# Monthly water situation report: Devon and Cornwall Area

## 1 Summary - April 2025

Devon and Cornwall received 169% of the April long term average (LTA) rainfall, which was notably high for the time of year. Soil moisture deficit decreased overall during April, ending the month lower (wetter) than the LTA for the time of year. Monthly mean river flows were normal to notably high for the time of year across the area. Groundwater levels ended the month between normal to exceptionally high for the time of year. Total reservoir storage across Devon and Cornwall ended the month at 92%, with Wimbleball, Colliford and Roadford reservoirs at 93%, 86% and 96% respectively at the end of April.

### 1.1 Rainfall

Devon and Cornwall received 118mm of rain during April (169% of the April LTA), which is classed as notably high for the time of year. The first half of April was mostly dry, following an exceptionally dry March, with the most significant periods of rain taking place sporadically on 14 to 15 April, 17 to 18 April, and on 22 and 25 April. April was the fifth out of 7 months since the start of the water year (October) to have experienced above average rainfall.

In April, rainfall was normal to exceptionally high across Devon and Cornwall, with higher rainfall in Cornwall and west Devon and lower rainfall in east and north Devon. Cumulative rainfall was below normal to above normal in the last 3 months, and was normal across all hydrological areas in the last 6 months. In the last 12 months cumulative rainfall was normal to above normal for the time of year.

### 1.2 Soil moisture deficit

SMD increased in the first part of April reaching greater than the historic maximum deficit for the time of year, before decreasing significantly in the middle part of the month in response to the periods of heavy rainfall. The average deficit for most of Devon and Cornwall was between 11mm and 40mm, apart from west Cornwall where the average deficit was less than 10mm.

The SMD at the end of April was within 5 mm of the LTA across Devon and Cornwall for the time of year, except for east Devon where the SMD was 6mm to 25mm above (drier than) the LTA.

The SMD at the end of April was slightly lower (wetter) than the LTA for the time of year, but higher (drier) than the SMD at the end of April 2024.

## 1.3 River flows

April monthly mean river flows were normal for the time of year at most sites across the area, except for Bodmin Dunmere on the River Camel and Gwills on the River Gannel, which both recorded above normal monthly mean flows, and Truro on the River Kenwyn which recorded notably high monthly mean flows.

Following the initial period of dry weather in early April, daily mean flows increased at all sites in the middle of April in response to heavy rainfall, before falling again in the latter part of the month. On 30 April, all reporting sites in Devon recorded normal daily mean flows, whereas sites across Cornwall recorded normal to notably high daily mean flows.

Due to data accuracy concerns, Chudleigh Bridge on the River Teign has been excluded from the April report.

## 1.4 Groundwater levels

On 30 April, groundwater levels were classed as follows:

- Exceptionally high at Whitlands (monitoring the Upper Greensand)
- Notably high at Winnards Perch (monitoring the Staddon Formation)
- Above normal at Branscombe Lane (monitoring the Dawlish Sandstone) and Woodbury Common No2 (monitoring the Budleigh Salterton Pebble Beds)
- Normal at Bussels No7A (monitoring the Dawlish Sandstone), Coleford Production (monitoring the Permian Breccias and Sandstones), and Woodleys No1 (monitoring the Otterton Sandstone Formation).

All groundwater sites were in recession by the end of April, which is normal for the time of year.

## 1.5 Reservoir stocks

Total reservoir storage was 92% at the end of April, which is an overall decrease in storage of 2% since the end of March, despite the small increase in storage in response to rainfall in the second half of the month. This is only slightly higher than total storage at the same time in 2022 (the most recent drought year), which was 89%. At the end of April, storage at

Wimbleball (93%) was less than it was at the same time in 2022 (95%) and Roadford storage (96%) was similar to the same time in 2022 (95%).  Colliford ended April at 86%, compared to 76% in 2022.

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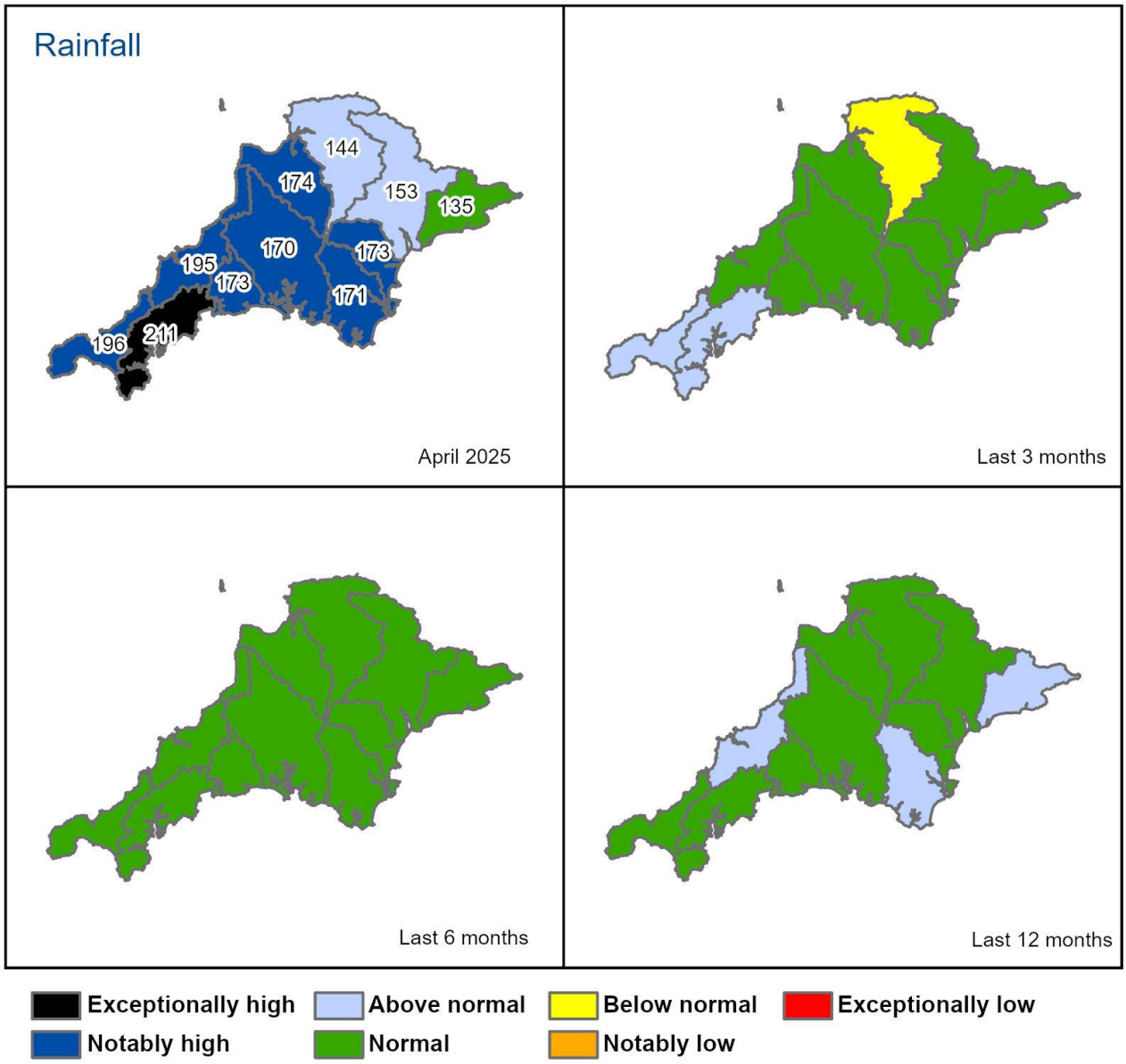
# 2 Rainfall

