Monthly water situation report: Midlands

1 Summary - April 2025

Please see Section 7.3 for a map detailing the Midlands regional coverage of this report.

Rainfall - April was a particularly dry month for the time of year. The majority of the Midlands hydrological catchments received below normal or notably low rainfall totals of the month. The exception being the Lower Wye which received normal rainfall totals.

Soil moisture deficit - Due to lack of rainfall soils are drier than average for the time of year. All hydrological catchments except the Welsh Mountains recorded a soil moisture deficit (SMD) of between 41mm to 70mm. The Welsh Mountains recorded a SMD between 11mm to 40mm.

River flows - The majority of flow monitoring sites recorded either below normal or exceptionally low average flows for the time of year. Two sites recorded notably low and 2 sites recorded normal flows compared to the long term average (LTA) of April.

Groundwater levels - As of the end of April, all sites recorded normal or above groundwater levels, except for one site which recorded below normal levels.

Reservoir stocks - As of the end of April, 3 reservoirs in the Midlands recorded above average storage for the time of year. The remaining 7 recorded below average storage for the time of year.

1.1 Rainfall

April was particularly dry month for the time of year. Seven hydrological catchments received below normal rainfall totals for the month, ranging from 45% to 61% of the LTA. Four catchments in the north-east of the Midlands received notably low rainfall totals. These were the Dove, Derwent, Lower Trent and Soar, which received rainfall totals ranging from 22% to 38% of the LTA. The Lower Wye was the only hydrological catchment that received normal rainfall totals of 63% of the LTA.

During the last 3 months, 3 hydrological catchments have received notably low rainfall totals, ranging from 54% to 57% of the LTA for February to April. These were Lower Wye, Lower Severn and Avon. The other 9 catchments received exceptionally low rainfall totals, ranging from 37% to 50% of the LTA for February to April.

Over the past 6 months, 5 hydrological catchments have received below normal rainfall totals, ranging 79% to 83% of the LTA for November to April. These were Welsh Mountains, Upper Trent, Dove, Derwent and Tame. The remaining hydrological catchments have received normal rainfall totals, ranging from 83% to 95% of the LTA for November to February.

Lastly, over the last 12 months, the majority hydrological catchments received normal rainfall totals, ranging from 94% to 110% of the LTA. Two hydrological catchments received above normal rainfall totals. They were the Lower Severn which received 118% of the LTA, and Shropshire Plains which received 114% of the LTA. The Welsh Mountains was the only hydrological catchment to receive below normal rainfall totals at 92% of the LTA.

1.2 Soil moisture deficit and recharge

By the end of April, all hydrological catchments except the Welsh Mountains recorded a SMD of between 41mm to 70mm. The Welsh Mountains recorded a SMD of 11mm to 40mm. Soils in April were therefore drier compared to the previous month of March, when all the catchments recorded a SMD of 11mm to 40mm.

All of the Midlands hydrological catchments, except Welsh Mountains, during April had a 26mm to 50mm difference in SMD from the LTA. This means soils for these catchments were drier compared to the previous month of March. The Welsh Mountains recorded a difference of 6mm to 25mm from the LTA. This means SMD is greater than expected for the time of year, with soils being drier than the LTA.

1.3 River flows

In April, 8 flow monitoring sites in the Midlands recorded exceptionally low monthly mean flows ranging from 27% to 46% of the LTA. Two sites recorded notably low mean flows at North Muskham, and Yoxhall. Eight sites recorded below normal monthly mean flows ranging from 46% to 72% of the LTA. A further 2 sites recorded normal monthly mean flows. These were Worksop and Evesham.

Wedderburn Bridge gauges is currently removed from this report due to data issues

1.4 Groundwater levels

As of the end of April, the majority of groundwater levels recorded normal or higher compared to the LTA. Weir Farm recorded exceptionally high groundwater levels compared to the LTA. Two sites recorded notably high groundwater levels compared to the LTA. These were Anthony's Cross and Coxmoor. A further two sites recorded above normal groundwater levels compared to the LTA. These were Crossley Hill and Four Crosses. Two sites recorded normal groundwater levels compared to the LTA. These were Ram Hall and St Mary's Church. Rider Point recorded below normal groundwater levels compared to the LTA.

Southards Lane is currently removed from this report due to data issues.

1.5 Reservoir stocks

As of the end of April, 3 reservoirs in the Midlands recorded above average storage for the time of year. The remaining 7 recorded below average storage for the time of year, with the end of month storage percentage for these ranging from 76% to 97%. The reservoirs recording below average storage were Clywedog, Vyrnwy, Derwent, Tittesworth, Blithfield, Elan, and Charnwood. The majority of these reservoirs have seen a decrease in storage levels over April. Derwent saw the biggest decrease in storage, decreasing from approximately 85% to 76% storage over the month. The only reservoirs to see an increase were Carsington and Ogston and Dove reservoirs. Similar to March, no reservoirs by the end of April were at 100% storage. Due to works at Blithfield reservoir, data was missing from 26 February to 3 March. Therefore, data was interpolated for Blithfield for this period.

1.6 River Severn operations

The River Severn is regulated to maintain a minimum flow at Bewdley gauging station. This ensures sufficient water flows along the river to support environmental and water supply requirements. Regulation is instigated when flows drop below a threshold. In April, the River Severn regulation was not instigated.

1.7 River Wye operations

Throughout April, flows at Redbrook were above the regulation threshold. Therefore, regulation releases were not in operation during April. Though regulation releases were instigated as of 2 May.

1.8 Water abstraction restrictions

As of the end of April there were 13 water abstraction licence restrictions in place across the Midlands affecting 23 licences in total.

Table 1.2: Water abstraction licence restrictions

Area	Rivers and stations restricted
East Midlands	Rothley Brook at Rothley River Derwent at Derby St, Mary's
West Midlands	River Leadon at Wedderburn Bridge

	River Strine at Crudington River Sow at Great Bridgford River Trent at Darlaston River Blythe at Whiteacre River Stour at Puxton River Wye at Belmont River Wye at Redbrook River Lugg at Butts Bridge

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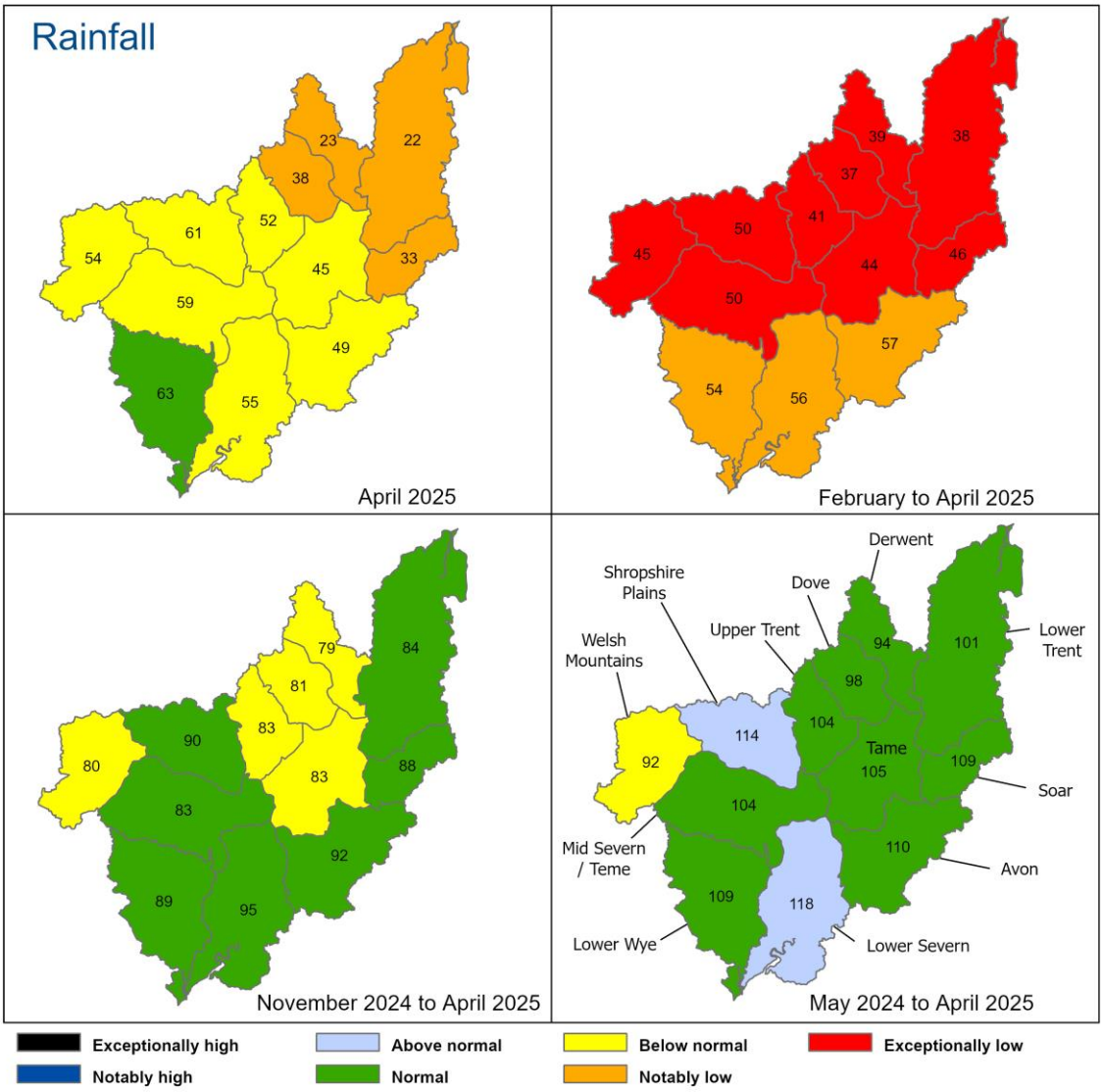
Contact Details: 03708 506 506

