

Soil moisture on 31 May 2022 (see back page for explanatory comments).

Notes on period to 31 May 2022

At the end of May, soil moisture for the majority of sites throughout the UK is normal for the time of year.

Provisional data indicate that across the UK, May precipitation was close to the long-term average and evenly distributed throughout the month. Some areas such as Northern Scotland and Northern Ireland, along with smaller localised areas received up to 150 % of their long-term average precipitation.

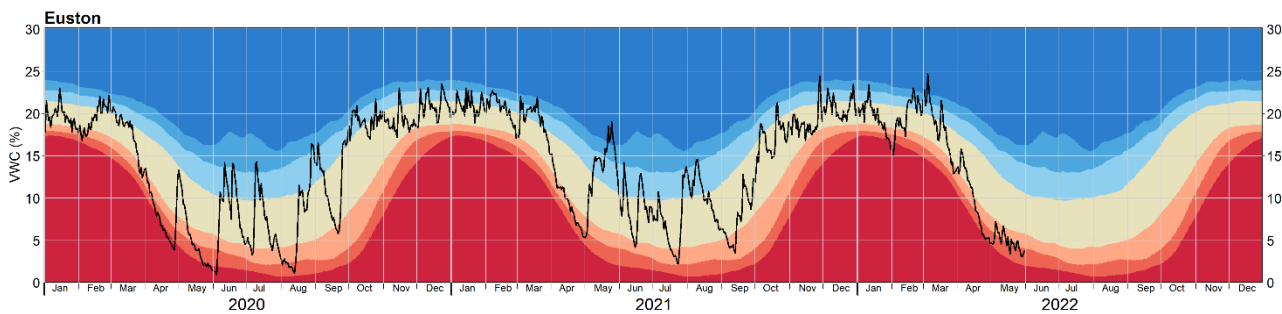
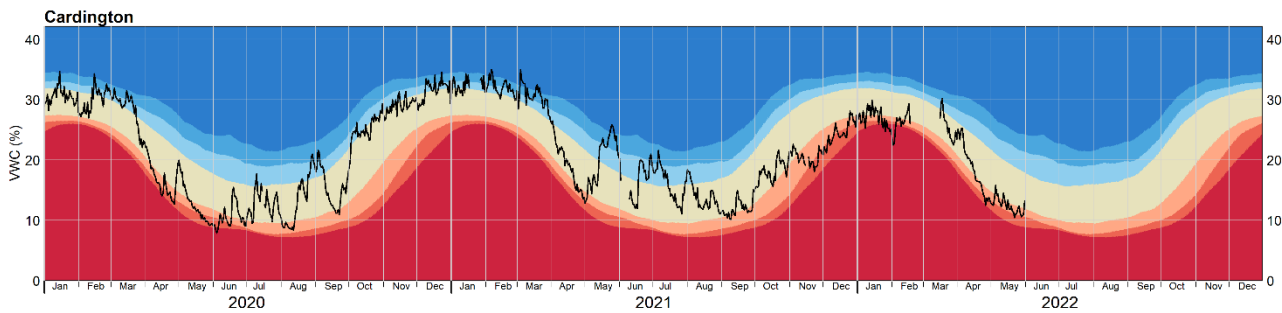
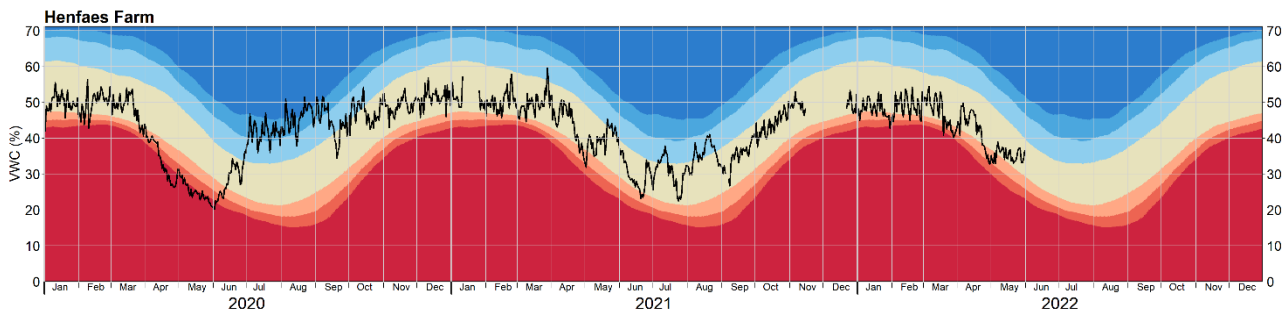
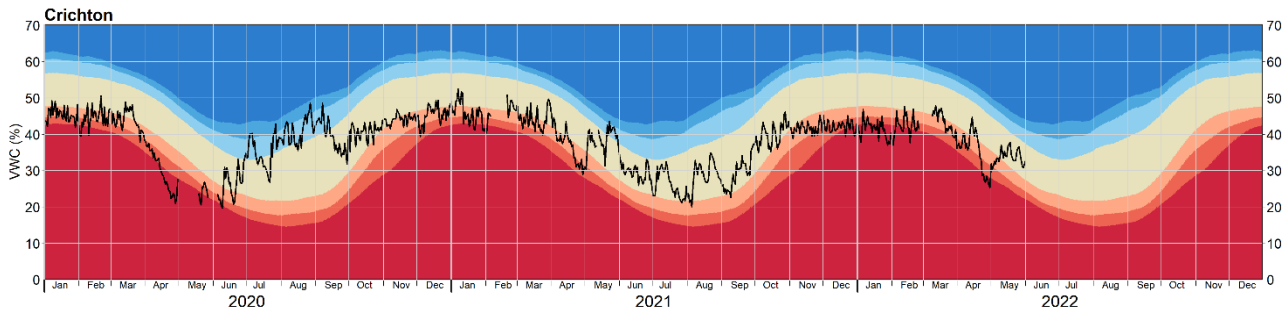
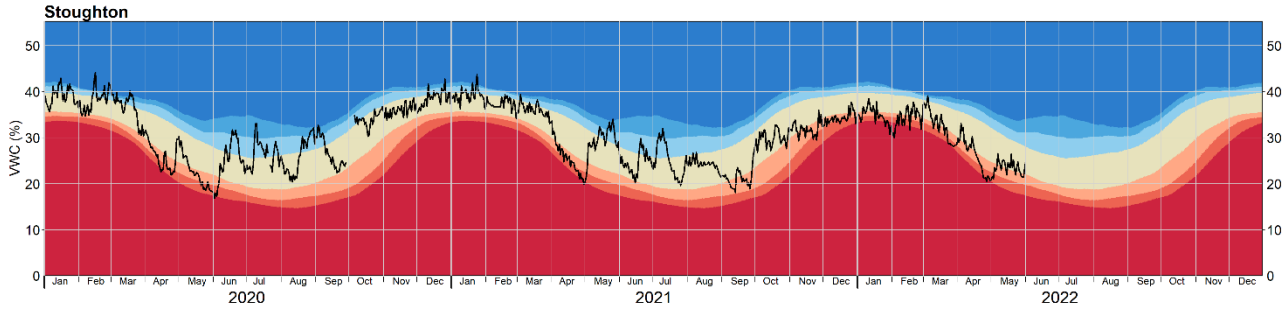
After a dry end to April, precipitation throughout May has led to many soils across the UK transitioning from drier than normal, or notably dry, to normal levels for the time of year (e.g. Stoughton, Crichton, Henfaes Farm and Cardington).