## 2.1 Rainfall map

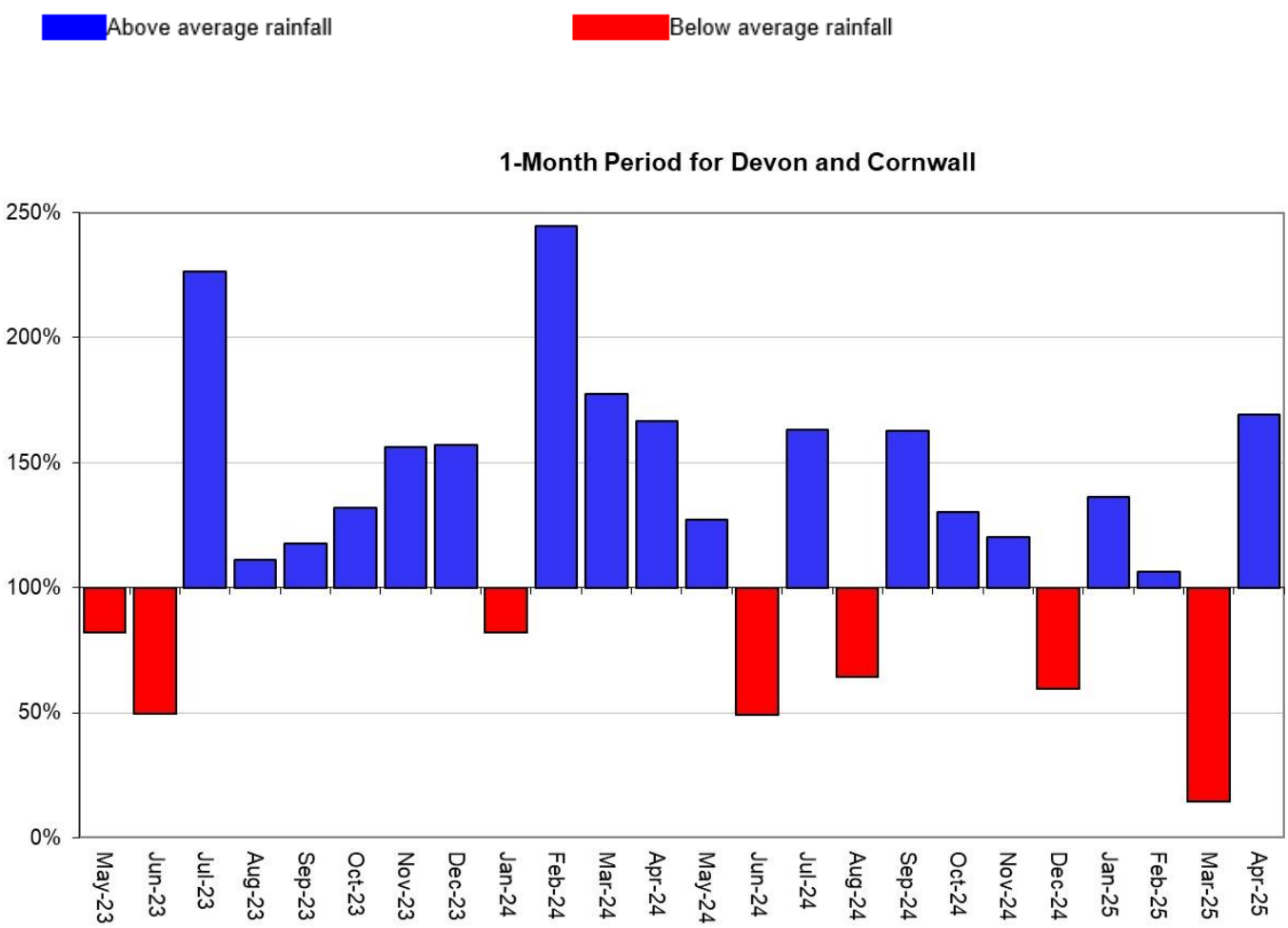
Figure 2.1: Total rainfall for hydrological areas for the current month (up to 30 April 2025), the last 3 months, the last 6 months, and the last 12 months, classed relative to an analysis of respective historic totals. Table available in the appendices with detailed information.




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 24 months as a percentage of the 1961 to 1990 long term average for Devon and Cornwall area.