2 Rainfall

2.1 Rainfall map

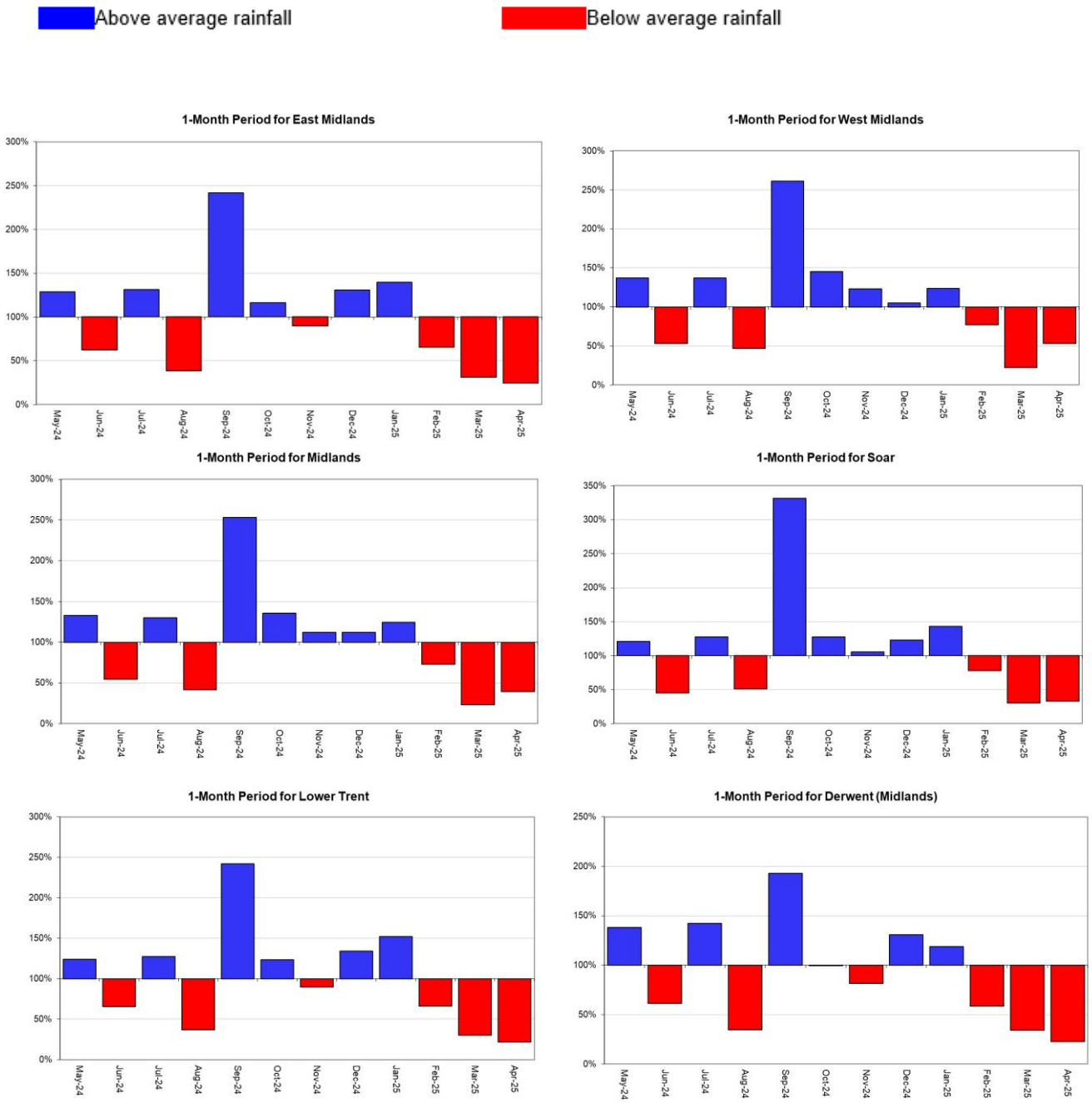
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 30 April 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.

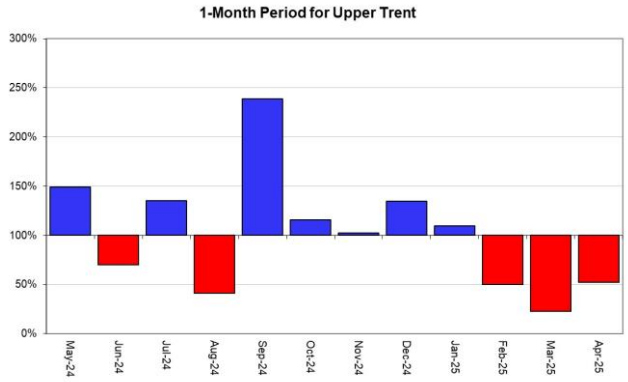


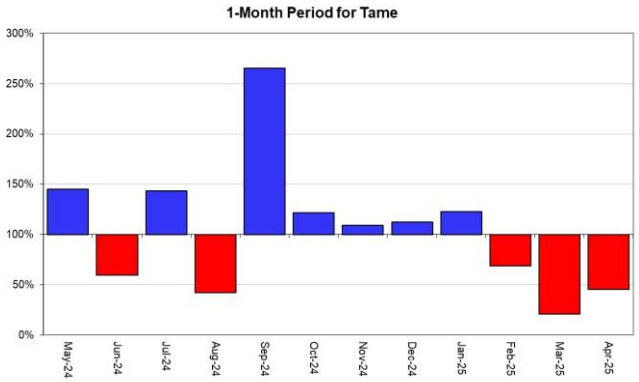
Rainfall data for Oct 2023 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to Oct 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2025).

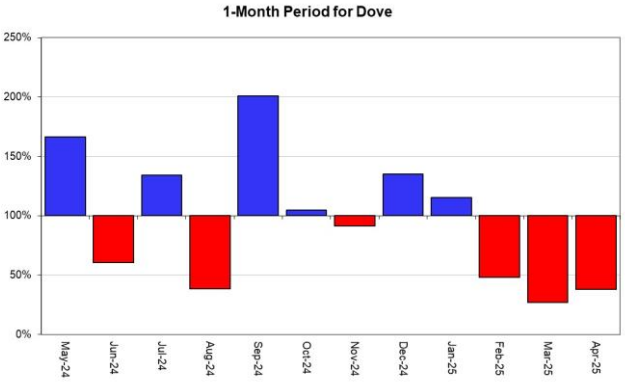
2.2 Rainfall charts

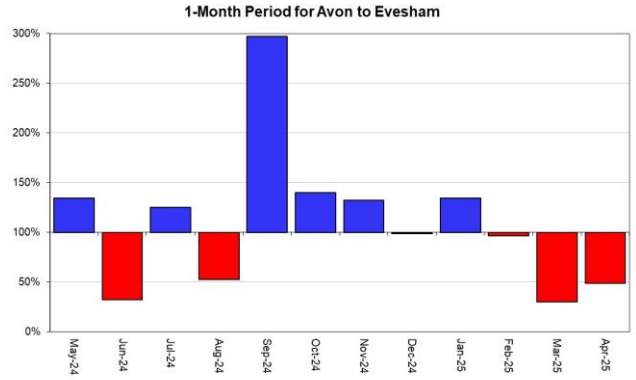
Figure 2.2: Monthly rainfall totals for the past 12 months as a percentage of the 1961 to 1990 long term average for hydrological areas across the Midlands region.

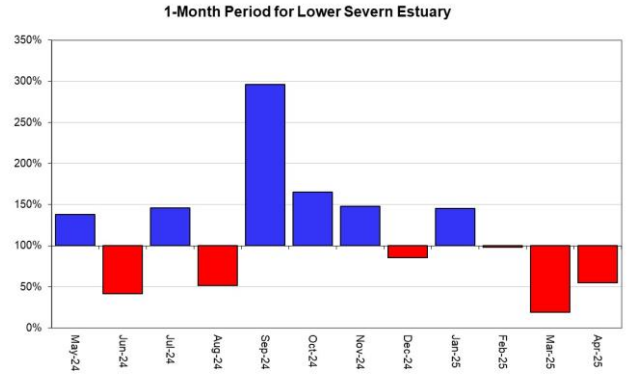


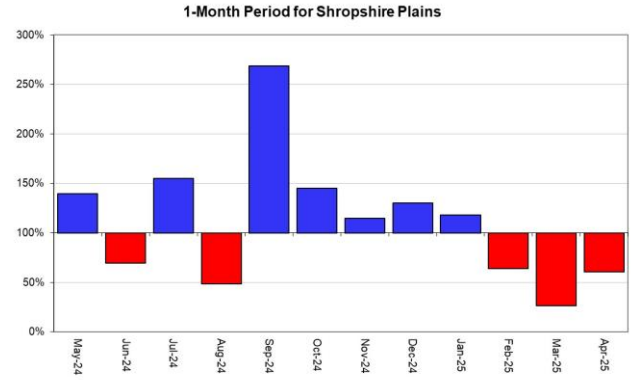

1-Month Period for Upper Trent
300%
250%
200%
150%
100%
50%
0%
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25

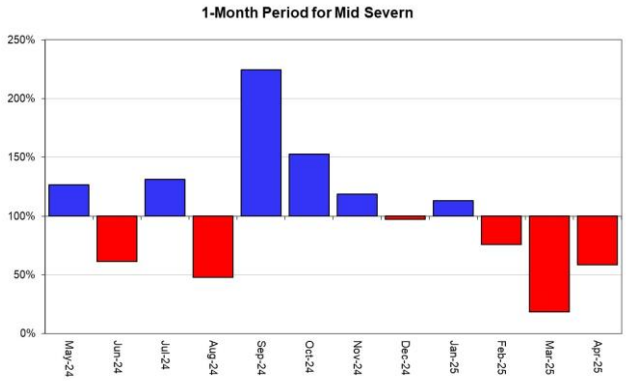

1-Month Period for Tame
300%
250%
200%
150%
100%
50%
0%
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25

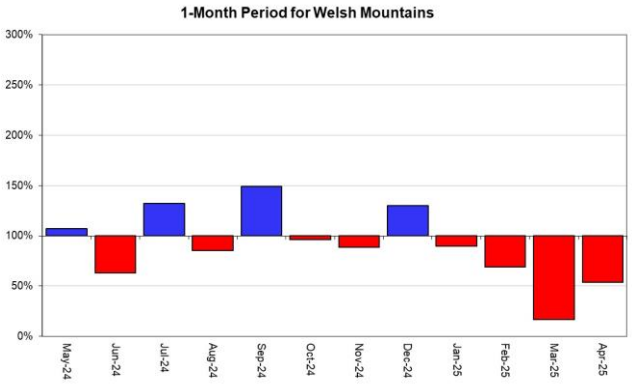

1-Month Period for Dove
250%
200%
150%
100%
50%
0%
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25

