshire were within normal range between 60% and 120% of the LTA, with exception of the West Beck. The West Beck monthly mean flows were in the exceptionally high range for March at 158% of the LTA.

In the West Beck, flows continued to be dominated by high groundwater levels which ensured that they remained exceptionally high for the first 14 days of the month. They gradually receded from day 15 onwards to notably high, above normal from day 19, and normal by the last 3 days of the month.

Elsewhere in Yorkshire flows for the first 11 days were within normal range. There were two periods in the month when flows peaked temporarily to exceptionally high, which followed the rainfall pattern. The first of these was a short period between day 12 to 18 where flows from the Pennine-fed catchments increased to exceptionally high but then receded to normal by

day 19. The second peak occurred on day 24 and 25 where those Pennine-fed catchments again reached to above normal or exceptionally high peak flows.

1.4 Groundwater levels

1.5 Magnesian Limestone

The groundwater level within the Magnesian Limestone decreased at Brick House Farm and was at notably high for the time of year.

1.6 Millstone Grit

The groundwater level within the Millstone Grit increased at Hill Top Farm and was at normal for the time of year. *It should be noted that this observation borehole is used for water abstraction by means of a pump. Therefore, the groundwater level recorded here may be subject to the effects of this.*

1.7 Sherwood Sandstone

The groundwater level within the Sherwood Sandstone decreased at Great Ouseburn and was at notably high for the time of year. The groundwater level decreased at Riccall Approach Farm and was at normal for the time of year.

1.8 Corallian Limestone

The groundwater level within the Corallian Limestone decreased at Sproxton and was at normal for the time of year.

1.9 Chalk

The groundwater level decreased at Wetwang and was at normal for the time of year. The groundwater level decreased at Dalton Estate Well and was at notably high for the time of year.

1.10 Reservoir stocks

Reservoir stocks continued to remain close to full capacity with only small weekly variations, of less than 1% across the 4 weeks.

1.11 Environmental impact

At the end of the month there was a single abstraction licence with a Hands Off Flow condition in force and another 39 licence holders have been given advanced warnings that flows were low.

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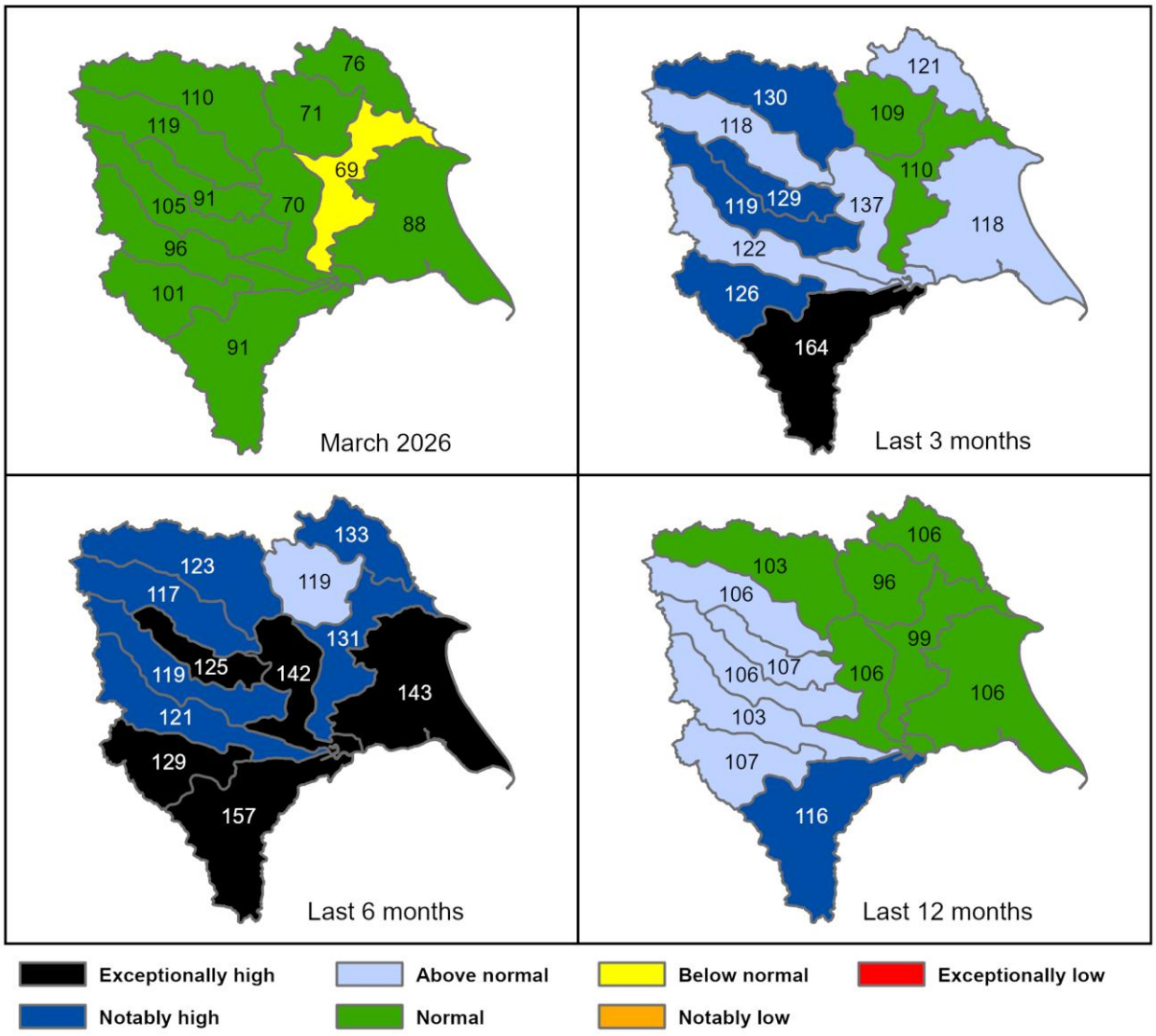
2 Rainfall