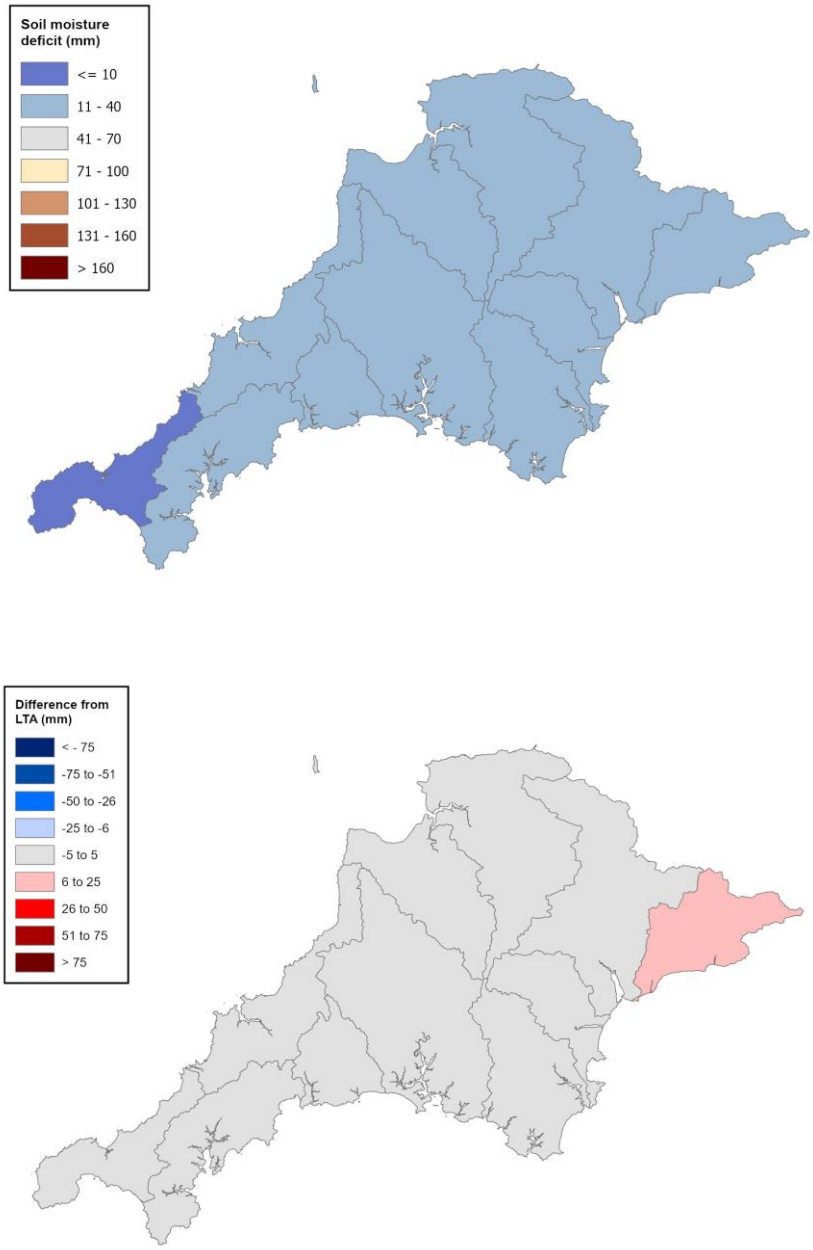



Rainfall data for 2025, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright, 100024198, 2025). Rainfall data prior to 2023, extracted from Met Office HadUK 1km gridded rainfall dataset derived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

# 3 Soil moisture deficit

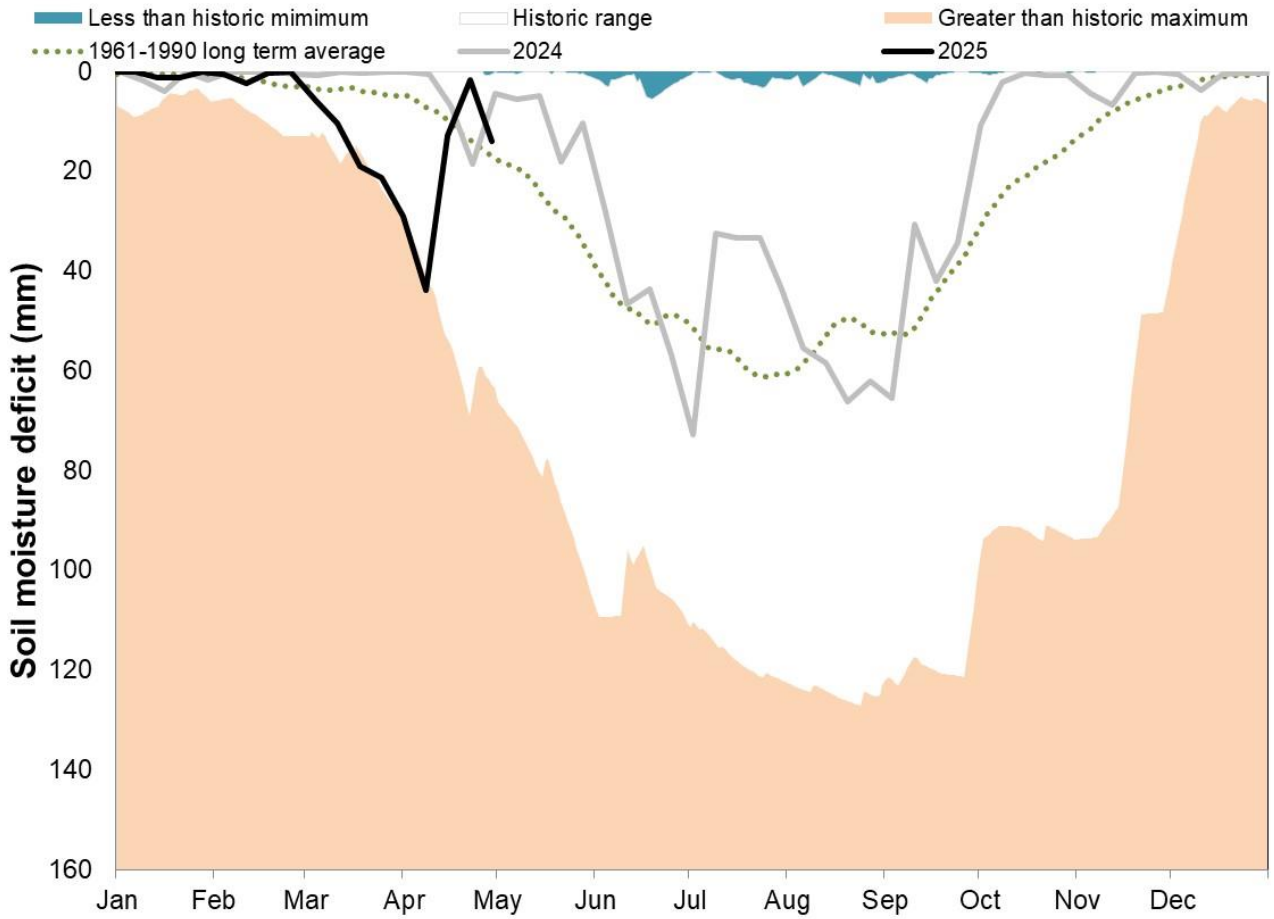
## 3.1 Soil moisture deficit map

Figure 3.1: Top map shows soil moisture deficit for week ending 30 April 2025. Bottom map shows the difference (mm) between the actual soil moisture deficit and the 1961 to 1990 long term average soil moisture deficits. MORECS data for real land use.