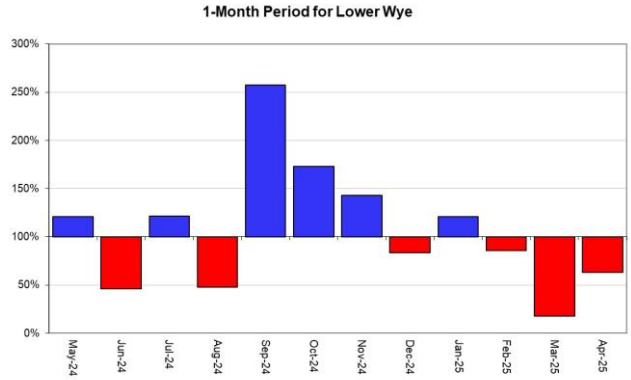

1-Month Period for Avon to Evesham
300%
250%
200%
150%
100%
50%
0%
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25


1-Month Period for Lower Severn Estuary
350%
300%
250%
200%
150%
100%
50%
0%
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25


1-Month Period for Shropshire Plains
300%
250%
200%
150%
100%
50%
0%
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25





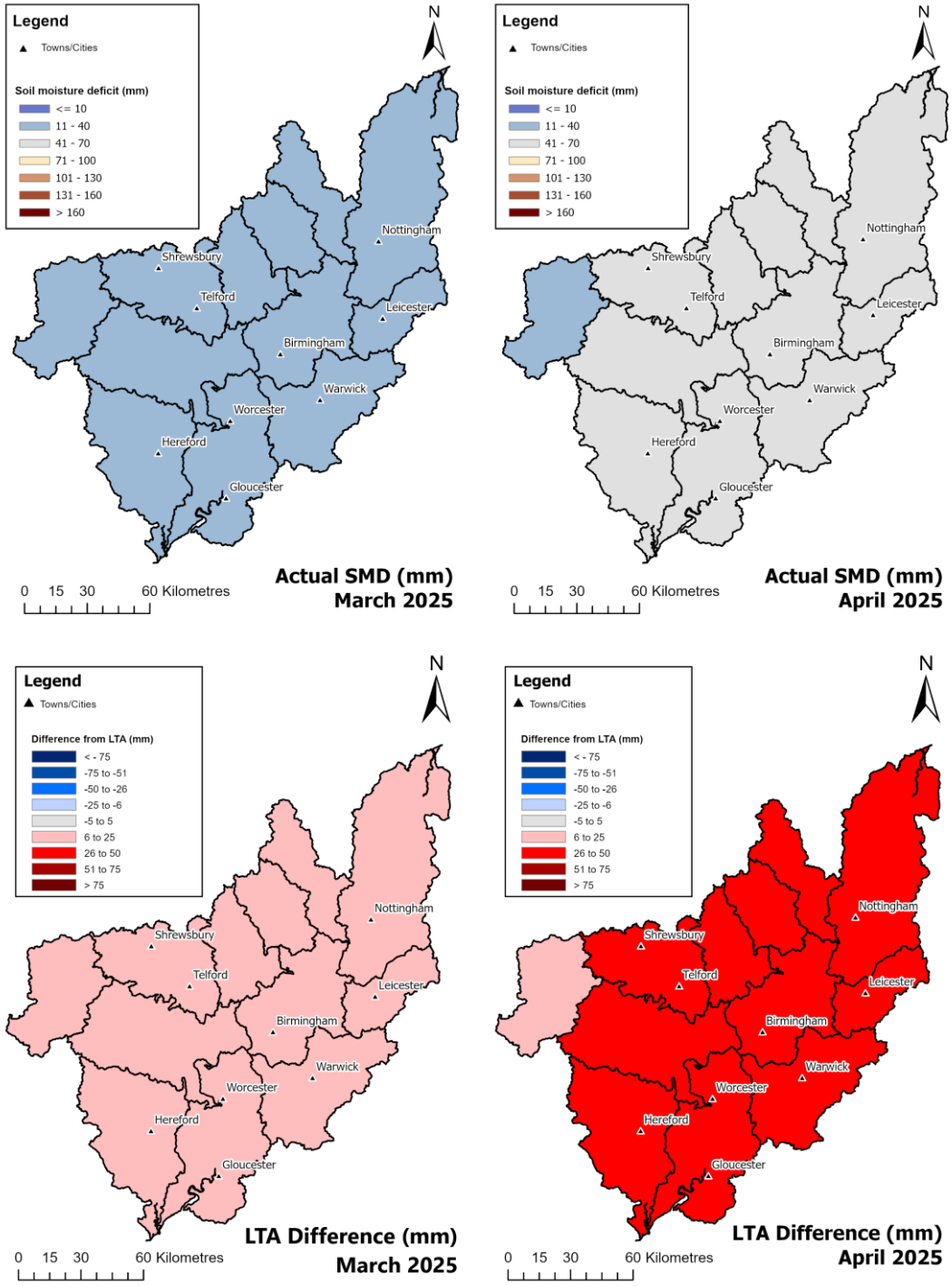


Rainfall data for Oct 2023 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to Oct 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges (Source: Met Office. Crown copyright, 2025).

3 Soil moisture deficit

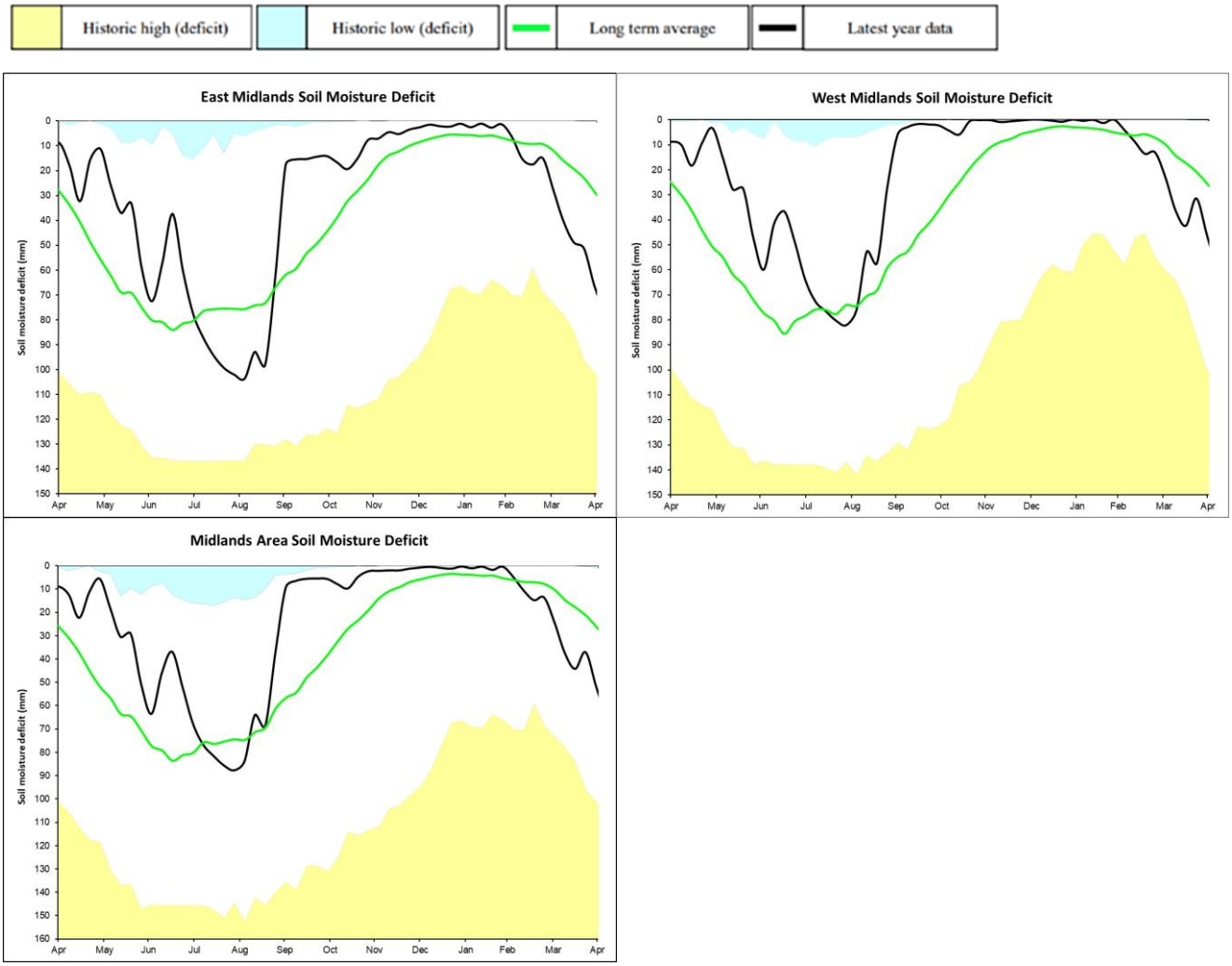
3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficits for weeks ending 30 April 2025. Shows the difference (mm) of the actual soil moisture deficit from the 1961 to 1990 long term average soil moisture deficits. MORECS data for real land use.



