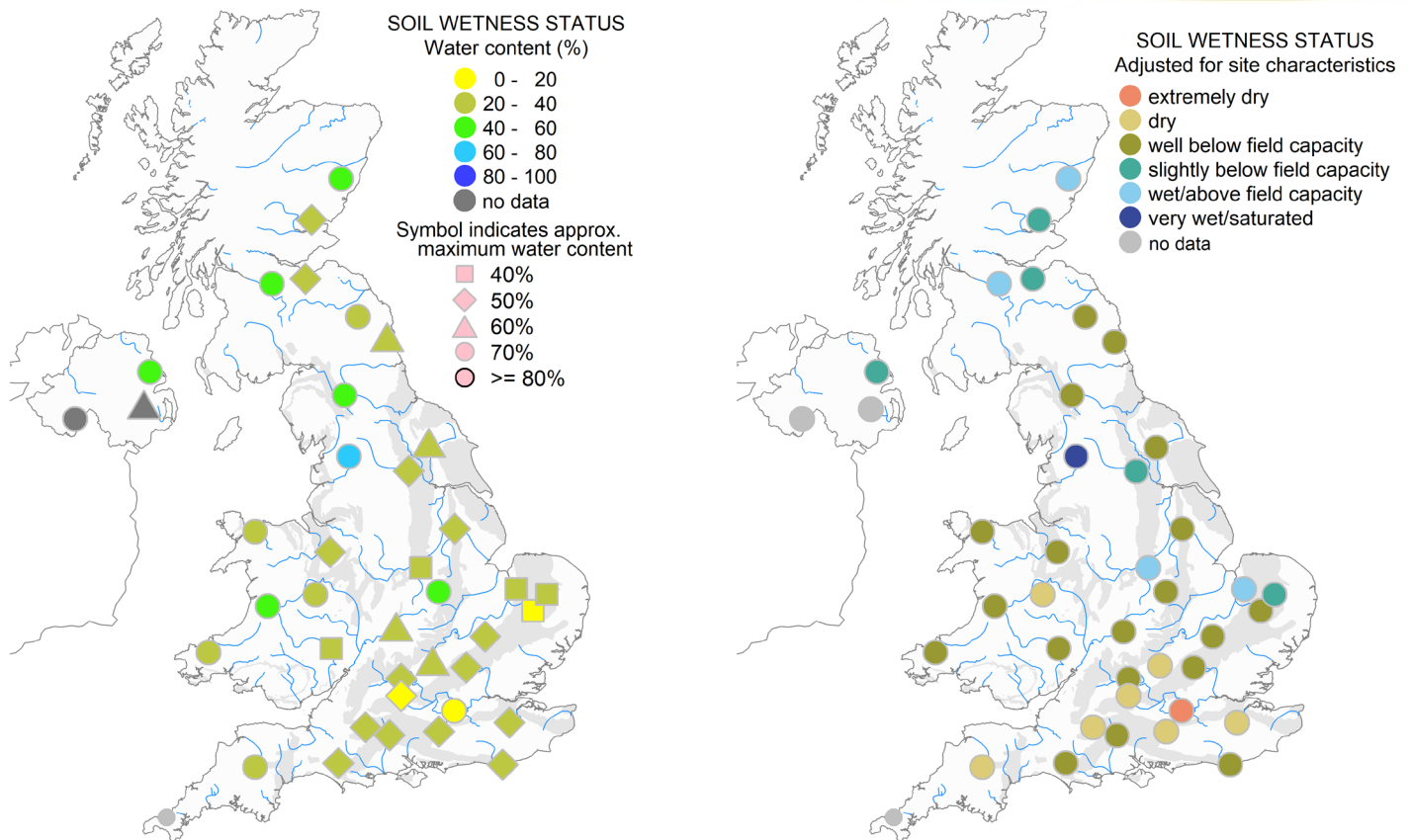




Soil moisture on 31 Aug 2026 (see back page for explanatory comments).

