Monthly water situation report: Kent and South London Area

1 Summary - October 2025

During October, the Kent and South London and East Sussex (KSLES) area received 123% of the long-term average (LTA) rainfall for the time of year, based on a whole-area average. Rainfall received across individual catchments ranged from normal to above normal, all catchments received LTA rainfall above 100%. Soil moisture deficits (SMDs) in all catchments but one decreased during the month of October. SMDs decreased across most catchments, though they remained 4.5% above the LTA overall. Effective rainfall was just 41% of the LTA, with SMDs ranging from 23 to 171 mm by month-end. River flows were mostly normal, except for below normal monthly mean flows (MMFs)at Ravensbourne. Daily mean flows (DMFs) varied, with groundwater-fed sites showing steadier flows and clay catchments showing flashier responses. Groundwater levels in the Chalk aquifer showed variation across the area, with Chipstead recording notably low levels and Little Bucket falling to below normal. In contrast, Riddles Lane levels rose to above normal. In the Greensand aquifer, Riverhead also remained at an above normal level. Reservoir stocks showed mixed trends: Bewl, Bough Beech, and Powdermill declined early in the month, while Darwell and Weir Wood levels rose.

1.1 Rainfall

During October, the KSLES area received 123% of the LTA rainfall for the time of year, based on a whole-area average. Rainfall received across individual catchments ranged from normal to above normal. The percentage of LTA rainfall received ranged from 109% in the Thanet Chalk catchment to 137% in the North Kent Chalk catchment. The highest daily rainfall total of 46.4mm was observed on the 22 day of the month at Brede rain gauge in the Eastern Rother catchment.

Rainfall was particularly notable and widespread across the patch on three occasions; the third day, the nineteenth to the twenty second and the last day of the month. The first wet spell was a result of the first storm of the 2025/2026 season, Storm Amy. The remaining events were attributed to South Easterly heavy showers and unsettled conditions.

October featured three dry days across the KSLES area, defined as a day with 0.2 mm or less of recorded rainfall. This occurred on 7, 17 and 18 October. This was caused by high pressure system that brought settled conditions and persistent cloud in the middle of the month between storm Amy and the rainfall event on the 22 of the month.

1.2 Soil moisture deficit and recharge

SMDs in all catchments but one decreased during the month of October. At the end of October, SMDs throughout the KSLES area were, on average, 4.5% higher than the LTA for this time of year. Most catchments exhibited a notable decrease in SMDs in October with many in the south of the patch having the lowest soil moisture deficits since March. This change has been influenced by the increased effective rainfall received across the area during October, which amounted to just 41% of the LTA. At the end of October, SMDs ranged from 23 to 171 mm, whereas at the end of September, these ranged from 114 to 208mm.

1.3 River flows

MMFs at key indicator sites for October were predominantly normal across the area. Below normal MMFs were recorded at the Ravensbourne at Catford in the northwest.

DMFs continued to show considerable variability across most sites, reflecting the distribution of rainfall and effective rainfall throughout the month. Flow peaks were less pronounced – but still evident – at sites supported by groundwater base flow, such as the Dour at Crabble Mill. In contrast, flashy sites influenced by clay-rich catchments, including the Ravensbourne at Catford and the Mole at Dorking, exhibited more marked fluctuations in DMFs in response to heavy rainfall received in October.

1.4 Groundwater levels

Groundwater levels in the Chalk across the KSLES area showed variation (still falling and starting to rise) at the end of October. At Chipstead, in the western part of the patch, levels fell steadily from late September and were notably low by month-end. Little Bucket also saw a decline, recording below normal levels. In contrast, Sweeps Lane, Fleete Reservoir, and Wolverton all registered normal levels, with Fleete Reservoir and Wolverton showing a slight rise while remaining within the normal range. Riddles Lane experienced an increase in October and reached above normal levels. In the Greensand aquifer, groundwater levels at Riverhead rose slightly and remained above normal. The variation in groundwater levels is likely due to the higher effective rainfall received this month, combined with elevated soil moisture deficits (SMD). In areas like Chipstead, much of the rainfall has been absorbed by the dry soil, limiting recharge to the aquifer.

1.5 Reservoir stocks

Of the five water company reservoirs in KSLES, Bewl, Bough Beech and Powdermill experienced steady declines in water levels in the first half of October that then stabilised in the second half of the month. Levels at Darwell reservoir and Weir Wood reservoir saw a more notable rise in levels, primarily during the last half of the month.