3.2 Soil moisture deficit charts

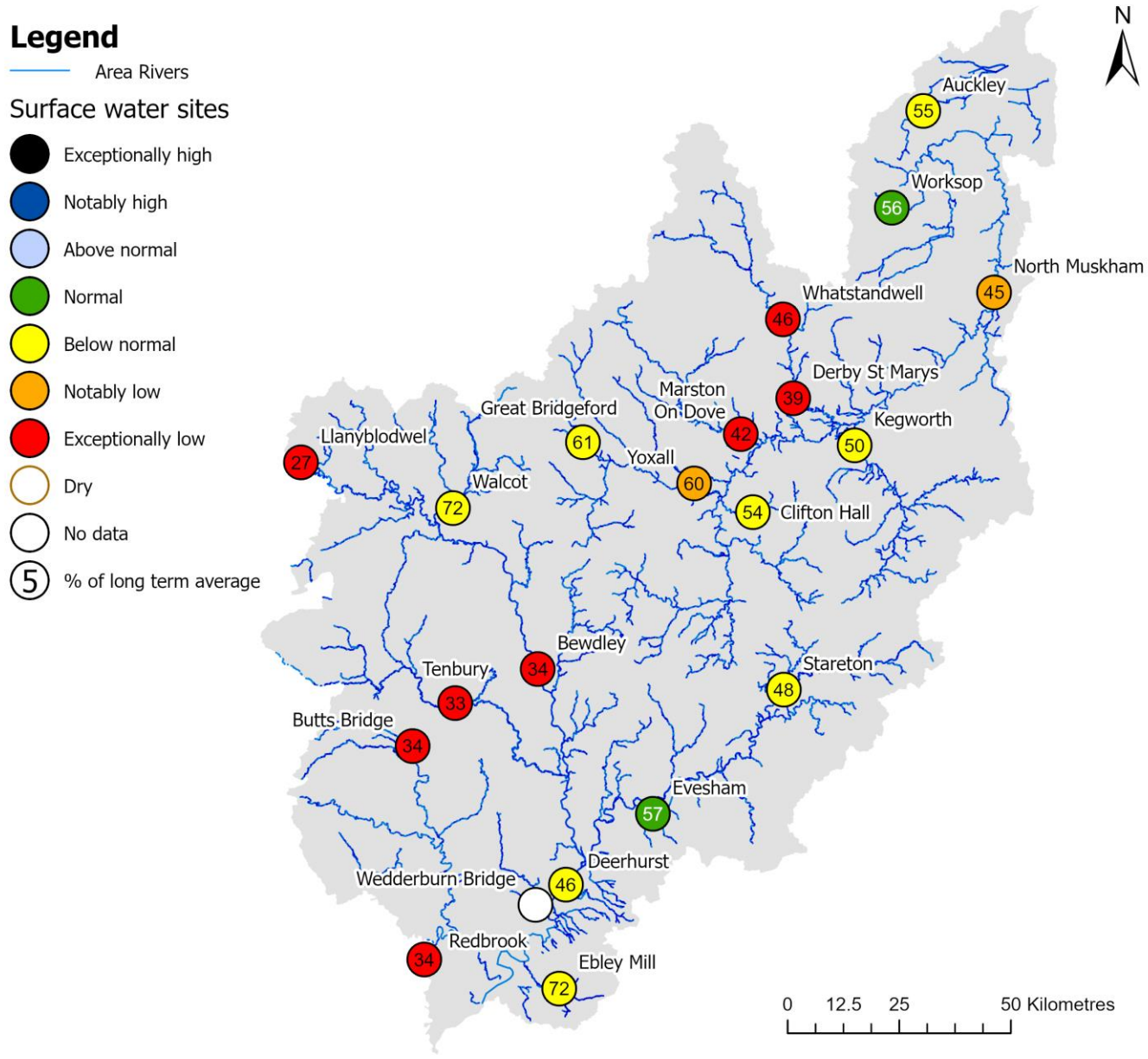
Figure 3.2: Latest soil moisture deficit charts for selected areas across the Midlands.



4 River flows

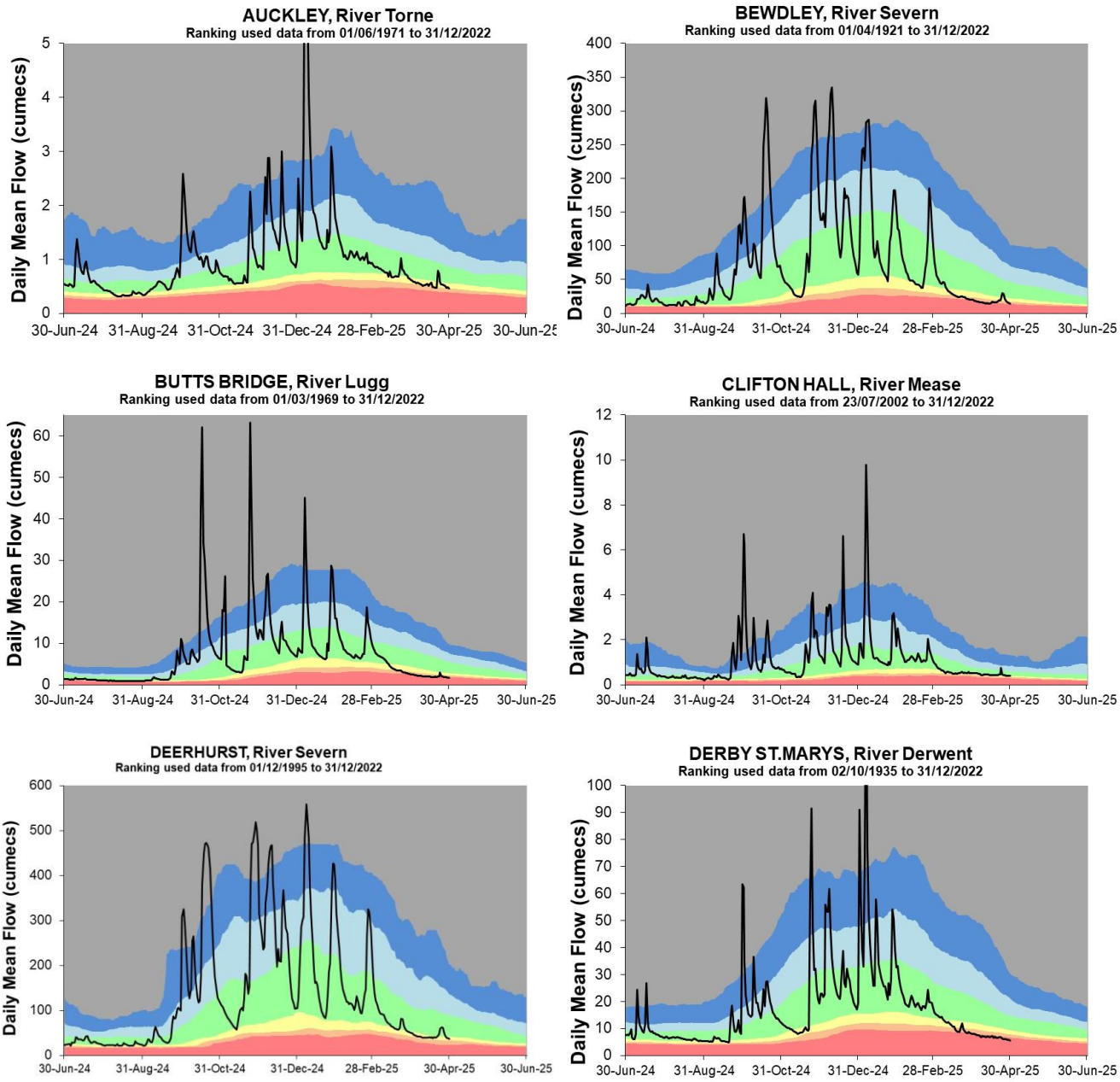
4.1 River flows map

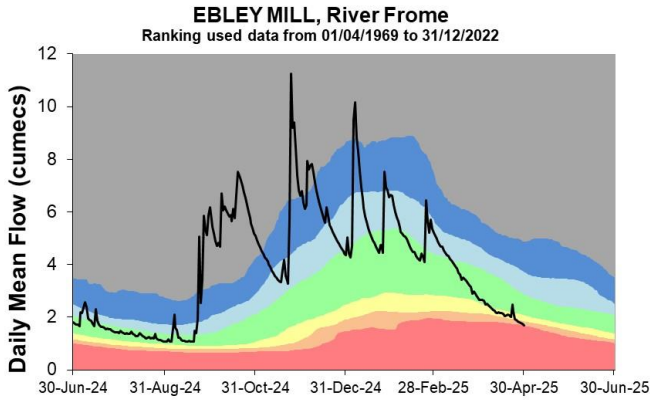
Figure 4.1: Monthly mean river flow for indicator sites for [April 2025], expressed as a percentage of the respective long term average and classed relative to an analysis of historic April monthly means. Table available in the appendices with detailed information.

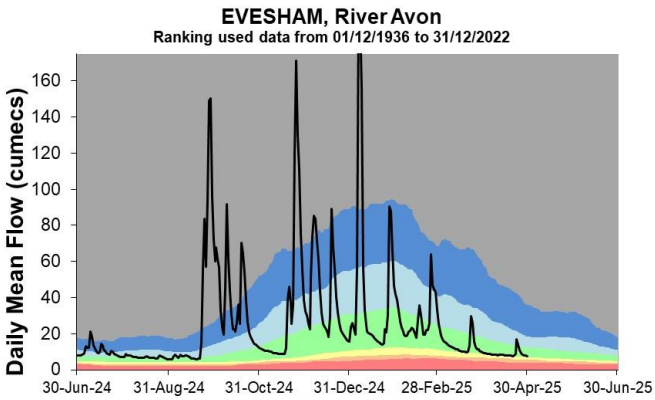


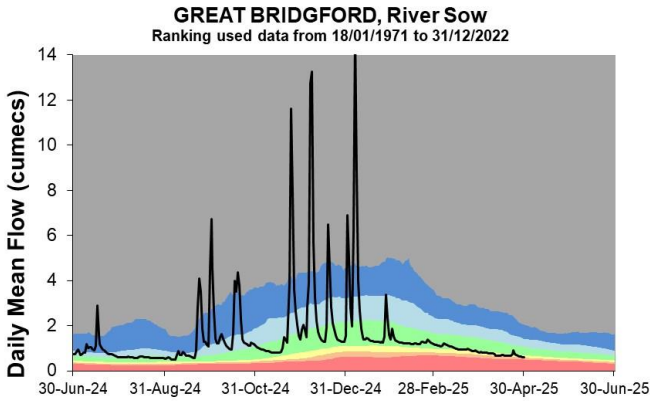
4.2 River flow charts

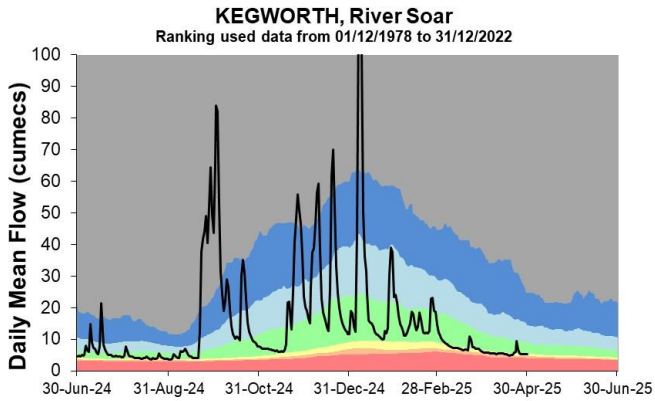
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