2.1 Rainfall map

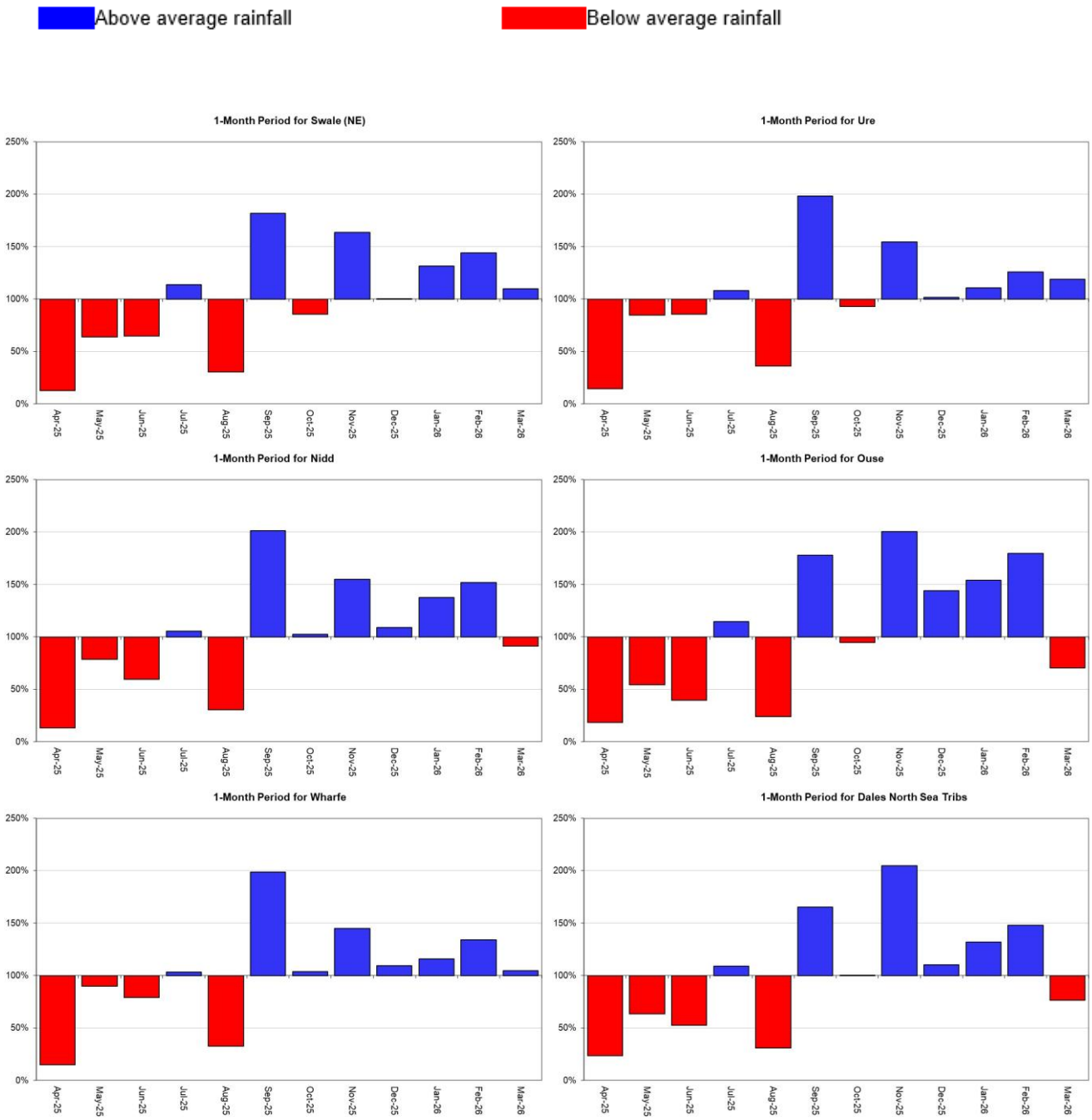
Figure 2.1: Total rainfall for hydrological areas across Yorkshire, expressed as a percentage of the 1991 to 2020 long term average rainfall, for the current month (up to 31 March 2026), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.