Soil moisture conditions across the COSMOS-UK network showed signs of recovery in August, but some sites remained exceptionally dry and will require more rainfall to reach seasonal norms.

Southern parts of the UK remained under high pressure at the start of August, bringing high temperatures and little rainfall, though they saw heavy rainfall events towards the end of the month. On 13 August, Kew Gardens recorded 38.1°C, the fifth-highest temperature on record for the UK. In contrast, low-pressure systems brought cooler conditions and increased rainfall to the north of the UK. Rainfall totals were below the long-term average for Wales (65%), England (78%), Northern Ireland (85%) and Scotland (87%). More regionally, Northern Scotland (108%) and Central England (105%) were the wettest regions.

Increased rainfall and lower temperatures during August led to a partial recovery in soil moisture at many COSMOS-UK sites, though most remained well below field capacity. More northerly sites, including Balruddery, Easter Bush and Hartwood Home, were generally within the normal range for the time of year or slightly wetter than average. Across central and southern England, many sites started the month exceptionally dry, followed by a sharp increase in soil moisture towards the end of the month, including Chimney Meadows, Euston, Loddington, Porton Down and Riseholme. However, some locations remained notably dry; for example, North Wyke, Chobham Common and Stiperstones were among the driest sites in the network.

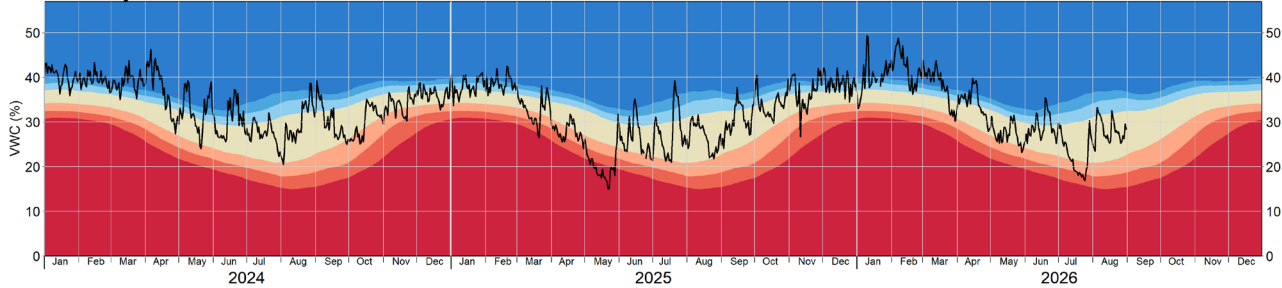
The August data show localised short-term recovery in soil moisture. Still, more prolonged rainfall is needed over the coming months for widespread recovery across the COSMOS-UK network after the hot, dry summer.

Network news

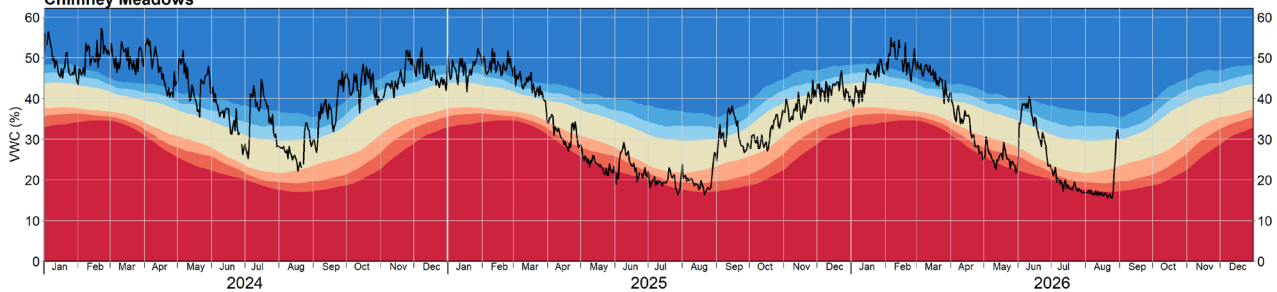
Preventive maintenance site visits are coming to a close soon, with visits to our Northern Ireland sites this week, where there have been connection issues at Fivemiletown and Hillsborough.