## 3.2 Soil moisture deficit charts

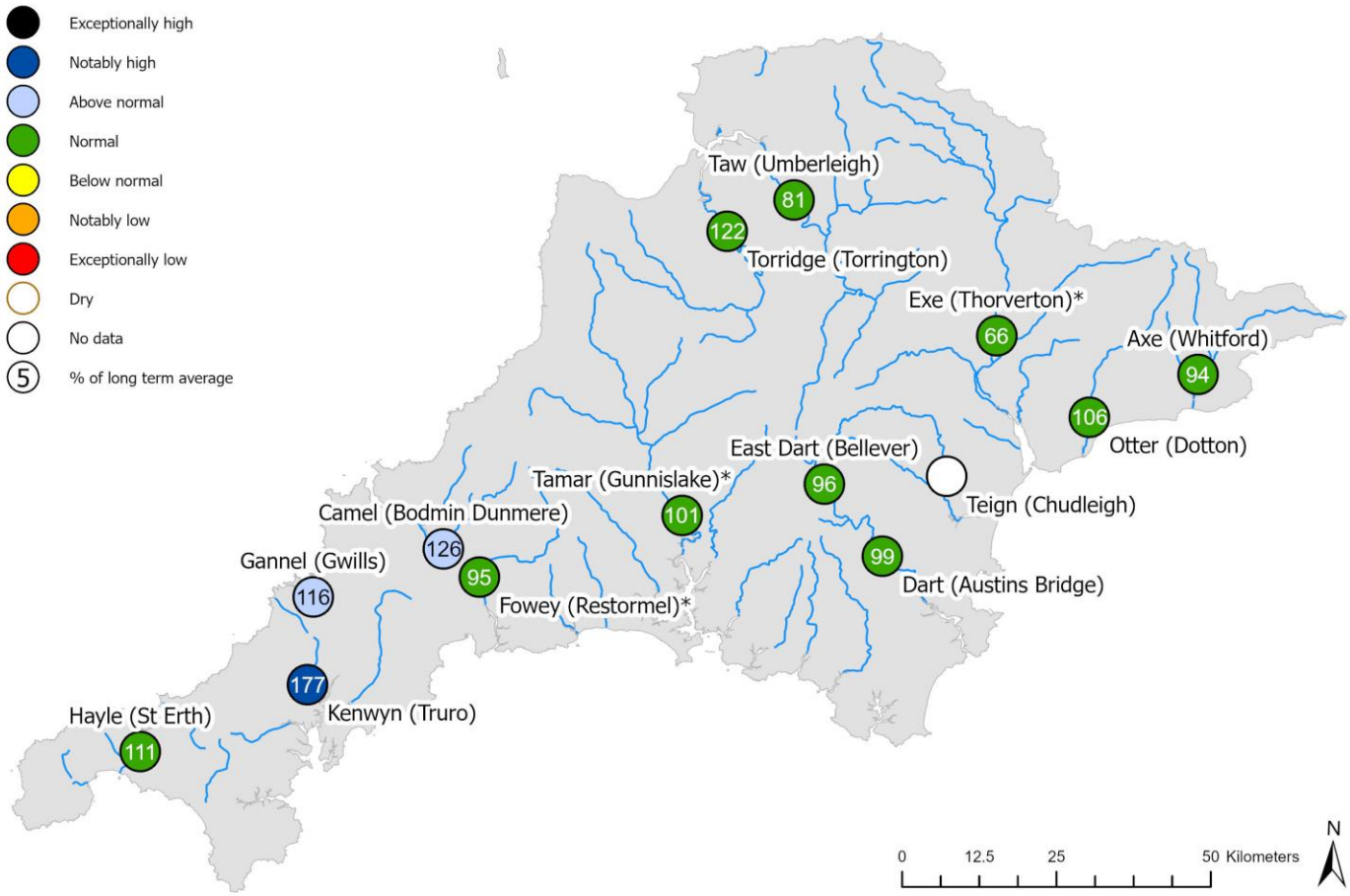
Figure 3.2: Latest soil moisture deficit compared to previous year, maximum, minimum, and 1961 to 1990 long term average. Weekly MORECS data for real land use.