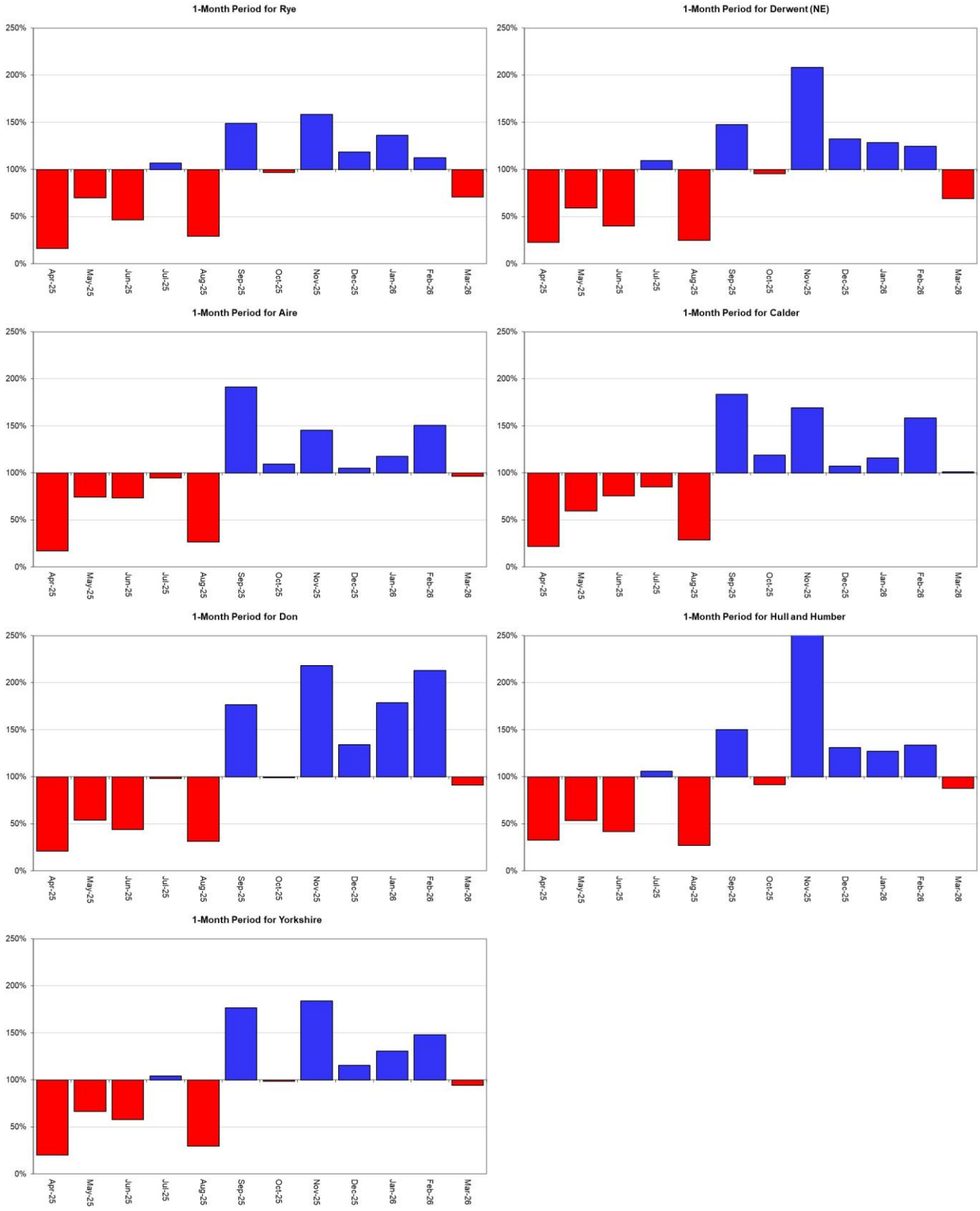


Rainfall data for January 2025 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, AC0000807064, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

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 catchment.





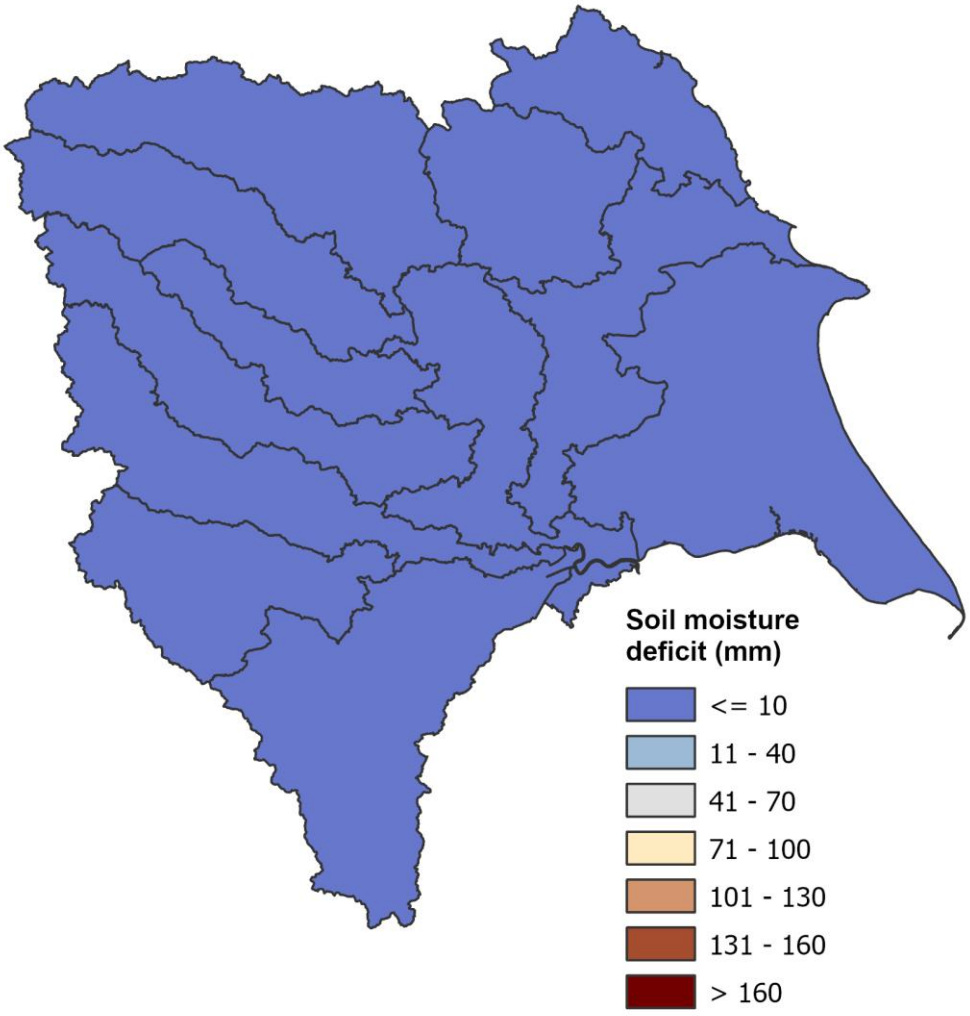
Rainfall data for January 2025 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment

Agency. Crown Copyright, 2026). Rainfall data prior to January 2025, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2026).