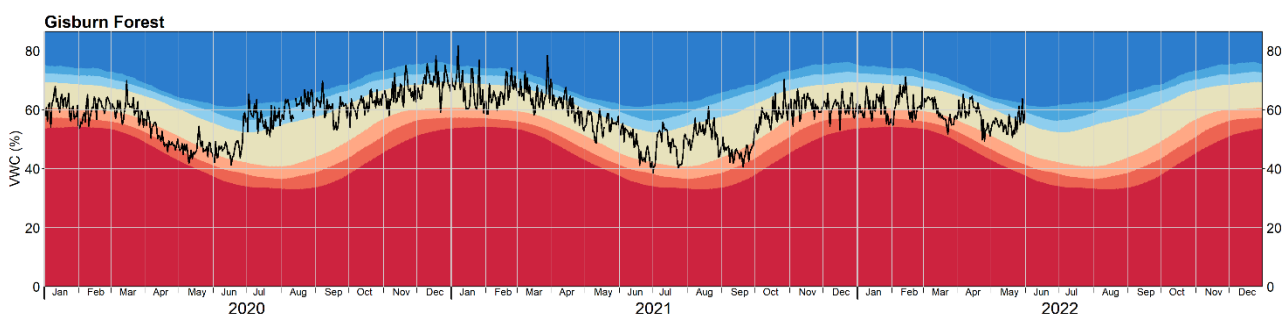
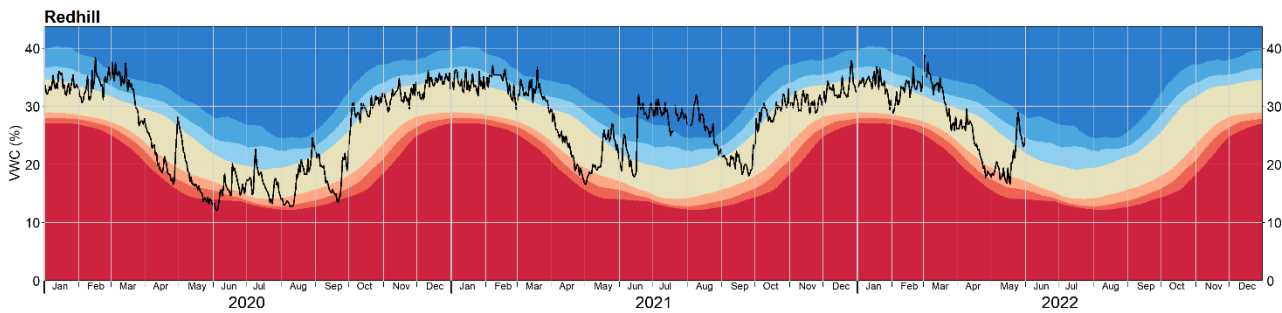
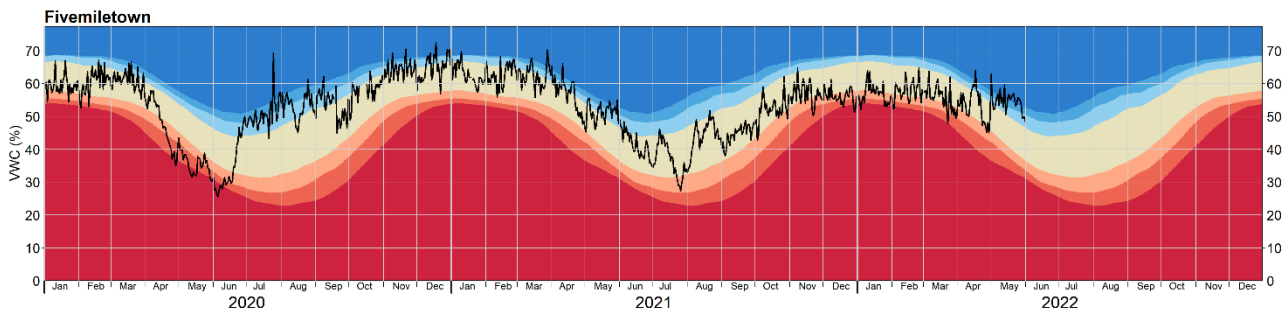
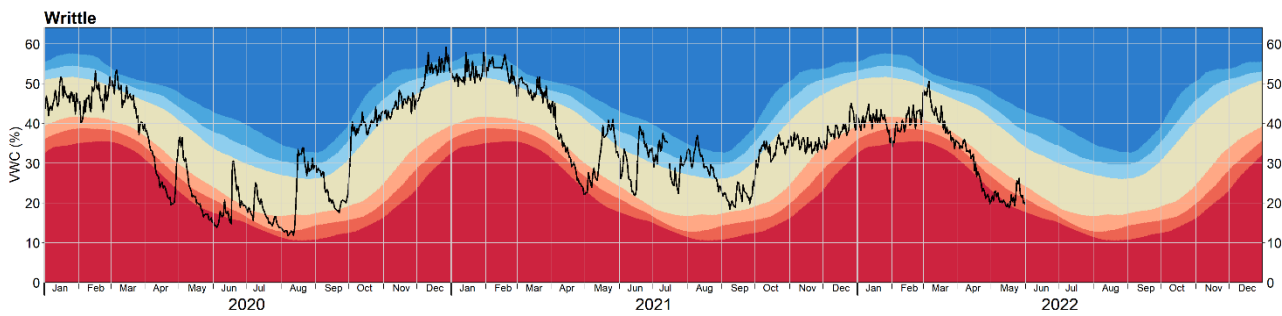
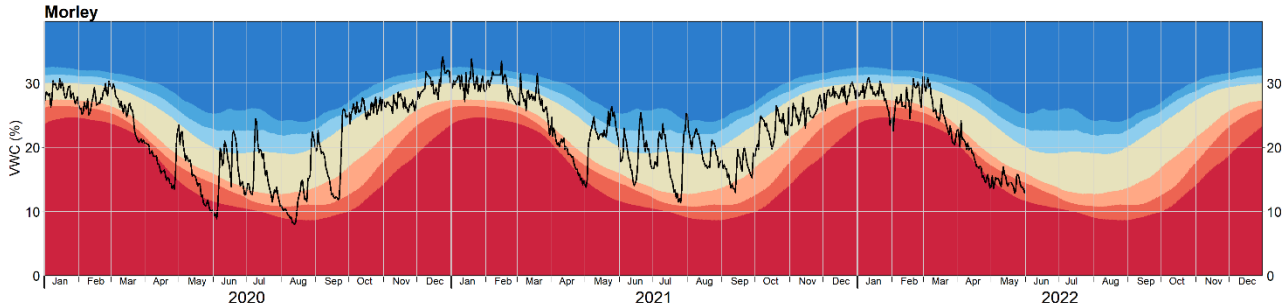
In some regions where soil moisture was drier than normal for the time of year at the beginning of May, soils have continued to dry throughout the month to notably dry levels for the time of year (e.g. East Anglia: Euston, Morley, and Writtle).