# 4 River flows

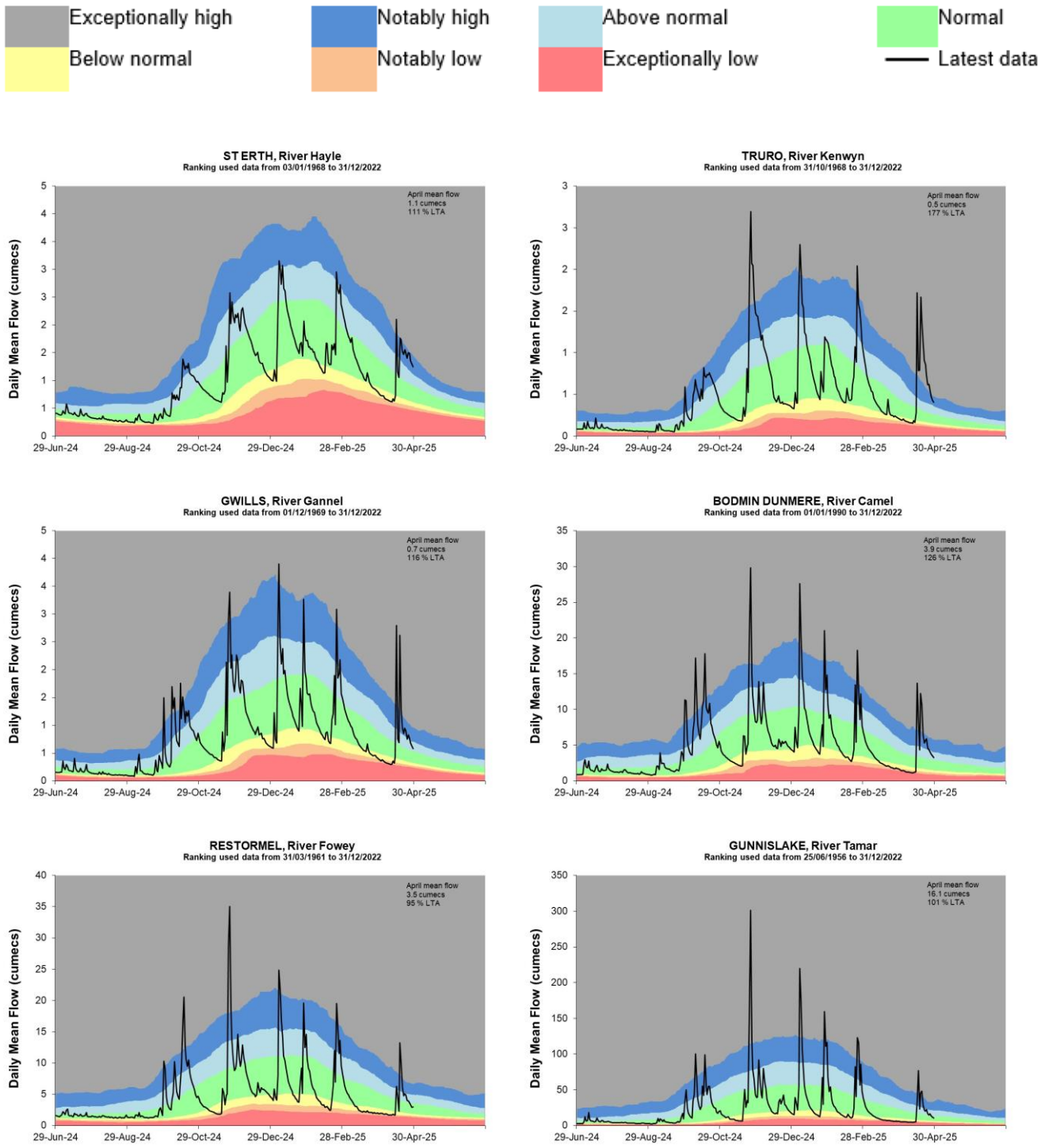
## 4.1 River flows map

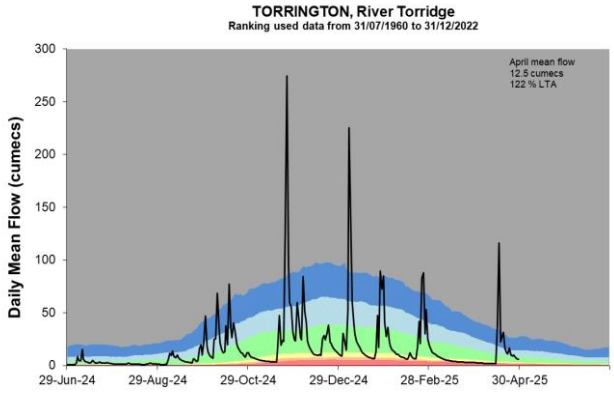
Figure 4.1: Monthly mean river flow for indicator sites for April 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic April monthly means. Table available in the appendices with detailed information.

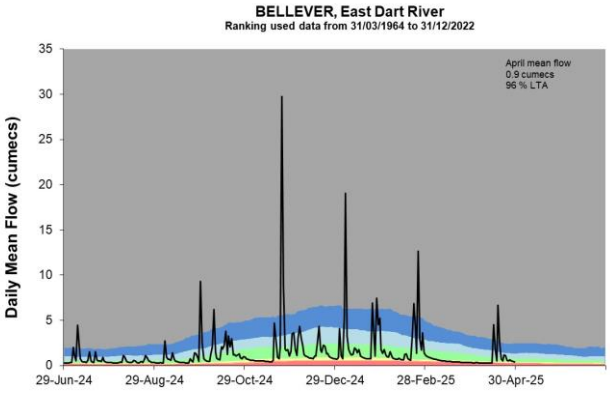


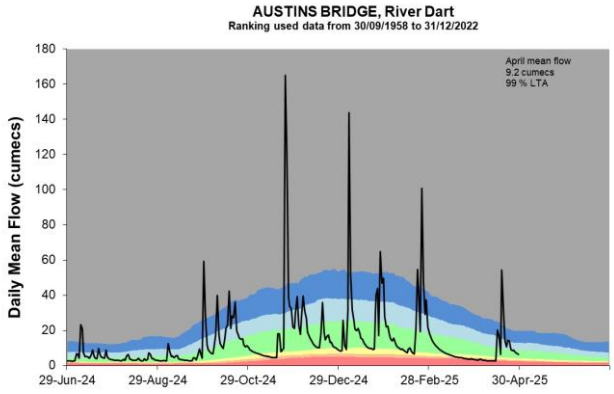
## 4.2 River flow charts

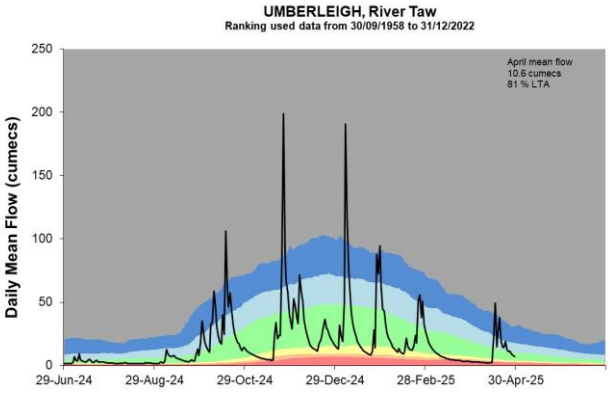
Figure 4.2: Daily mean river flow for indicator sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