By the end of October, the reservoirs held by the following live storage capacities and LTA class:

- Darwell – 47% Normal
- Bewl – 42% Below normal
- Bough Beech – 43% Notably Low
- Powdermill – 45% Below normal
- Weir Wood – 99% Above normal

1.6 Environmental impact

All hands-off flow restrictions were lifted in October, except for a small number of abstractors in the Stour catchment which remained subject to constraints. A limited number of hands-off groundwater level constraints introduced in September continued to apply throughout the month.

Only three fluvial flood alerts were issued during October.

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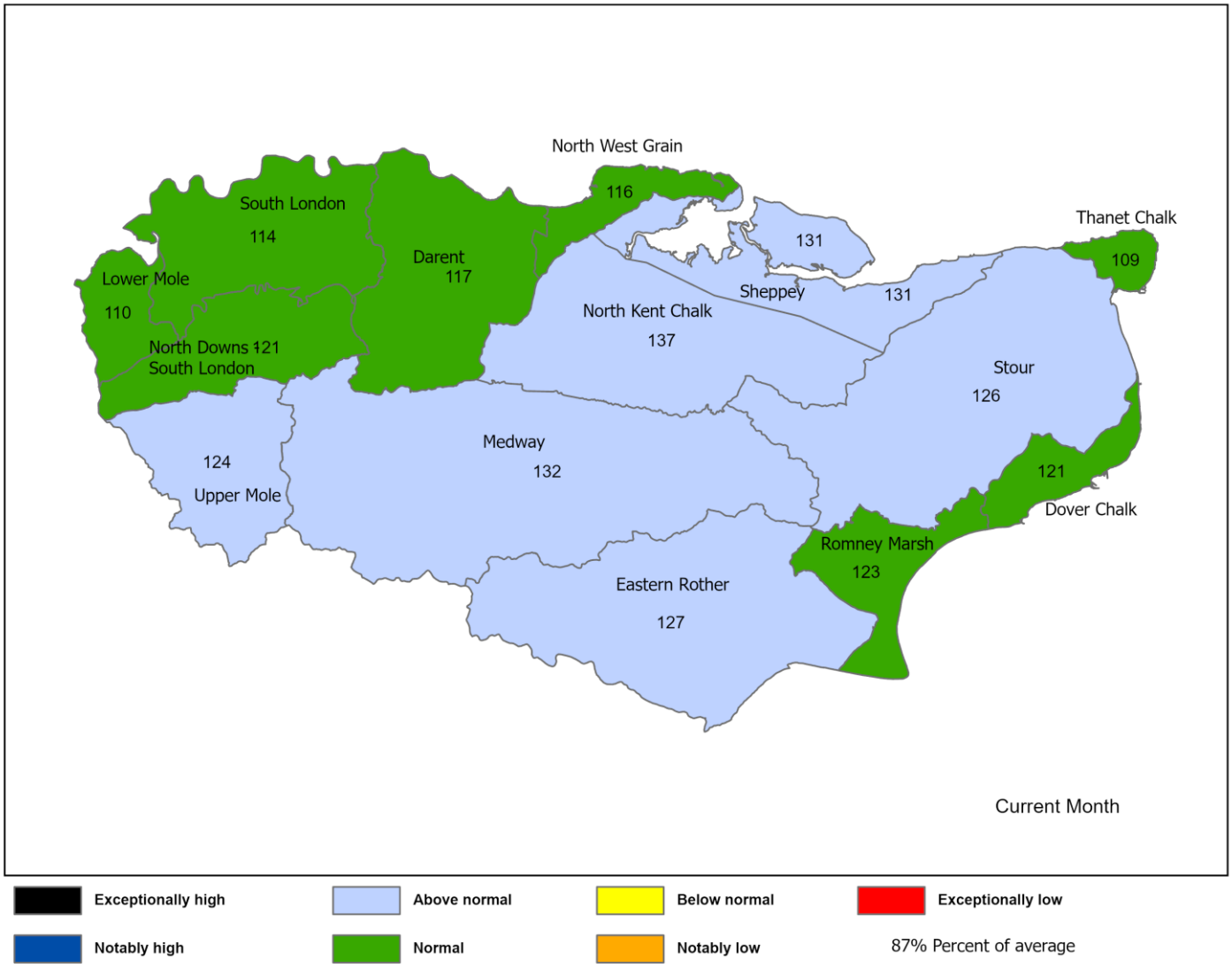
2 Rainfall