3 Soil moisture deficit

3.1 Soil moisture deficit map

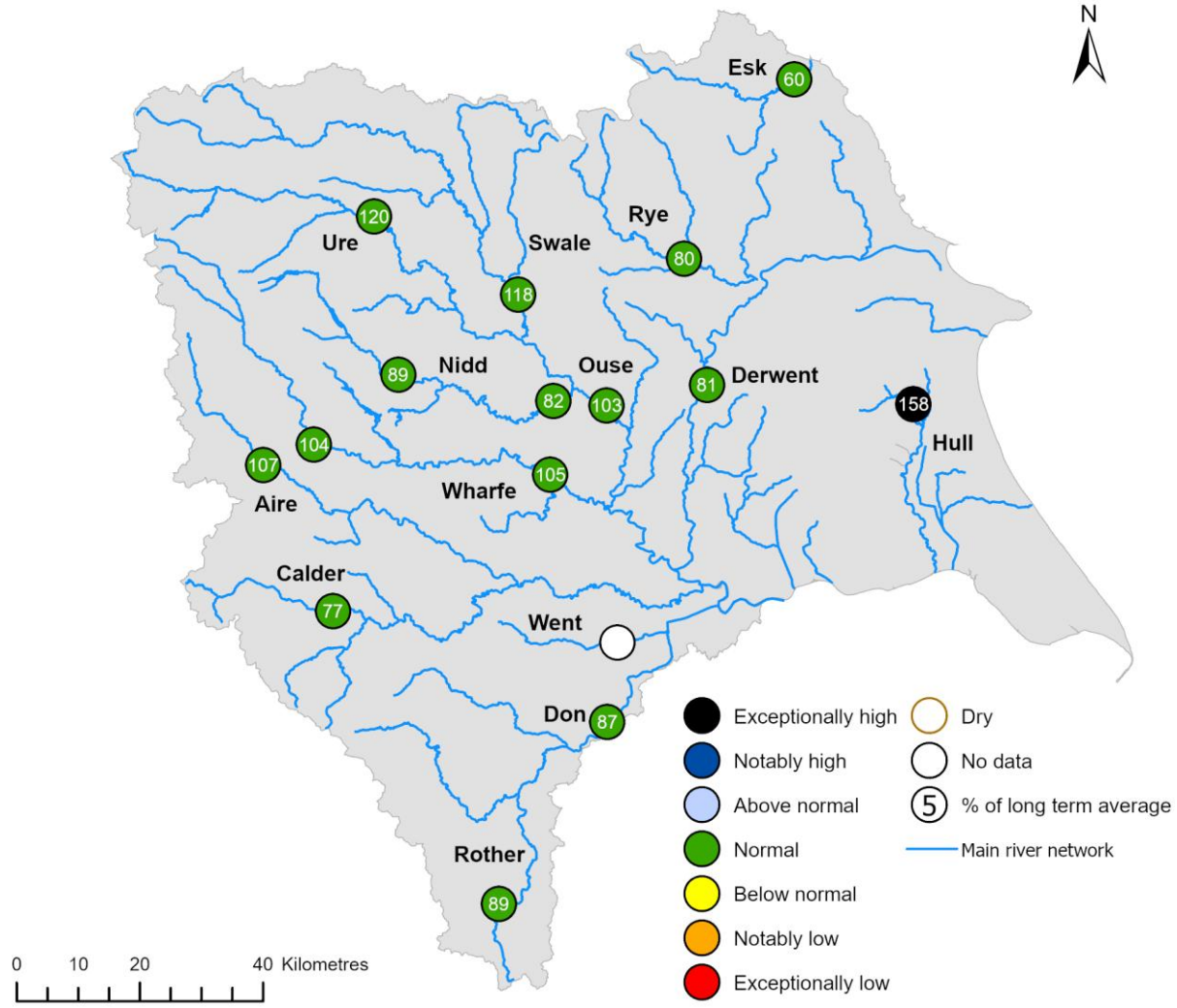
Figure 3.1: Soil moisture deficits for weeks ending 31 March 2026. Shows the actual soil moisture deficits (mm) within each hydrological area. Calculated from MORECS data for real land use.



4 River flows

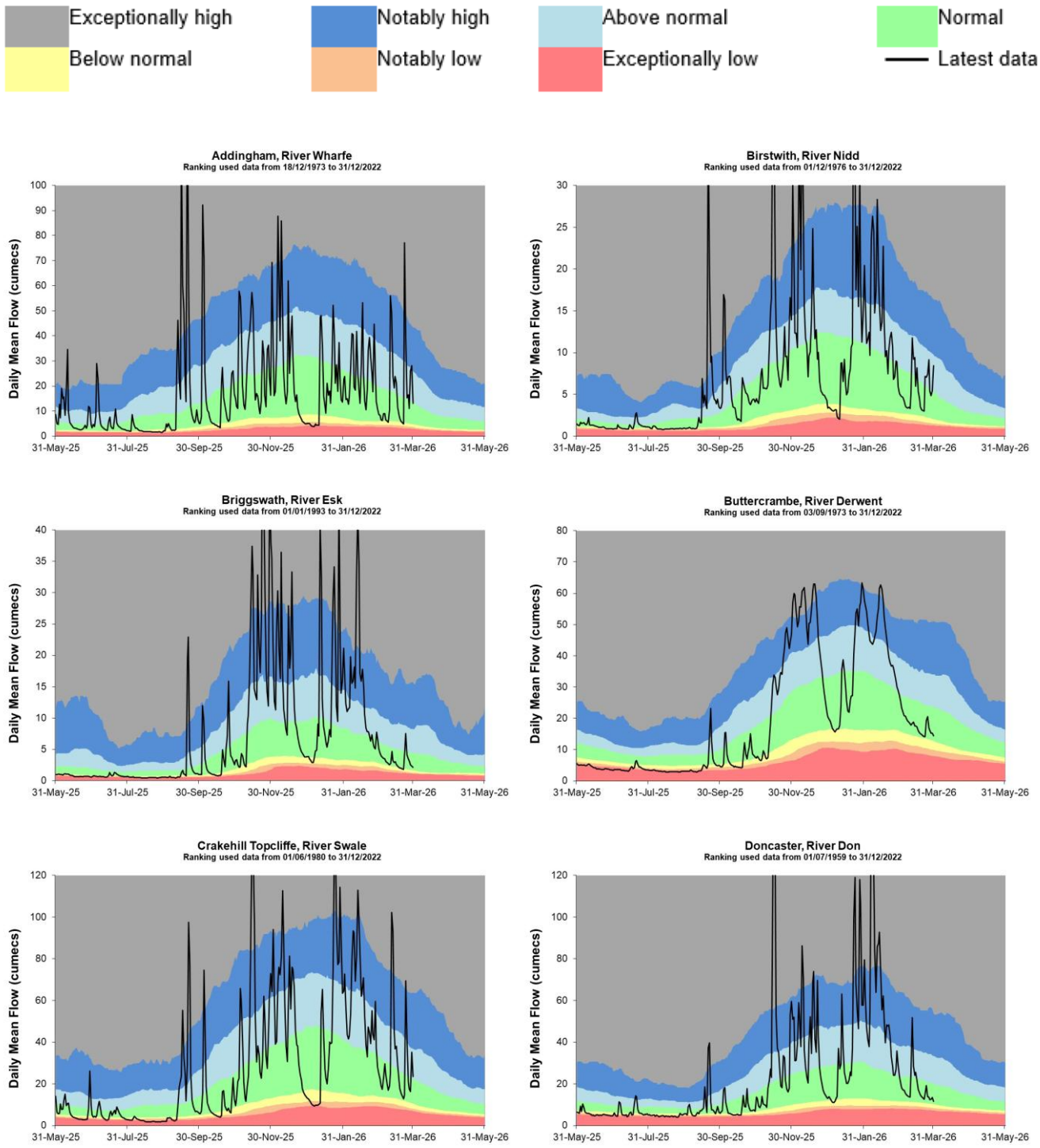
4.1 River flows map

Figure 4.1: Monthly mean river flow for indicator sites for March 2026, expressed as a percentage of the respective long term average and classed relative to an analysis of historic March monthly means. Table available in the appendices with detailed information.