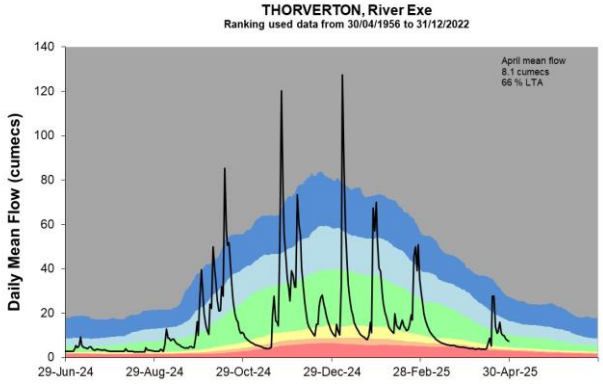


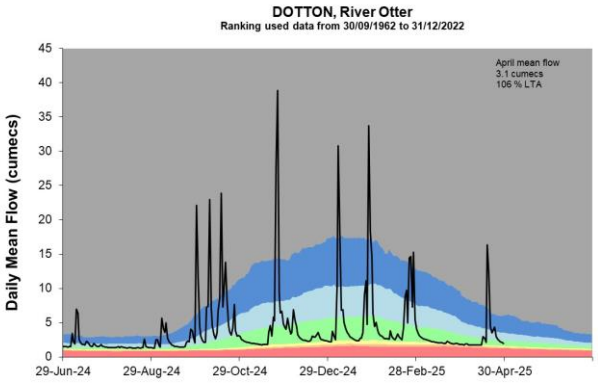


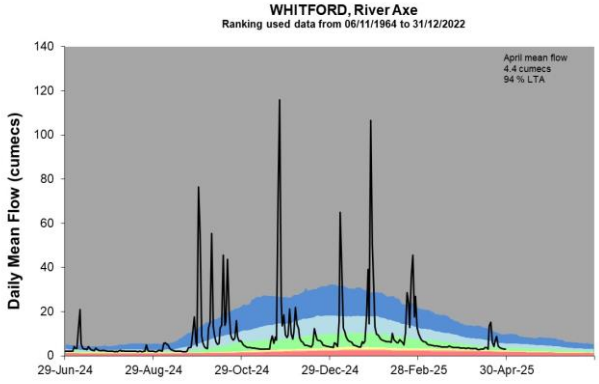



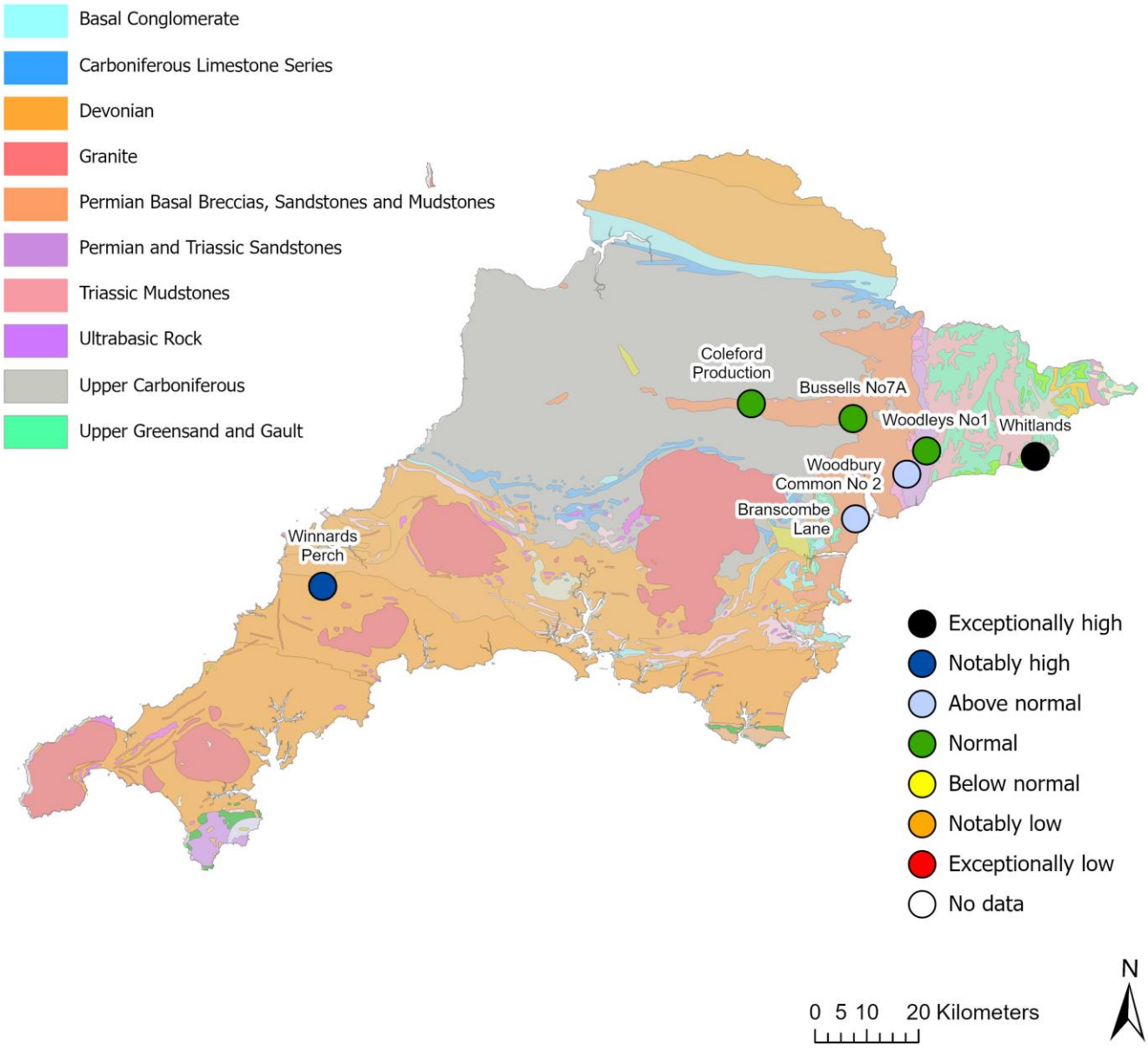




Source: Environment Agency.