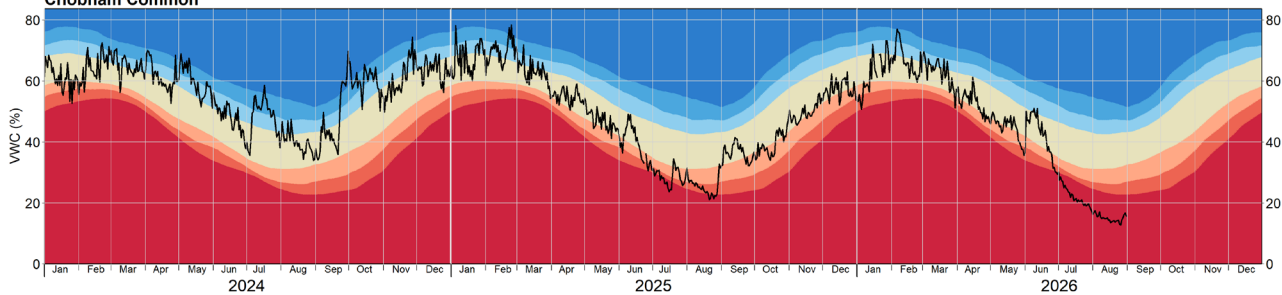
Balruddery



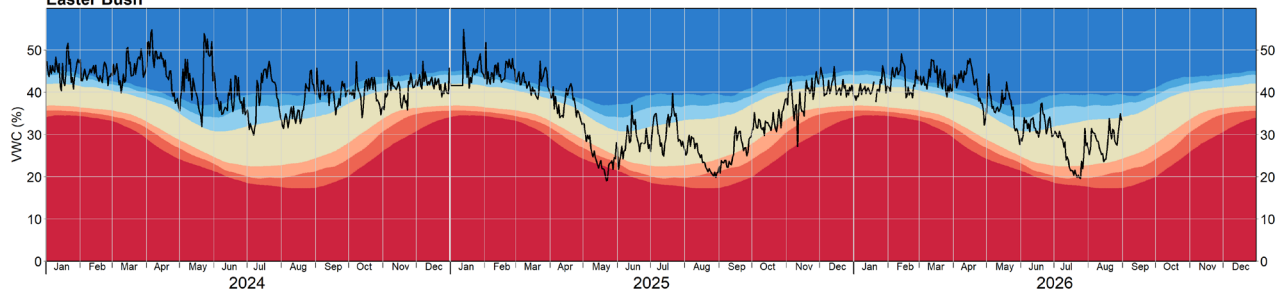
Chimney Meadows