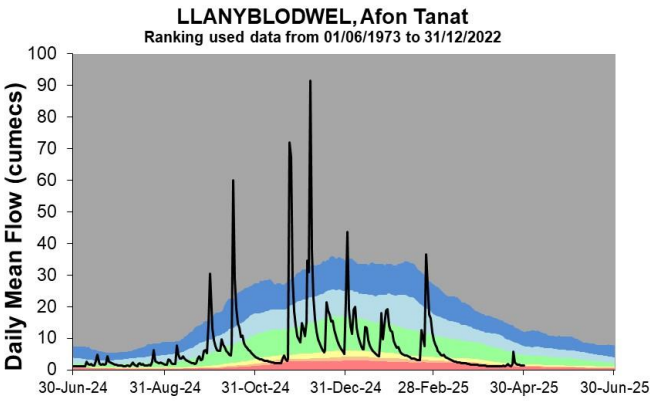


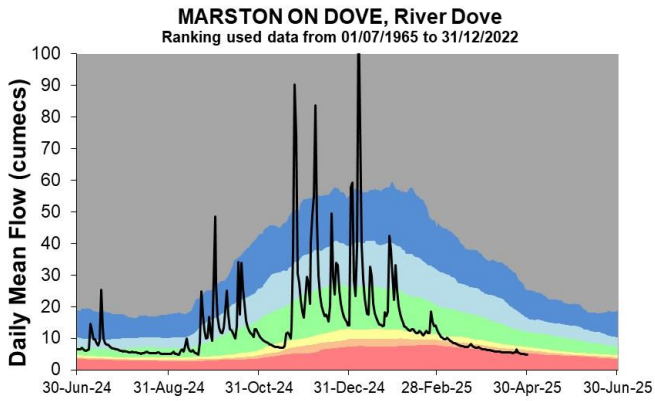

EBLEY MILL, River Frome
Ranking used data from 01/04/1969 to 31/12/2022
Daily Mean Flow (cumecs)
0
2
4
6
8
10
12
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

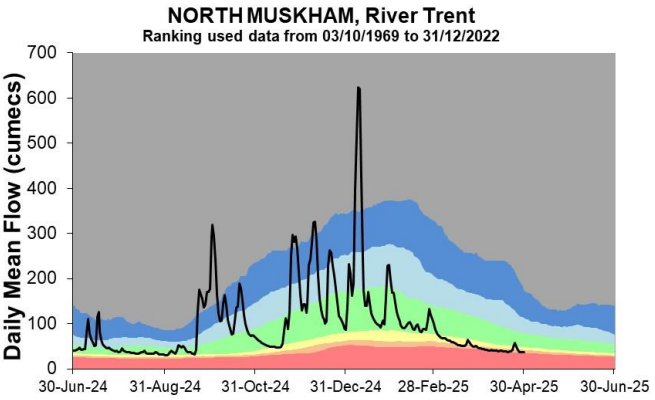

EVESHAM, River Avon
Ranking used data from 01/12/1936 to 31/12/2022
Daily Mean Flow (cumecs)
0
20
40
60
80
100
120
140
160
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

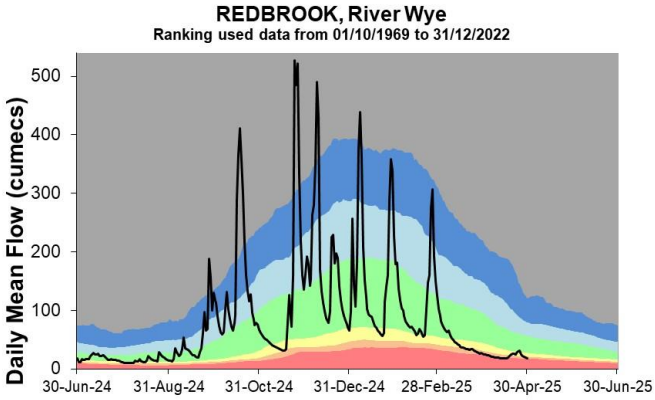

GREAT BRIDGFORD, River Sow
Ranking used data from 18/01/1971 to 31/12/2022
Daily Mean Flow (cumecs)
0
2
4
6
8
10
12
14
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

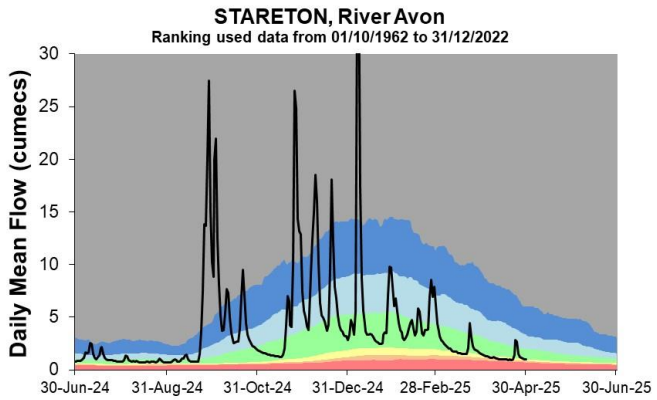

KEGWORTH, River Soar
Ranking used data from 01/12/1978 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
60
70
80
90
100
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

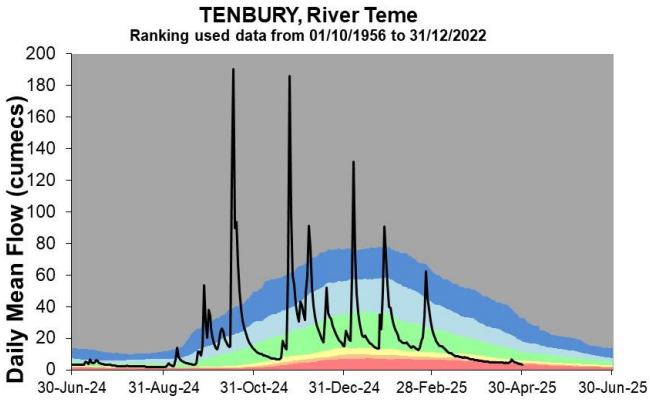

LLANYBLODWEL, Afon Tanat
Ranking used data from 01/06/1973 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
60
70
80
90
100
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

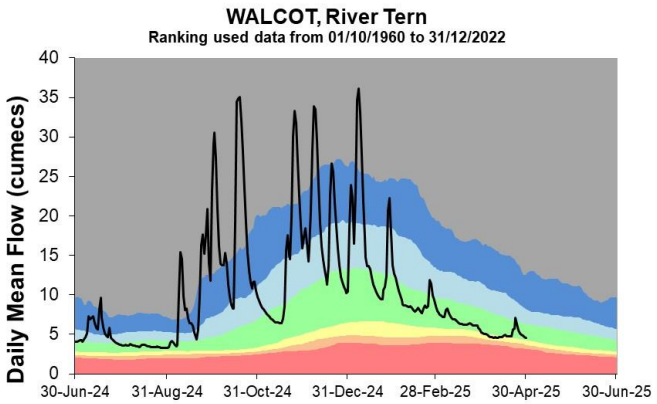

MARSTON ON DOVE, River Dove
Ranking used data from 01/07/1965 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
60
70
80
90
100
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

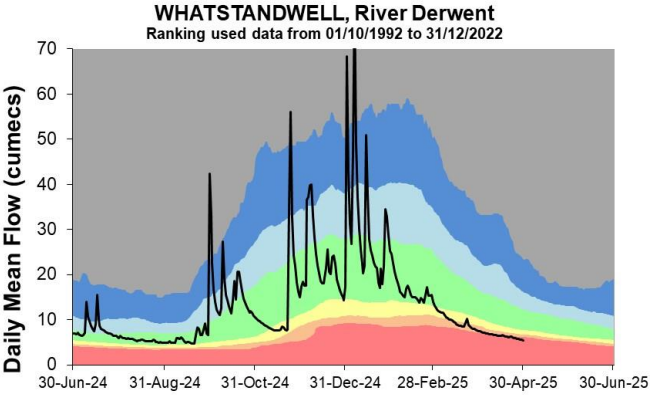

NORTH MUSKHAM, River Trent
Ranking used data from 03/10/1969 to 31/12/2022
Daily Mean Flow (cumecs)
0
100
200
300
400
500
600
700
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

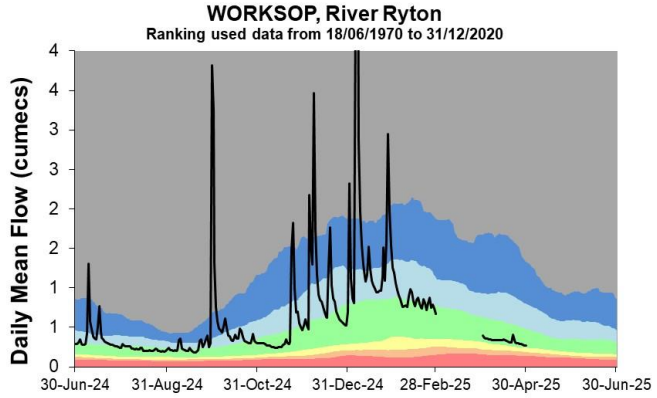

REDBROOK, River Wye
Ranking used data from 01/10/1969 to 31/12/2022
Daily Mean Flow (cumecs)
0
100
200
300
400
500
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

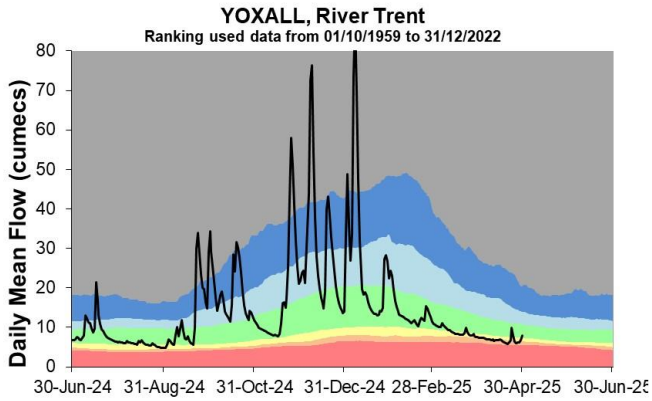

STARETON, River Avon
Ranking used data from 01/10/1962 to 31/12/2022
Daily Mean Flow (cumecs)
0
5
10
15
20
25
30
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25