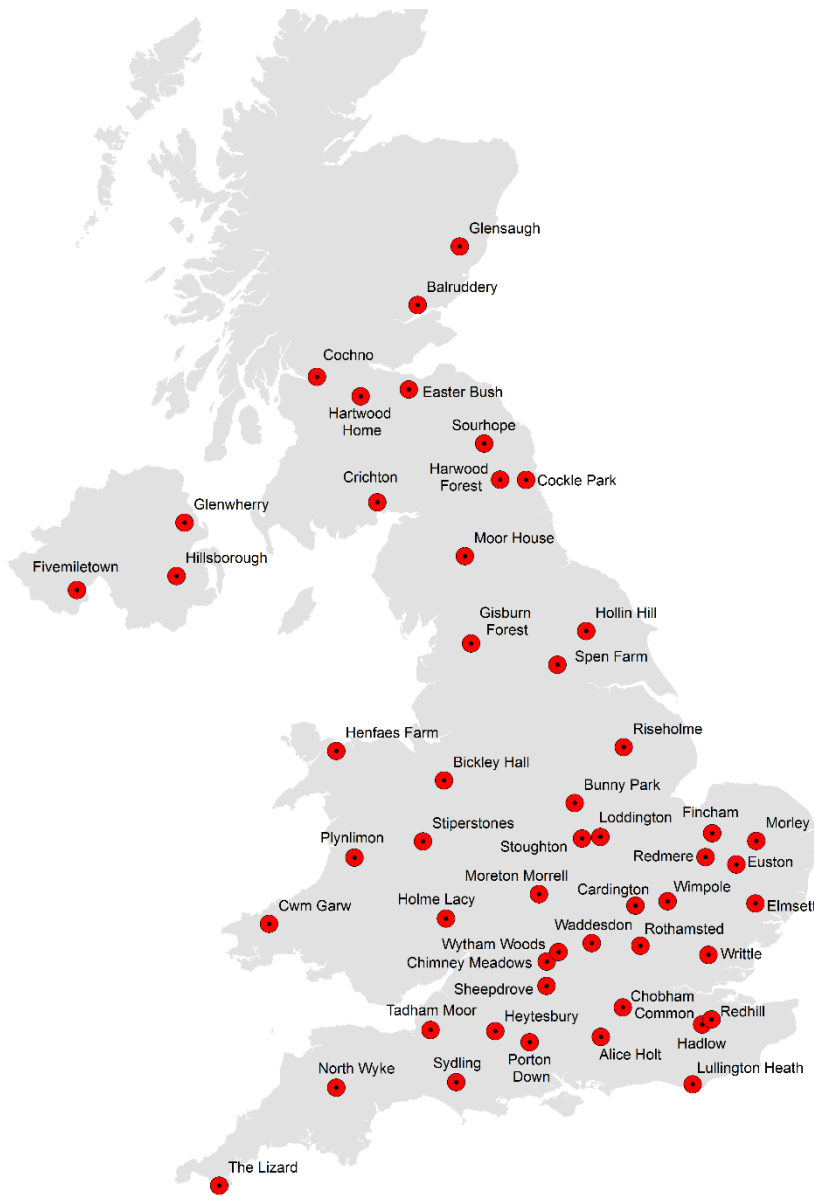
In areas such as Scotland and Northern Ireland, where rainfall was higher than the long-term average, soils at some sites have ended the month wetter than normal for the time of year (e.g. Fivemiletown). Soils at other sites in regions of more localised rainfall have now become wetter than normal for the time of year (e.g. Redhill and Gisburn Forest)

Network News

- Soil moisture derived from the ‘cosmos’ sensor at Hollin Hill is being reviewed.
- Technical issues at Balruddery.







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.

- exceptionally dry
- notably dry
- drier than normal
- normal
- wetter than normal
- notably wet
- exceptionally wet

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, field capacity; additional rainfall either cannot enter the already saturated soil and flows across the land surface as overland flow, or infiltrates but drains quickly through the soil. 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.

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About this summary: Every reasonable effort is made to publish this review on the first working day of the month.