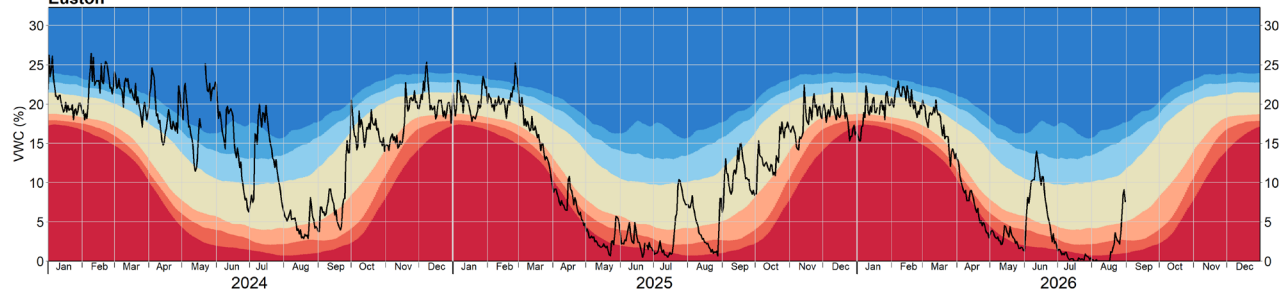
Chobham Common

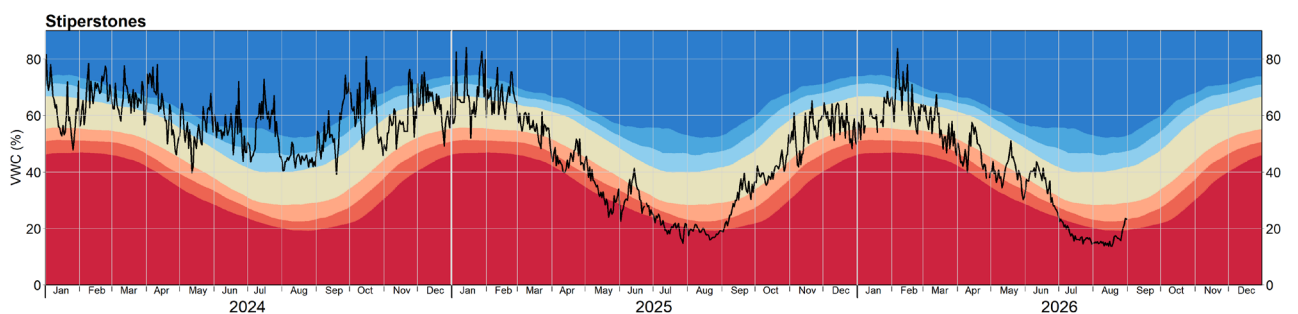
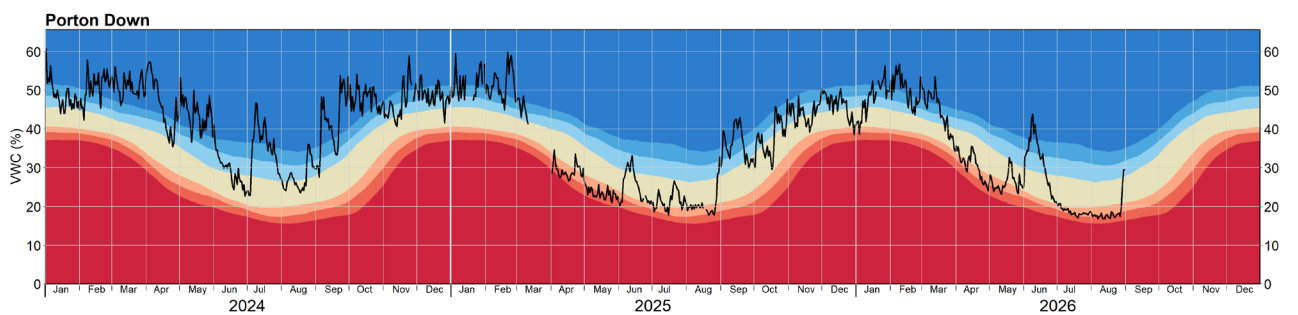