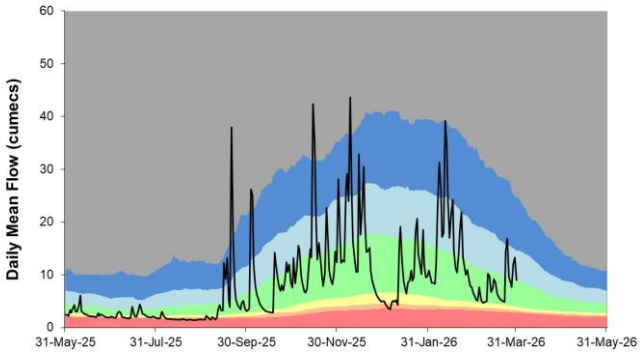


4.2 River flow charts

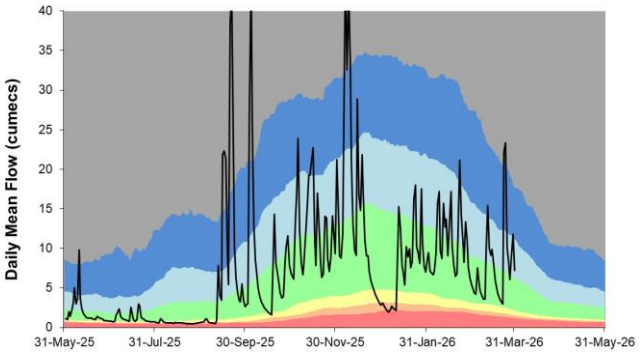
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



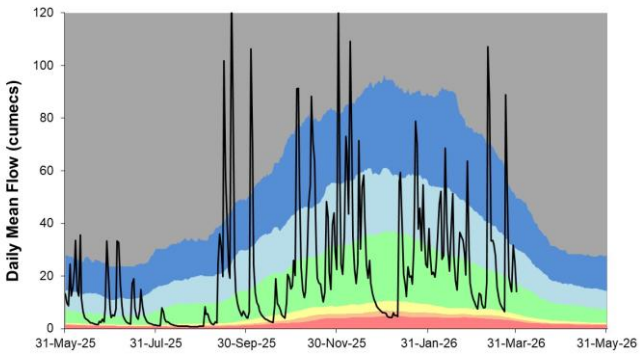
Elland, River Calder
Ranking used data from 01/07/1971 to 31/12/2022



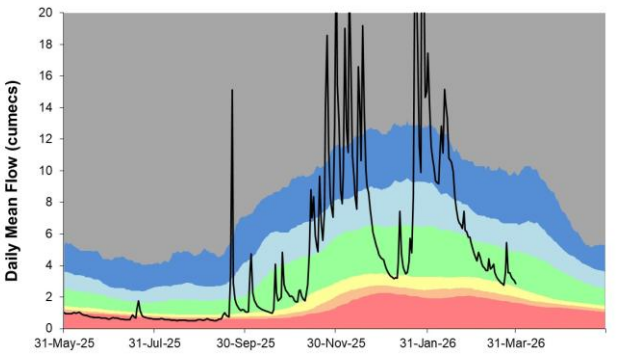
Kildwick, River Aire
Ranking used data from 01/08/1971 to 31/12/2022



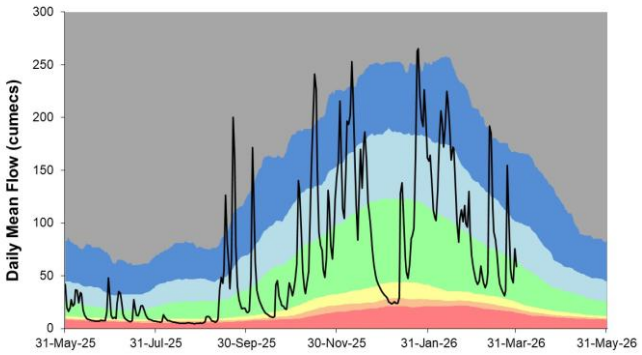
Kilgram Bridge, River Ure
Ranking used data from 01/08/1971 to 31/12/2022



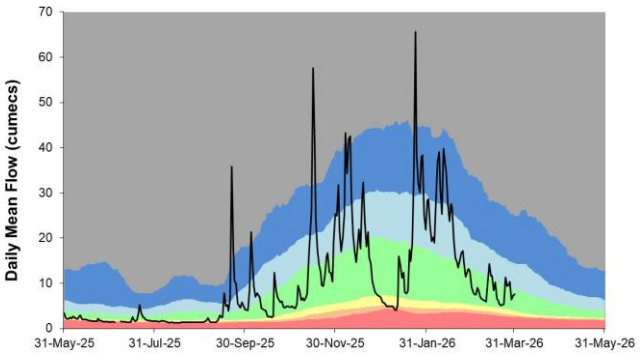
Ness, River Rye
Ranking used data from 01/09/1974 to 31/12/2022

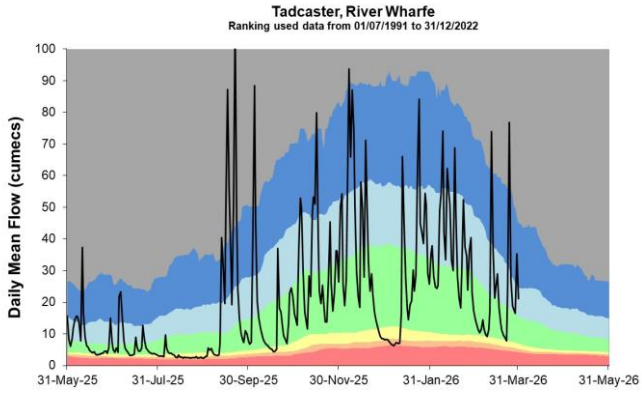


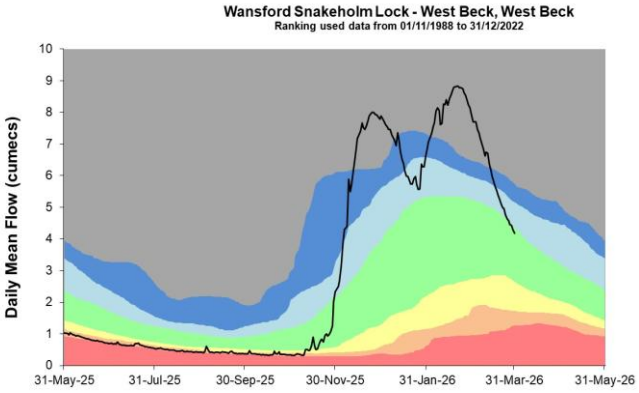
Skelton, River Ouse
Ranking used data from 18/09/1969 to 31/12/2022