TENBURY, River Teme
Ranking used data from 01/10/1956 to 31/12/2022
Daily Mean Flow (cumecs)
0
20
40
60
80
100
120
140
160
180
200
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25


WALCOT, River Tern
Ranking used data from 01/10/1960 to 31/12/2022
Daily Mean Flow (cumecs)
0
5
10
15
20
25
30
35
40
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25


WHATSTANDWELL, River Derwent
Ranking used data from 01/10/1992 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
60
70
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

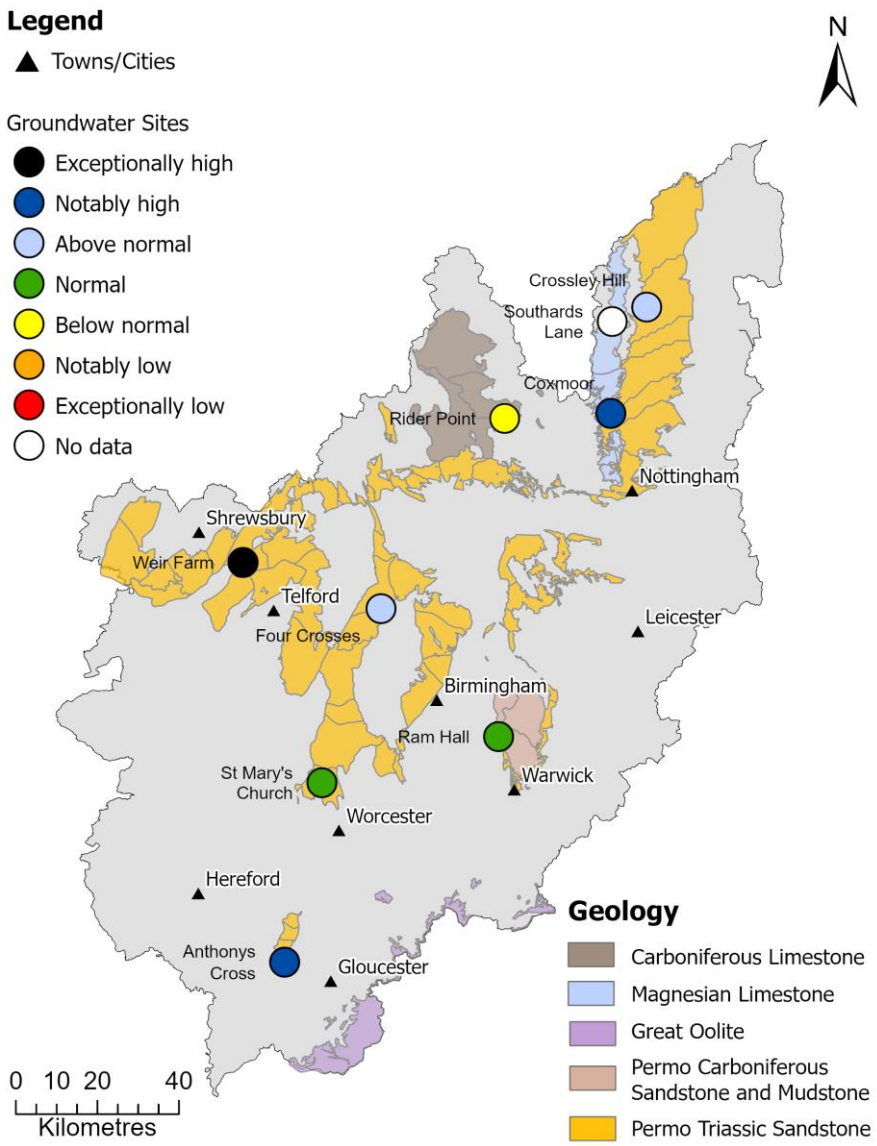

WORKSOP, River Ryton
Ranking used data from 18/06/1970 to 31/12/2020
Daily Mean Flow (cumecs)
0
1
1
2
2
3
3
4
4
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25


YOXALL, River Trent
Ranking used data from 01/10/1959 to 31/12/2022
Daily Mean Flow (cumecs)
0
10
20
30
40
50
60
70
80
30-Jun-24
31-Aug-24
31-Oct-24
31-Dec-24
28-Feb-25
30-Apr-25
30-Jun-25

5 Groundwater levels

5.1 Groundwater levels map

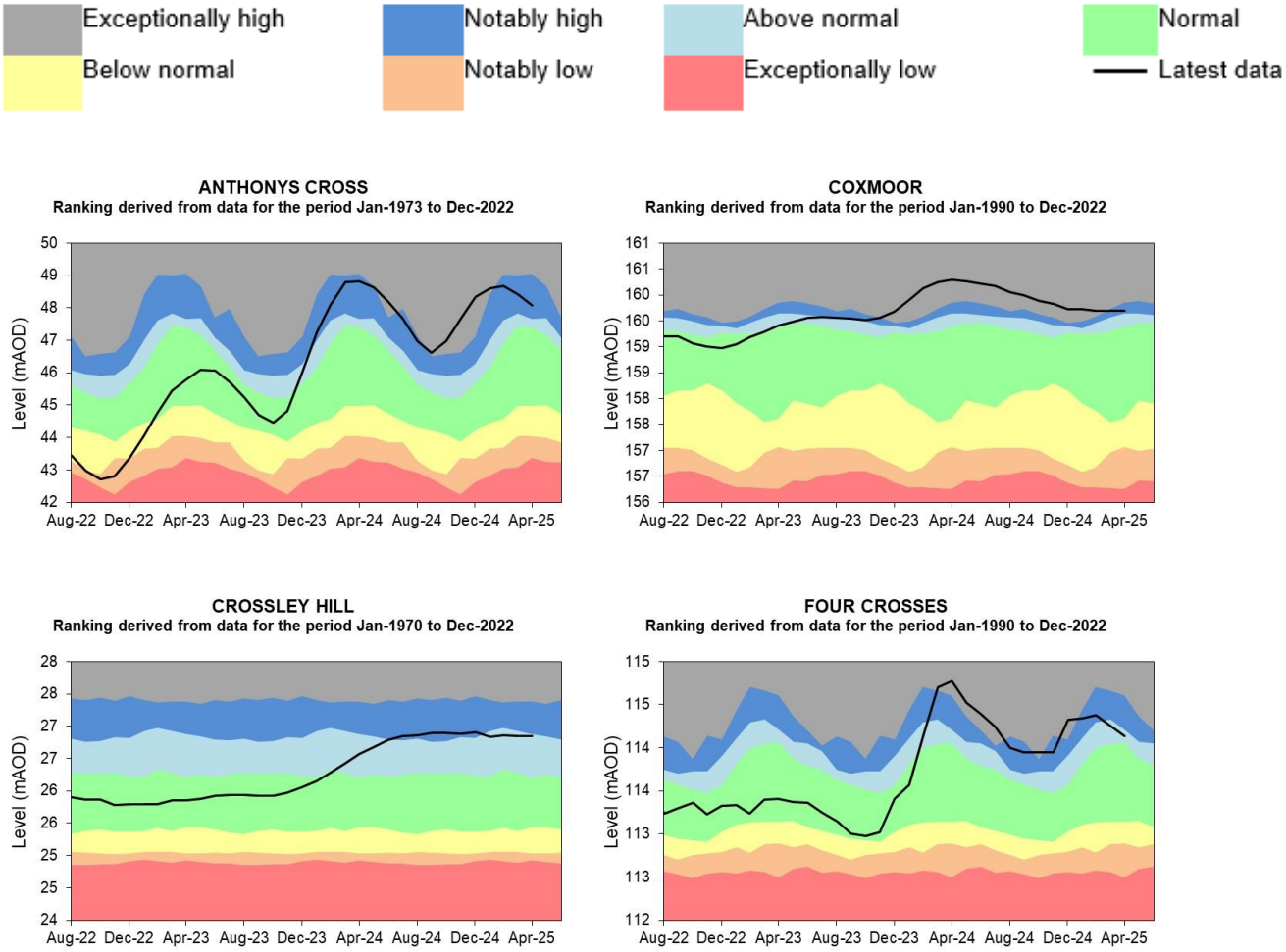
Figure 5.1: Groundwater levels for indicator sites at the end of April 2025, classed relative to an analysis of respective historic April levels. Table available in the appendices with detailed information, including aquifer type.

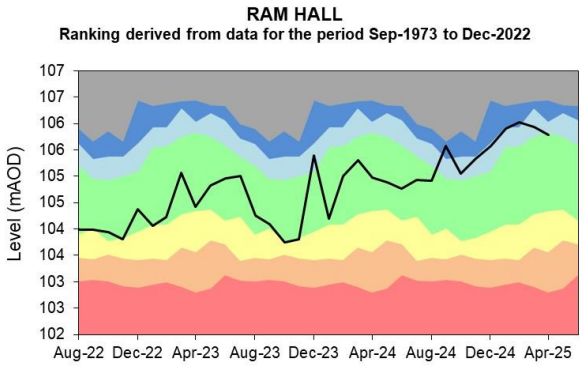


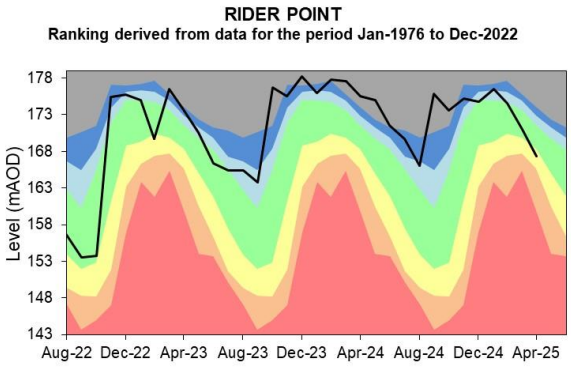
(Source: Environment Agency). Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. Crown copyright. All rights reserved. Environment Agency, 100024198, 2025.