# 5 Groundwater levels

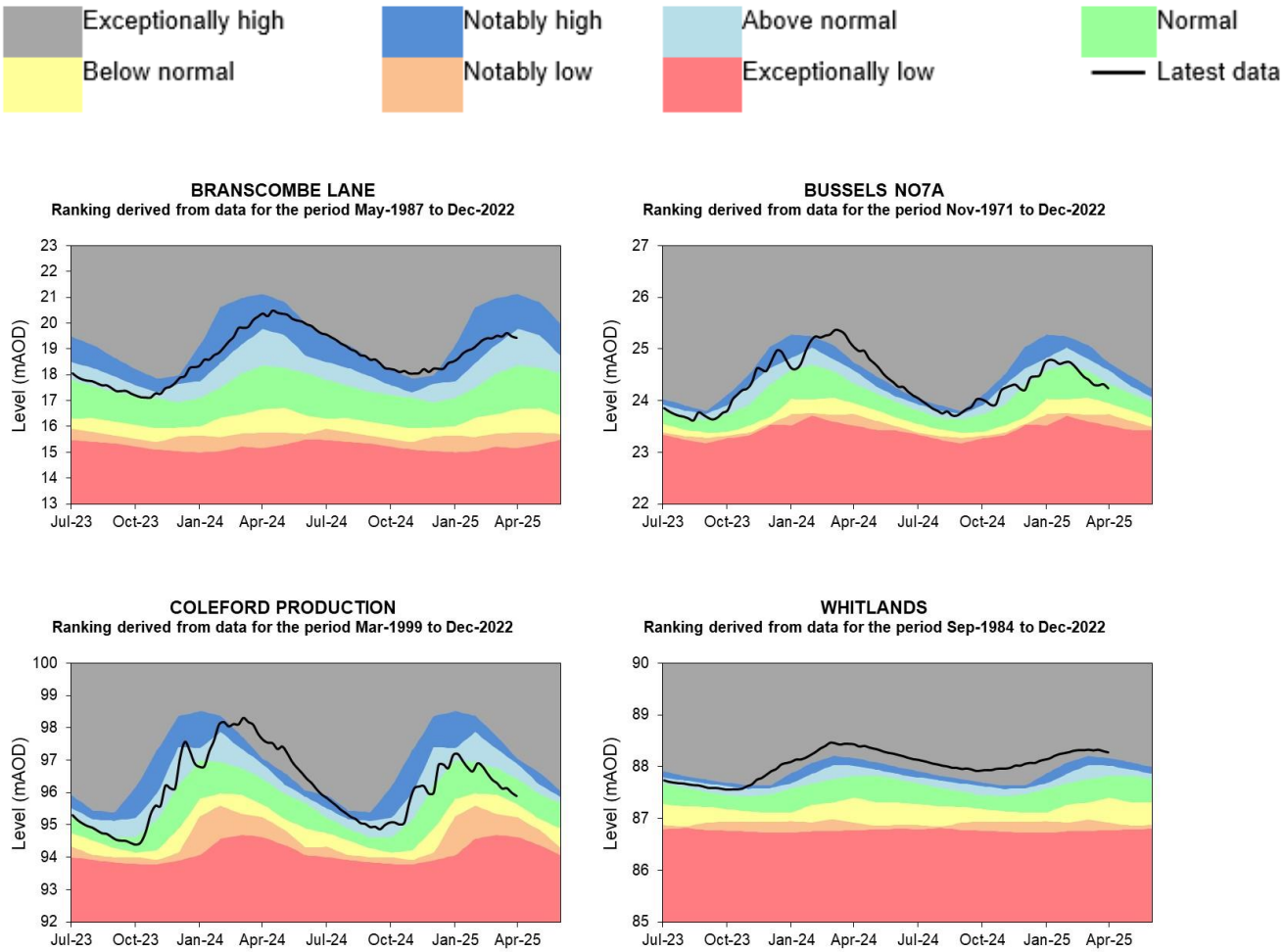
## 5.1 Groundwater levels map

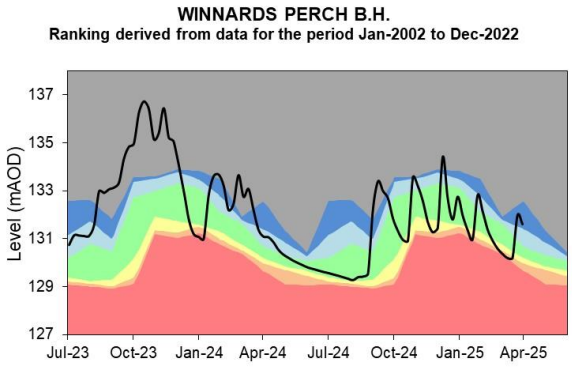
Figure 5.1: Groundwater levels for indicator sites at the end of April 2025, classed relative to an analysis of respective historic April levels. Table available in the appendices with detailed information.

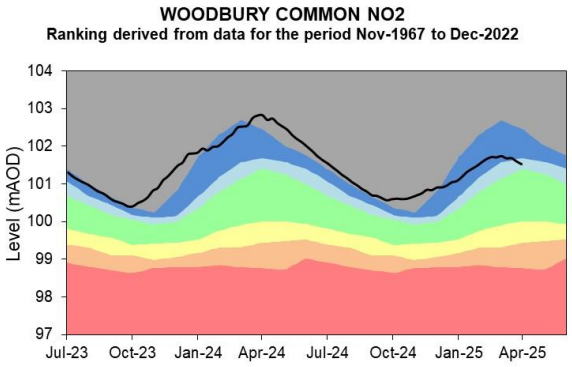


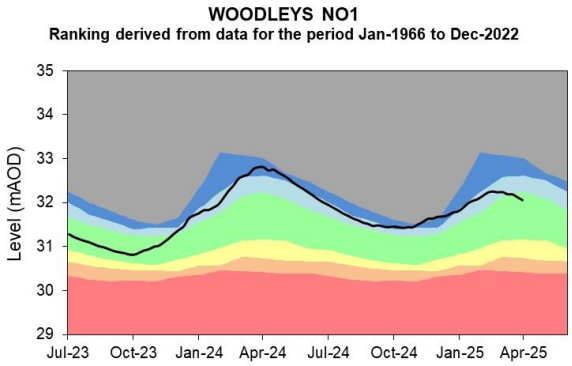
## 5.2 Groundwater level charts

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.