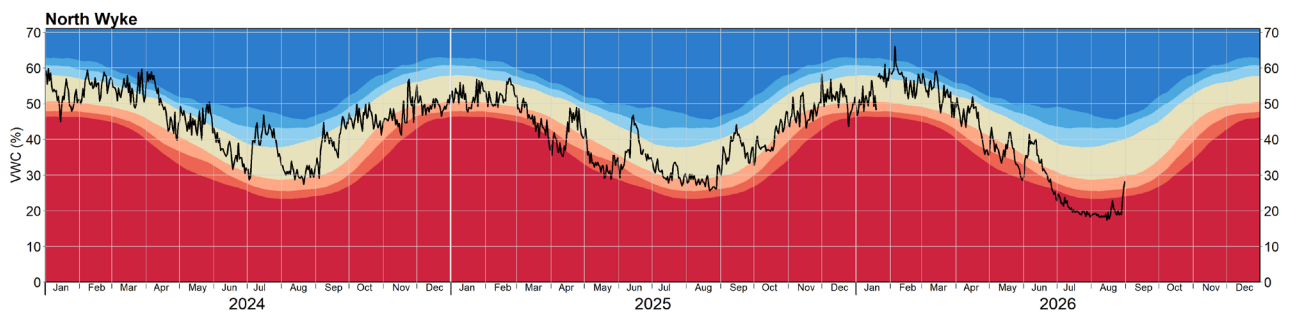
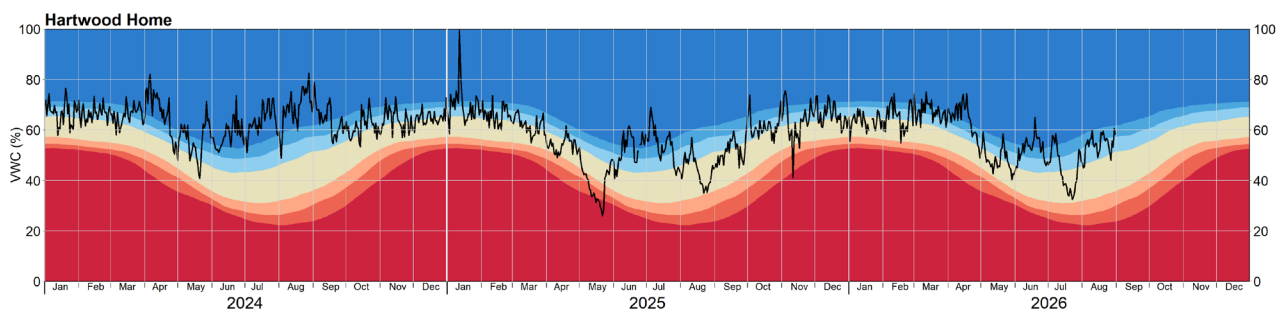
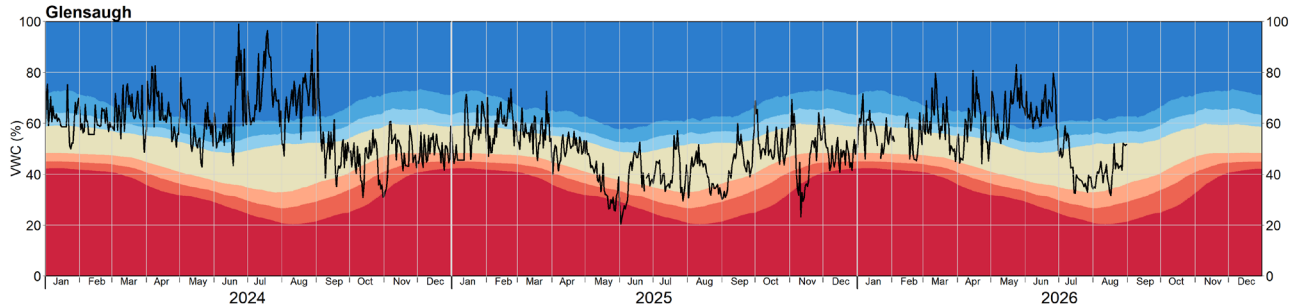