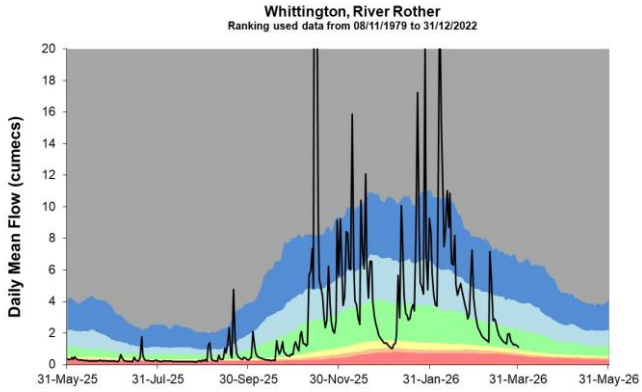


Skip Bridge Kirk Hammerton, River Nidd
Ranking used data from 12/06/1979 to 31/12/2022







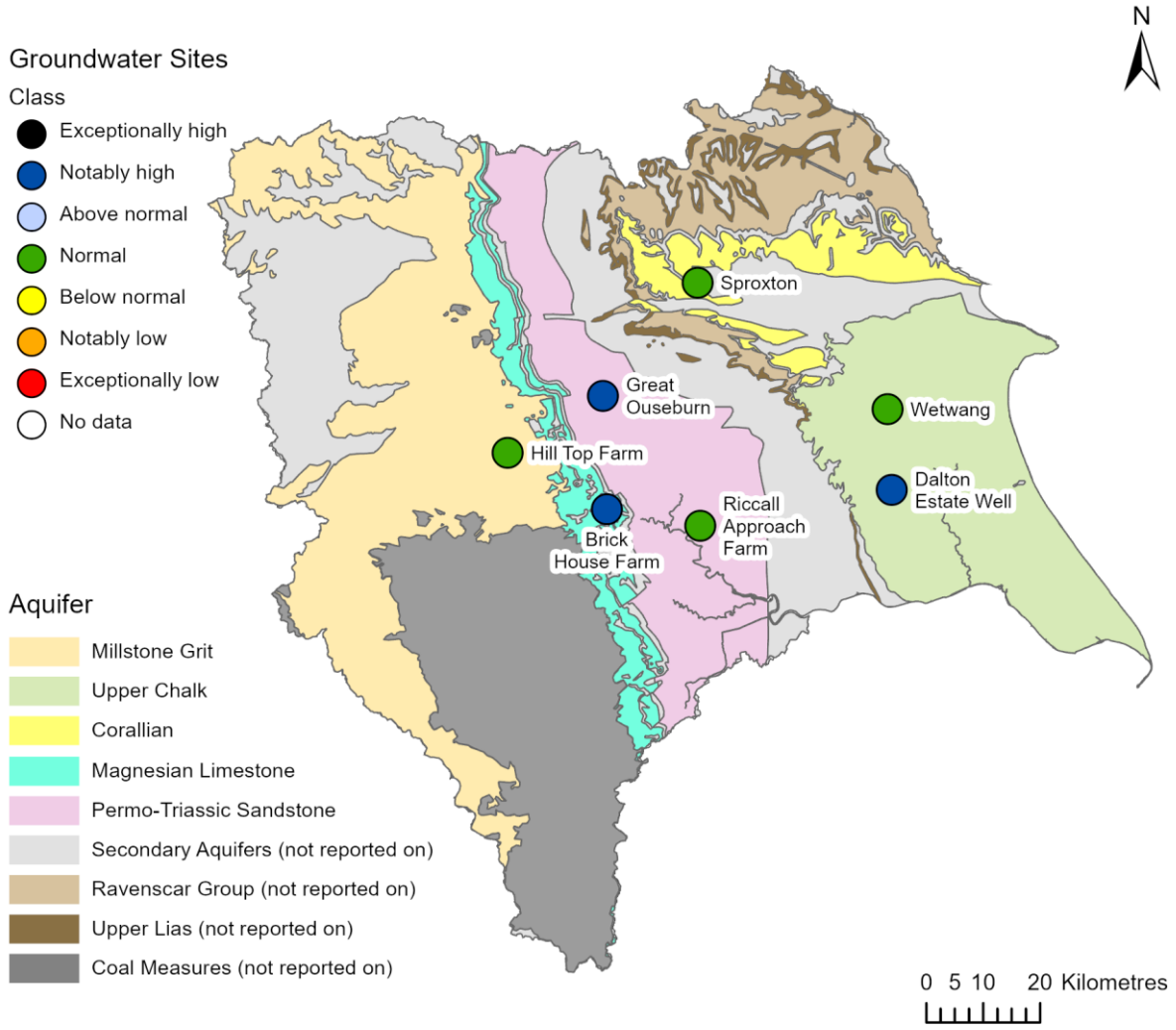


(Source: Environment Agency).