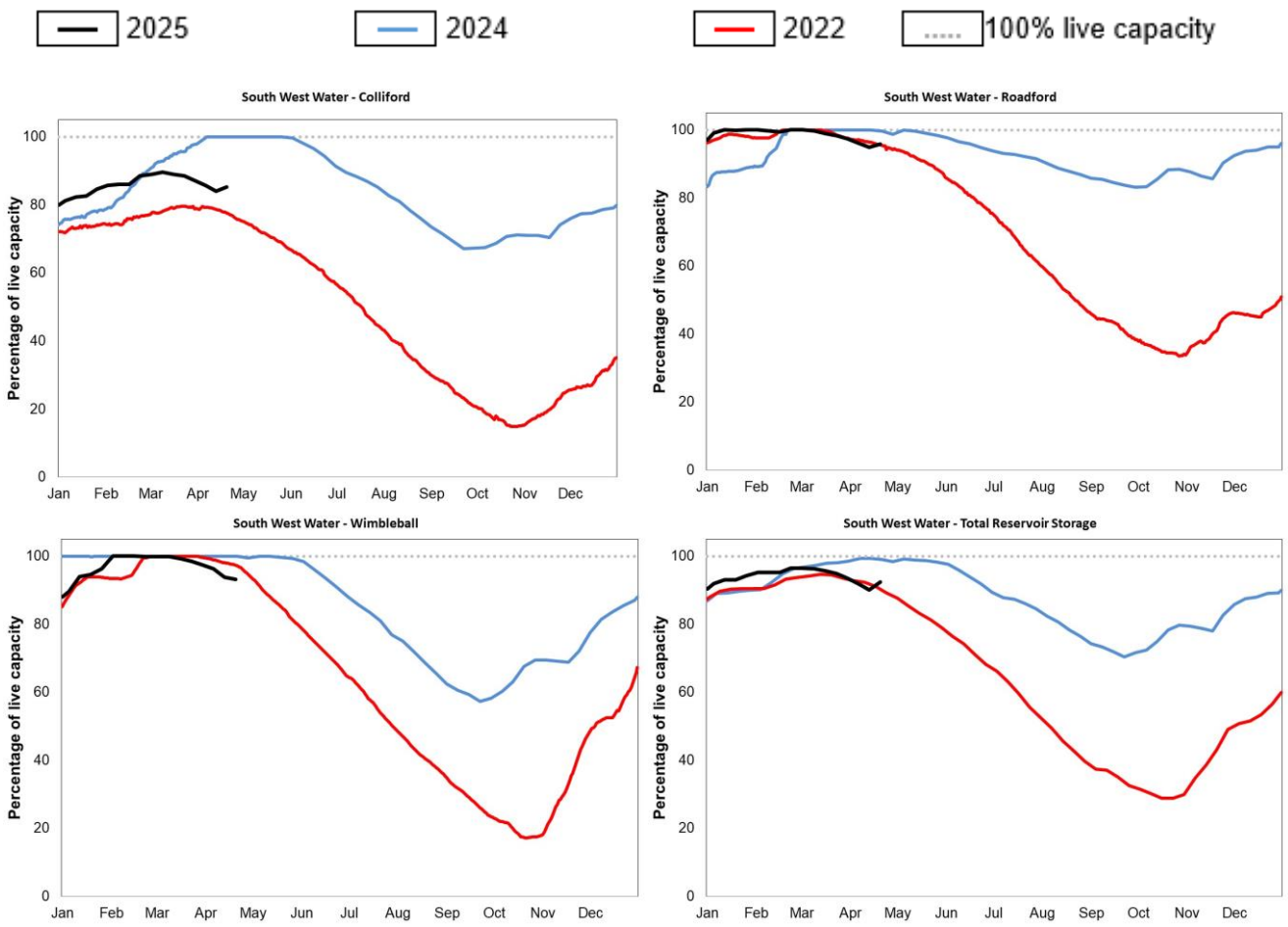




Source: Environment Agency, 2025.

# 6 Reservoir stocks

Figure 6.1: End of month reservoir storage compared to previous year and a historic drought year. Note: Historic records of individual reservoirs vary in length.




(Source: South West 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 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.

# 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 Dart And Erme | 171 | Notably High | Normal | Normal | Above normal |
| Exe | 153 | Above Normal | Normal | Normal | Normal |
| Fal And St Austell | 211 | Exceptionally High | Above normal | Normal | Normal |
| North Cornwall | 195 | Notably High | Normal | Normal | Above normal |
| Otter Sid Axe And Lim | 135 | Normal | Normal | Normal | Above normal |
| Seaton Looe And Fowey | 173 | Notably High | Normal | Normal | Normal |
| Tamar | 170 | Notably High | Normal | Normal | Normal |
| Taw And North Devon Streams | 144 | Above Normal | Below normal | Normal | Normal |
| Teign And Torbay | 173 | Notably High | Normal | Normal | Normal |

| | | | | | |
|---|---|---|---|---|---|
| Torridge And Hartland Streams | 174 | Notably High | Normal | Normal | Normal |
| West Cornwall | 196 | Notably High | Above normal | Normal | Normal |

## 8.2 River flows table

| Site name | River | Catchment | Apr 2025 band | Mar 2025 band |
|---|---|---|---|---|
| Austins Bridge | Dart | Dart | Normal | Notably low |
| Bellever | East Dart | Dart | Normal | Exceptionally low |
| Bodmin Dunmere | Camel | Camel | Above normal | Below normal |
| Chudleigh Bridge | Teign | Teign | Normal | Notably low |
| Dotton | Otter | Otter | Normal | Notably low |
| Gunnislake | Tamar | Tamar | Normal | Notably low |
| Gwills | Gannel | Gannel | Above normal | Normal |
| Restormel | Fowey | Fowey | Normal | Below normal |
| St Erth | Hayle | Hayle | Normal | Normal |
| Thorverton | Exe | Exe | Normal | Notably low |
| Torrington | Torridge | Torridge | Normal | Exceptionally low |
| Truro | Kenwyn | Tresillian Trevella Kenwyn | Notably high | Normal |
| Umberleigh | Taw | Taw | Normal | Exceptionally low |

| | | | | |
|---|---|---|---|---|
| Whitford | Axe | Axe Devon | Normal | Normal |

## 8.3 Groundwater table

| Site name | Aquifer | End of Apr 2025 band | End of Mar 2025 band |
|---|---|---|---|
| Branscombe Lane | Dawlish Sandstone | Above normal | Notably high |
| Bussels No7a | Dawlish Sandstone | Normal | Normal |
| Coleford Production | Permian Breccias And Sandstones | Normal | Normal |
| Whitlands | Upper Greensand | Exceptionally high | Exceptionally high |
| Winnards Perch B.h. | Staddon Formation | Notably high | Notably low |
| Woodbury Common No2 | Budleigh Salterton Pebble Beds | Above normal | Notably high |
| Woodleys No1 | Otterton Sandstone Formation | Normal | Above normal |