Easter Bush



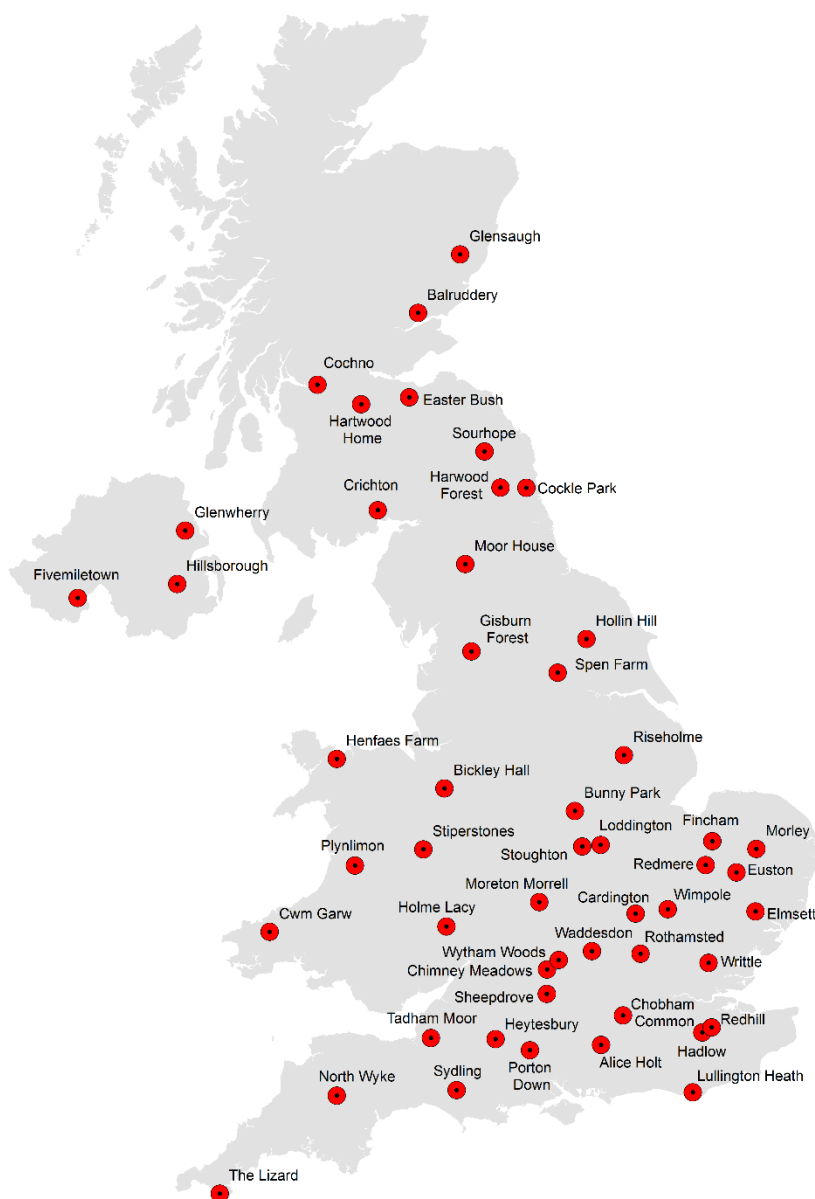
Euston







Issued on 11 September 2026



About the maps on page 1: The maps show daily mean soil moisture on the last day of the month. Colours indicate wetness as in the legends.

The map on the left shows wetness as the volumetric water content (VWC) of the soil which is constrained by soil type, i.e. some soils are able to hold more water than others as indicated by the shape of the symbol.

The map on the right presents soil wetness adjusted for site specific characteristics, i.e. taking account of the possible range of soil wetness at each site. Field capacity (FC) is a key point in this range. When soil moisture is below FC soil moisture is said to be in deficit, i.e. there is a (positive) soil moisture deficit (SMD).

Grey shaded areas on these two maps represent principal aquifers.

About the graphs on pages 2 and 3: The black line shows VWC. The coloured bands indicate how VWC compares to historical variability for the site and time of year.



About soil moisture: Soil moisture varies in the short term (hours to days) with rainfall and as water drains through the soil. Longer term variation is driven by the seasonal difference between rainfall and evaporation. Thus soil moisture decreases in the summer when evaporation exceeds rainfall but increases when this is reversed. In most winters under UK conditions, soil moisture reaches a relatively constant value, known as the field capacity. Field capacity is a measure of how much water the soil can hold against gravity and is strongly dependent on the soil type. Soils are expected to be around field capacity after being wetted to above field capacity and the excess water (e.g. from macropores) has drained away under gravity, which can take several days after heavy rain, to reach a near steady state. Differences in soil type and weather patterns cause variations in soil moisture between sites including when the soil returns to field capacity in autumn/winter and when soil moisture decreases in the spring/summer.

About COSMOS-UK: COSMOS-UK is supported/partially supported by NERC, through the UKCEH National Capability for UK Challenges Programme NE/Y006208/1.