5 Groundwater levels

5.1 Groundwater levels map

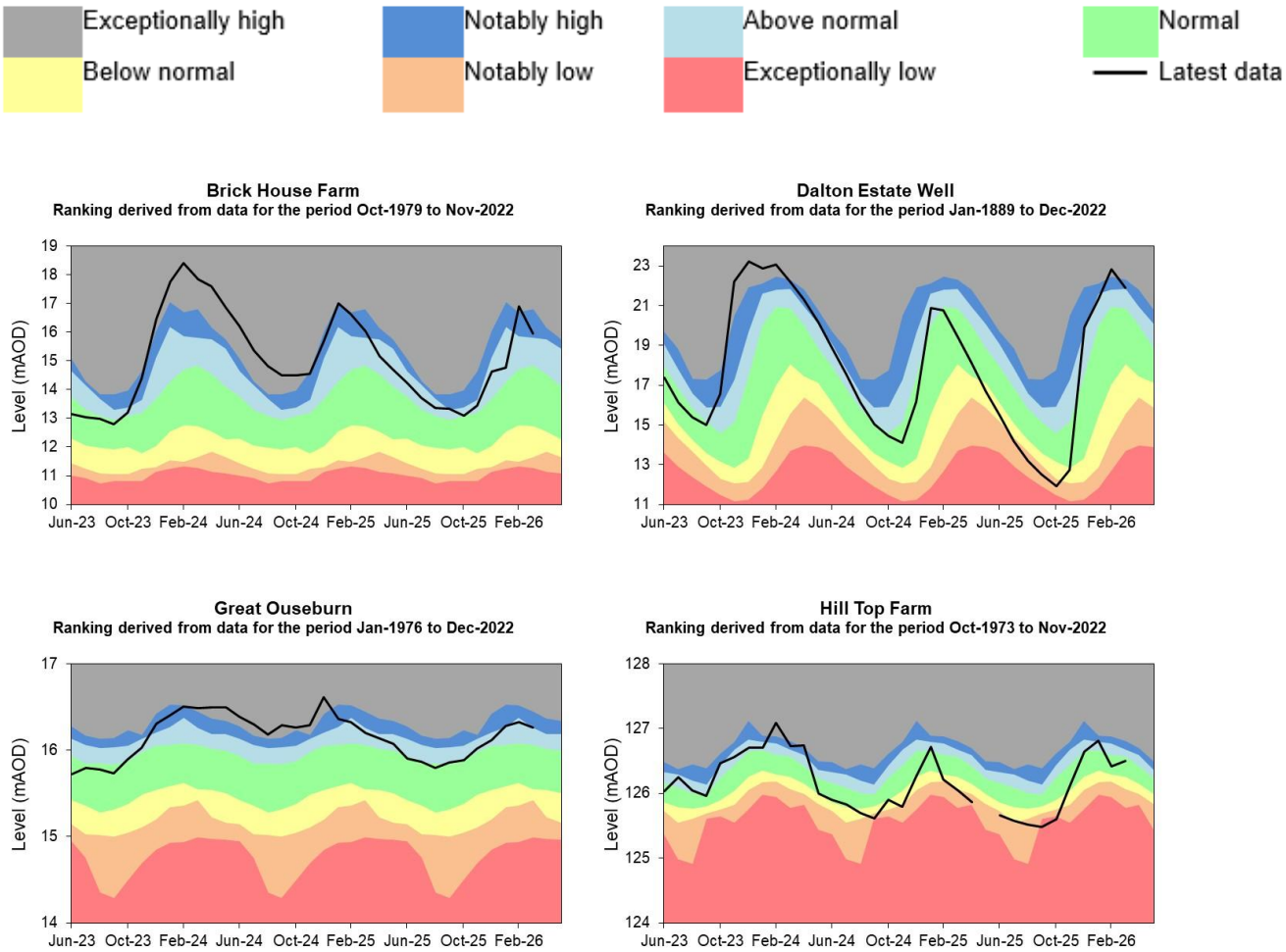
Figure 5.1: Groundwater levels for indicator sites at the end of March 2026, classed relative to an analysis of respective historic March levels. Table available in the appendices with detailed information.

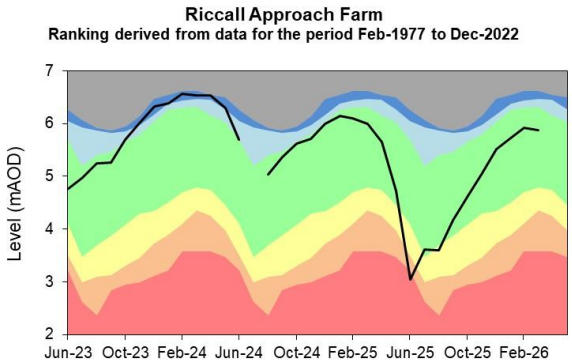


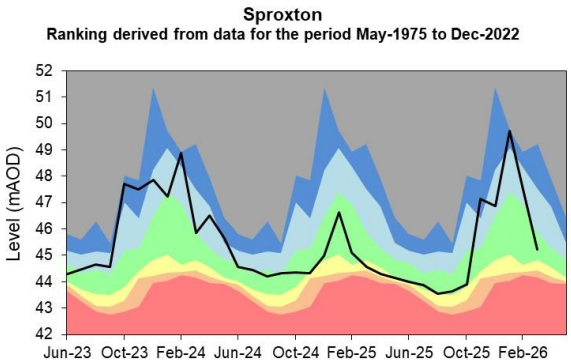
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, AC0000807064, 2026.

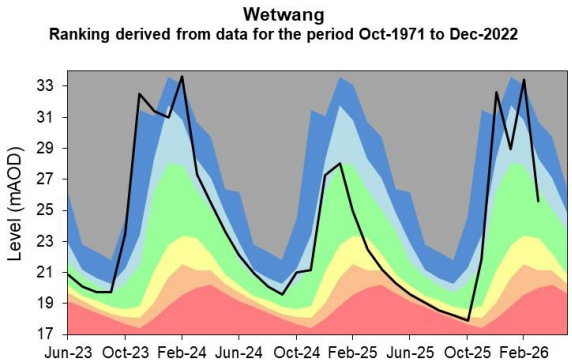
5.2 Groundwater level charts

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.