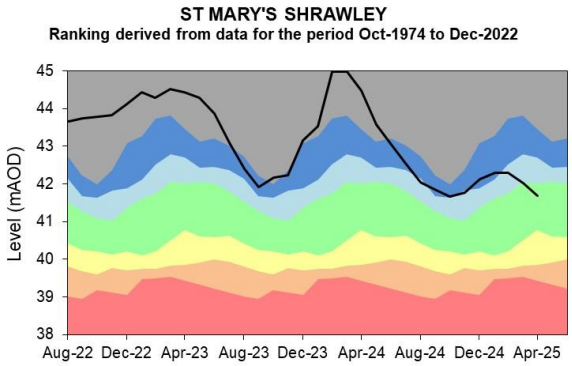
5.2 Groundwater level charts

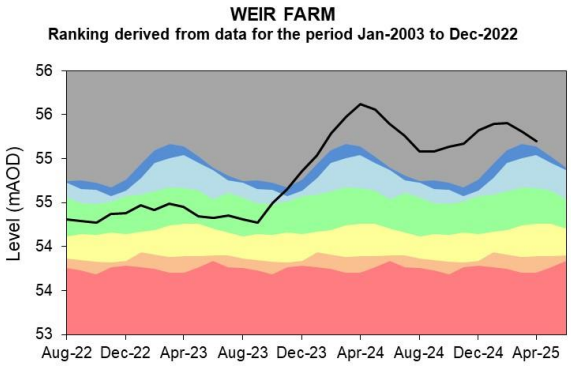
Figure 5.2: End of month groundwater levels at index groundwater level sites for major aquifers. 34 months compared to an analysis of historic end of month levels.







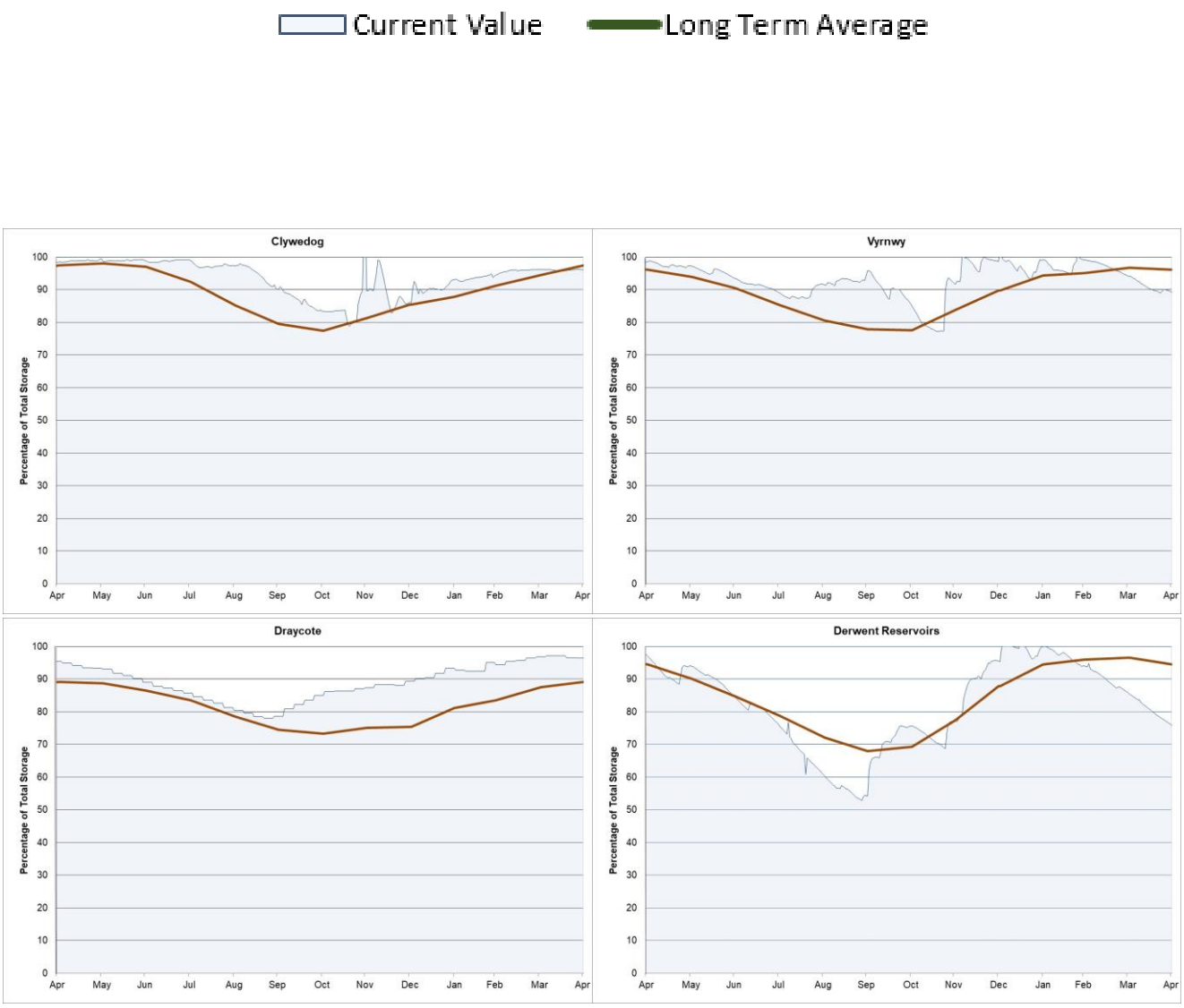


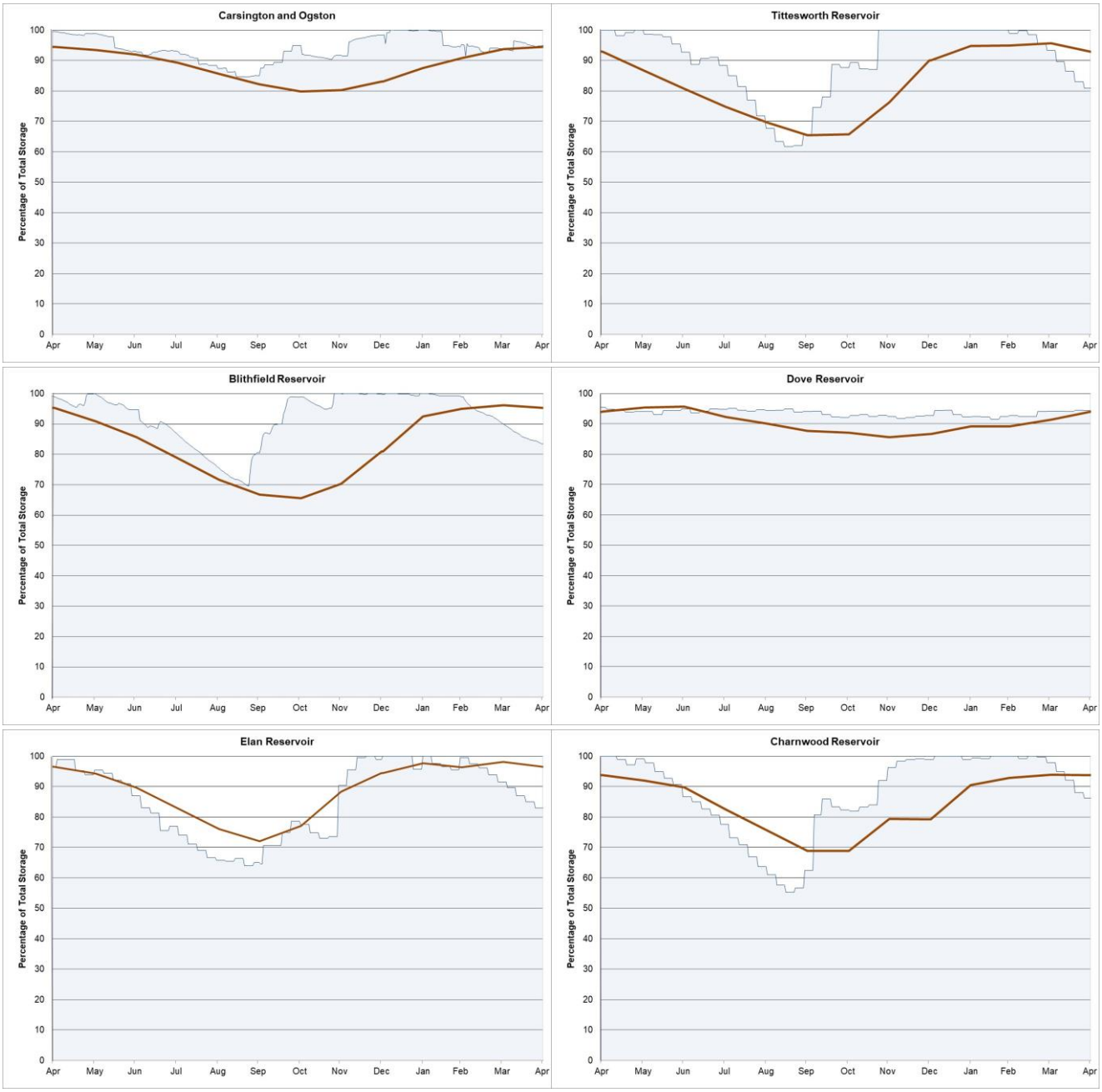


Source: Environment Agency, 2025.

6 Reservoir stocks

Figure 6.1: End of month regional reservoir stocks compared to long term average stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length. Please see Section 7.4 for a map detailing the locality of the Midlands reservoirs reported on.





(Source: water companies).

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).

Field capacity

Soil at field capacity is holding all of the water which it can hold against gravity.

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).