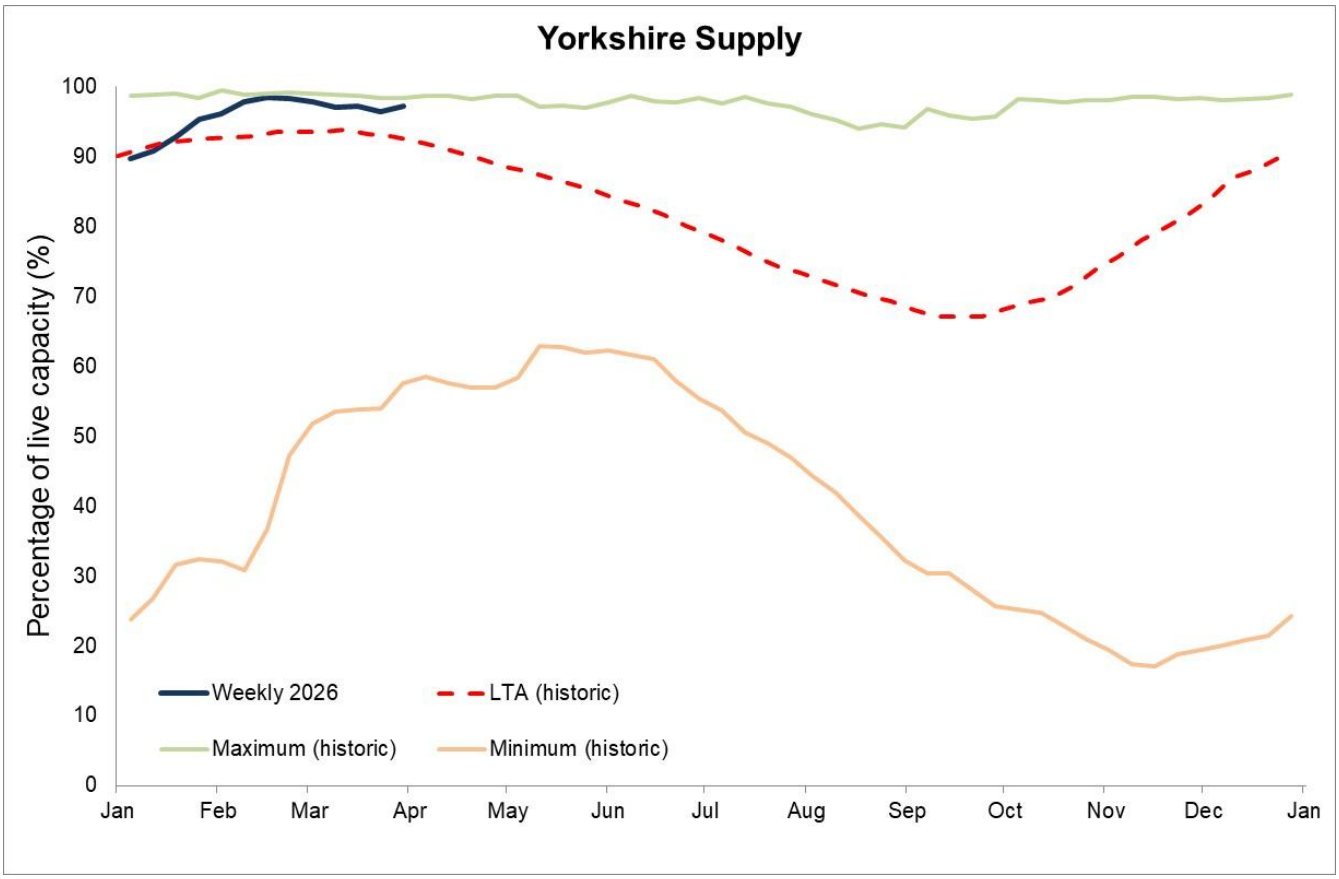


(Source: Environment Agency, 2026).

N.B. Hill Top Farm observation borehole is used for abstraction, therefore, the groundwater level record will be directly affected by pumping.

6 Reservoir stocks

Figure 6.1: End of month regional reservoir stocks compared to long term maximum, minimum and average stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.



(Source: Yorkshire Water).

7 Glossary

7.1 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).

7.2 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.

8 Appendices

8.1 Rainfall table

Hydrological area	Mar 2026 rainfall % of long term average 1991 to 2020	Mar 2026 band	Jan 2026 to March cumulative band	Oct 2025 to March cumulative band	Apr 2025 to March cumulative band
Aire	96	Normal	Above normal	Notably high	Above normal
Calder	101	Normal	Notably high	Exceptionally high	Above normal
Dales North Sea Tributaries	76	Normal	Above normal	Notably high	Normal
Derwent (NE)	69	Below Normal	Normal	Notably high	Normal
Don	91	Normal	Exceptionally high	Exceptionally high	Notably high
Hull And Humber	88	Normal	Above normal	Exceptionally high	Normal
Nidd	91	Normal	Notably high	Exceptionally high	Above normal
Ouse	70	Normal	Above normal	Exceptionally high	Normal
Rye	71	Normal	Normal	Above normal	Normal
Swale (NE)	110	Normal	Notably high	Notably high	Normal

Hydrological area	Mar 2026 rainfall % of long term average 1991 to 2020	Mar 2026 band	Jan 2026 to March cumulative band	Oct 2025 to March cumulative band	Apr 2025 to March cumulative band
Ure	119	Normal	Above normal	Notably high	Above normal
Wharfe	105	Normal	Notably high	Notably high	Above normal

8.2 River flows table

Site name	River	Catchment	Mar 2026 band	Feb 2026 band
Addingham	Wharfe	Wharfe Middle	Normal	Normal
Birstwith	Nidd	Nidd Middle	Normal	Above normal
Briggswath	Esk	Esk Yorks	Normal	Exceptionally high
Buttercrambe	Derwent	Derwent Yorks Middle	Normal	Exceptionally high
Crakehill Topcliffe	Swale	Swale Lower	Normal	Notably high
Doncaster	Don	Don Lower	Normal	Exceptionally high
Elland	Calder	Calder Yorks Upper	Normal	Above normal
Skip Bridge Kirk Hammerton	Nidd	Nidd Lower	Normal	Notably high
Kildwick	Aire	Aire Upper	Normal	Normal
Kilgram Bridge	Ure	Ure Middle	Normal	Normal
Ness	Rye	Rye	Normal	Exceptionally high
Skelton	Ouse	Ouse Yorks	Normal	Notably high

Site name	River	Catchment	Mar 2026 band	Feb 2026 band
Tadcaster	Wharfe	Wharfe Lower	Normal	Above normal
Wansford Snakeholm Lock	West Beck	Hull Upper	Exceptionally high	Exceptionally high
Whittington	Rother	Rother Yorks	Normal	Exceptionally high

8.3 Groundwater table

Site name	Aquifer	End of Mar 2026 band	End of Feb 2026 band
Brick House Farm	Wharfe Magnesian Limestone	Notably high	Exceptionally high
Dalton Estate Well	Hull and East Riding Chalk	Notably high	Exceptionally high
Great Ouseburn	Sherwood Sandstone	Notably high	Above normal
Hill Top Farm	Millstone Grit and Carboniferous Limestone	Normal	Normal
Riccall Approach Farm	Sherwood Sandstone	Normal	Normal
Sproxton	Sherwood Sandstone	Normal	Above normal
Wetwang	Hull and East Riding Chalk	Normal	Exceptionally high