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

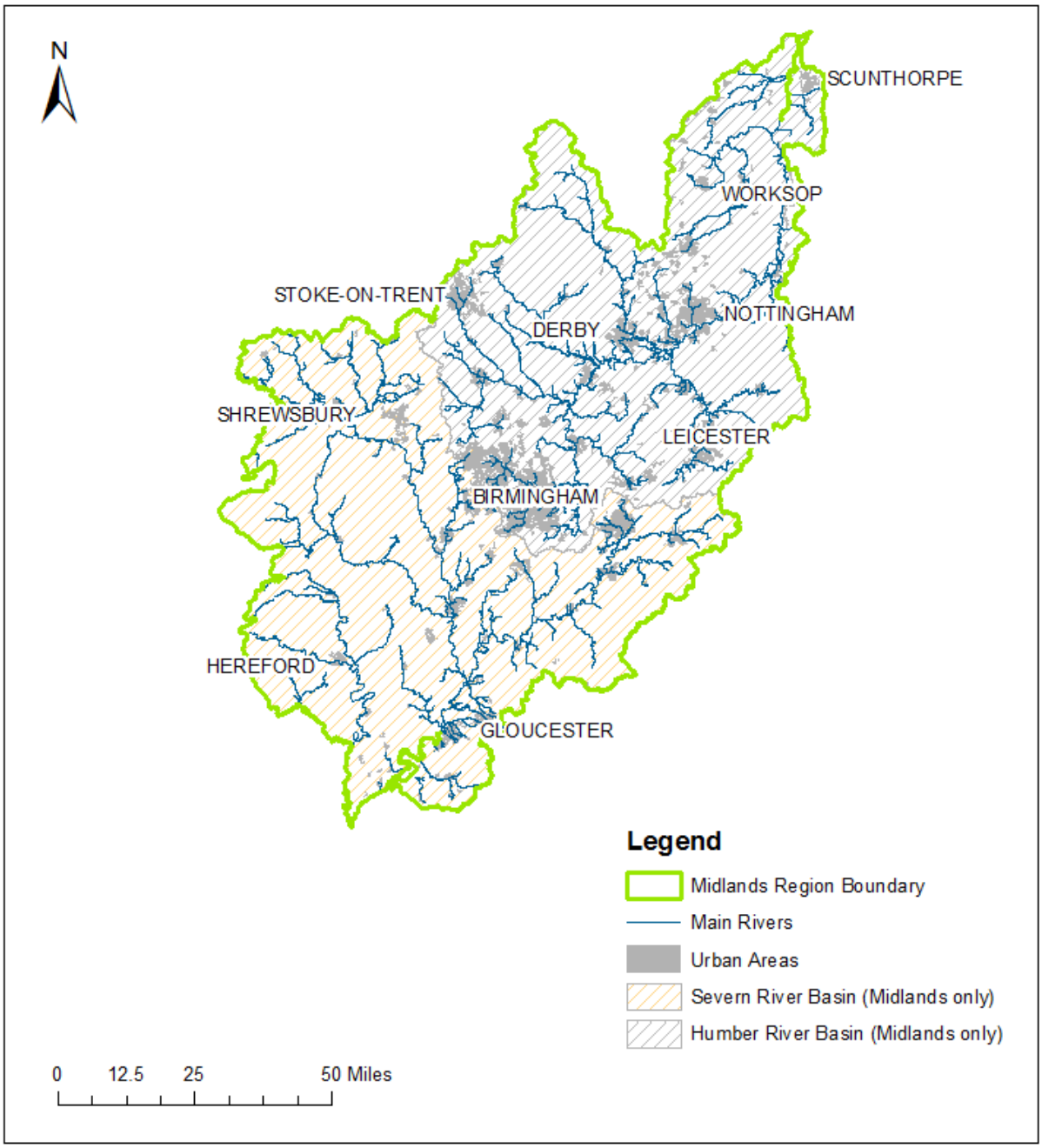
Value likely to fall within this band 8% of the time.

Exceptionally low

Value likely to fall within this band 5% of the time.

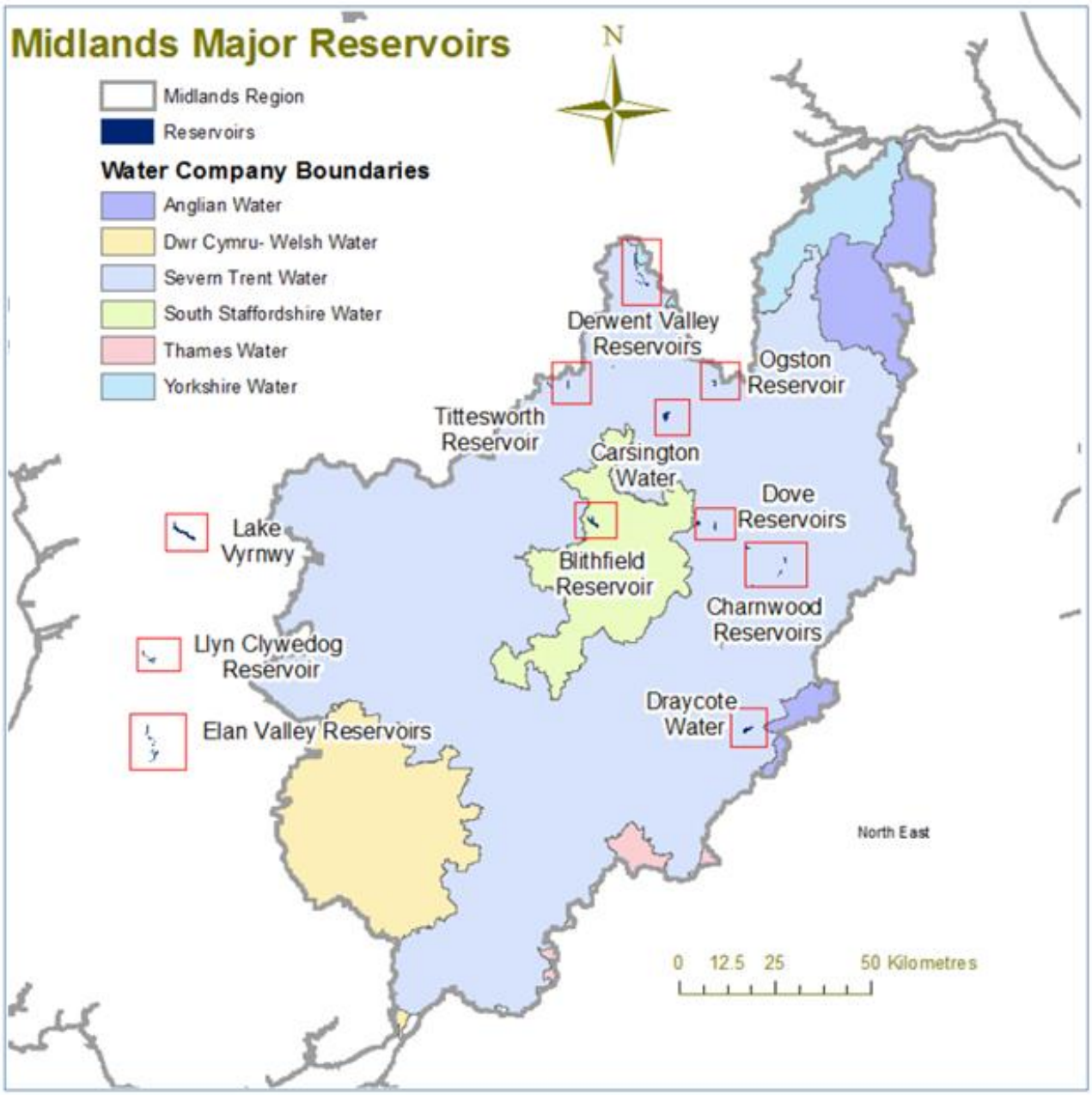
7.3 Midlands regional coverage

Figure 7.1: The Midlands regional boundary and the hydrological boundaries of the River Severn and River Trent.



7.4 Midlands major reservoirs

Figure 7.2: Location of major reservoirs in the Midlands.



8 Appendices

8.1 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
Avon To Evesham	49	Below Normal	Notably low	Normal	Normal
Derwent (midlands)	23	Notably Low	Exceptionally low	Below normal	Normal
Dove	38	Notably Low	Exceptionally low	Below normal	Normal
Lower Severn Estuary	55	Below Normal	Notably low	Normal	Above normal
Lower Trent	22	Notably Low	Exceptionally low	Normal	Normal
Lower Wye	63	Normal	Notably low	Normal	Normal
Mid Severn	59	Below Normal	Exceptionally low	Normal	Normal
Shropshire Plains	61	Below Normal	Exceptionally low	Normal	Above normal
Soar	33	Notably Low	Exceptionally low	Normal	Normal

Tame	45	Below Normal	Exceptionally low	Below normal	Normal
Upper Trent	52	Below Normal	Exceptionally low	Below normal	Normal
Welsh Mountains	54	Below Normal	Exceptionally low	Below normal	Below normal

8.2 River flows table

Site name	River	Catchment	Apr 2025 band	Mar 2025 band
Auckley	Torne	Torne	Below normal	Below normal
Bewdley	Severn	Severn Lower Mid	Exceptionally low	Notably low
Butts Bridge	Lugg	Lugg	Exceptionally low	Below normal
Clifton Hall	River Mease	Mease	Below normal	Below normal
Deerhurst	Severn	Severn Lower	Below normal	Below normal
Derby St. Marys	Derwent	Derwent Der to Markeaton con	Exceptionally low	Notably low
Ebley Mill	Frome (Gloucs)	Frome Gloucs	Below normal	Normal
Evesham	Avon (Midlands)	Avon Warwks Lower	Normal	Normal
Great Bridgford	Sow	Sow Upper	Below normal	Below normal
Kegworth	Soar	Soar to Kingston Brook confl	Below normal	Notably low
Llanyblodwel	Tanat	Severn Upper River Tanat	Exceptionally low	Notably low
Marston On Dove	Dove (Midlands)	Dove Derb to Hilton Br confl	Exceptionally low	Exceptionally low

North Muskham	Trent	Trent to Cromwell	Notably low	Notably low
Stareton	Avon (Midlands)	Avon Warwks Upper	Below normal	Below normal
Tenbury	Teme	Teme	Exceptionally low	Below normal
Walcot	Tern	Tern	Below normal	Normal
Wedderburn Bridge	Leadon	Leadon	No data	No data
Whatstandwell	Derwent	Derwent Derb to Amber conf	Exceptionally low	Notably low
Worksop	Ryton	Ryton Upper to Oldcoates Dyke	Normal	No data
Yoxall	Trent	Trent to Tame Mease confl	Notably low	Below normal
Redbrook	Wye (Herefordshire)	Wye H and W d s Lugg	Exceptionally low	Notably low

8.3 Groundwater table

Site name	Aquifer	End of Apr 2025 band	End of Mar 2025 band
Anthony's Cross	Severn Vale Permo Triassic Sandstone	Notably high	Notably high
Coxmoor	Permo Triassic Sandstone	Notably high	Notably high
Crossley Hill	Permo Triassic Sandstone	Above normal	Above normal
Four Crosses	Grimsby Ancholme Louth Limestone	Above normal	Above normal
Ram Hall, Meriden	Grimsby Ancholme Louth Limestone	Normal	Above normal
Rider Point Via Gellia	Carboniferous Limestone	Below normal	Normal
Southards Lane, Bolsover	Magnesian Limestone	No data	Normal
St Mary's Church, Shrawley	East Shropshire Permo-triassic Sandstone	Normal	Normal
Weir Farm	Bridgnorth Sandstone Formation	Exceptionally high	Exceptionally high