2.1 Rainfall map one

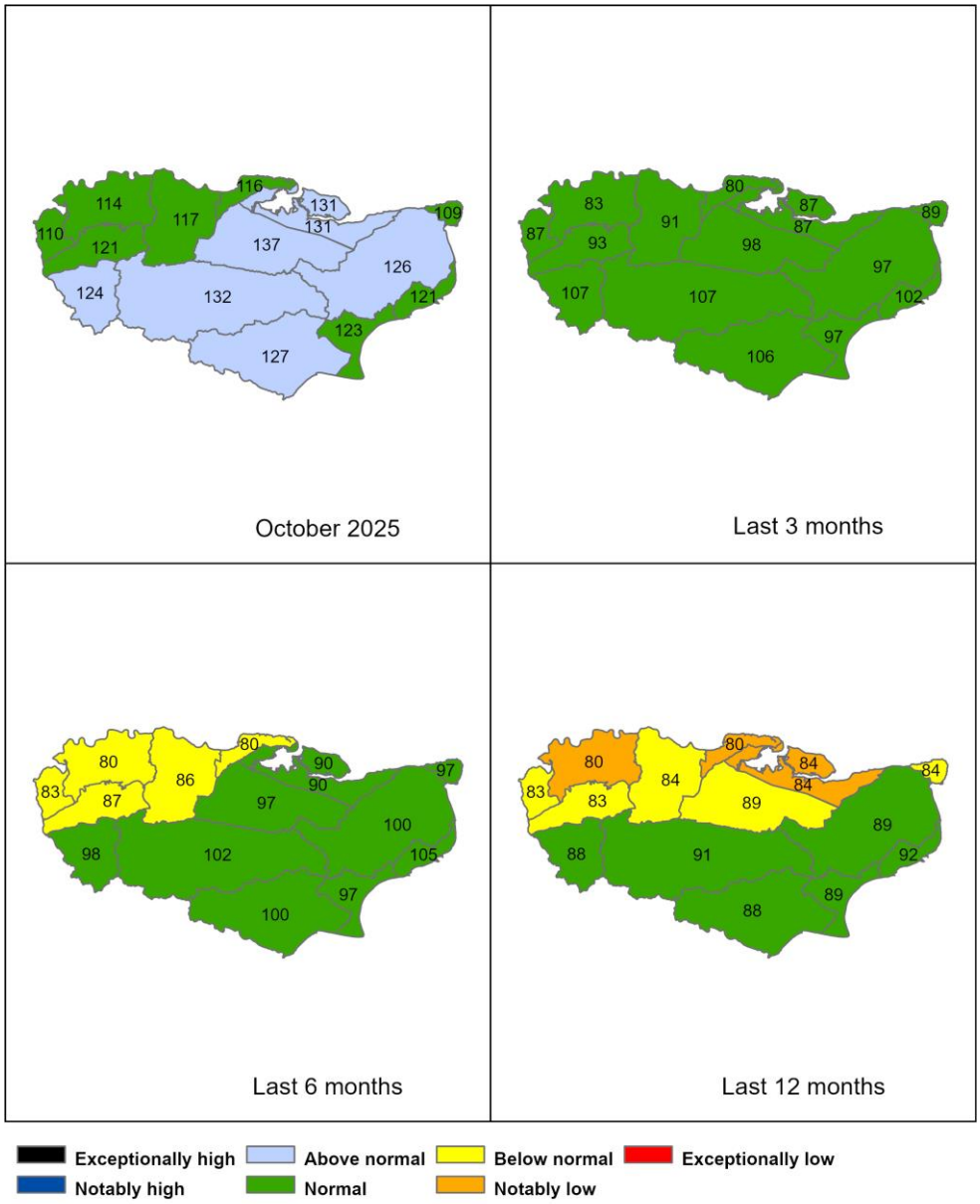
Figure 2.1: Total rainfall for hydrological areas across Kent and South London for the current month (up to 31 October 2025), classed relative of historic totals. The percentage of average uses the period of 1991 – 2020. Table available in the appendices with more detailed information.



HadUK data for October 2023 onwards, 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. Includes material based on Ordnance Survey 1:50 000 maps with the permission of the controller of His Majesty's Stationery Office © Crown copyright. All rights reserved. Environment Agency, 100026380, 2025.

2.2 Rainfall map two

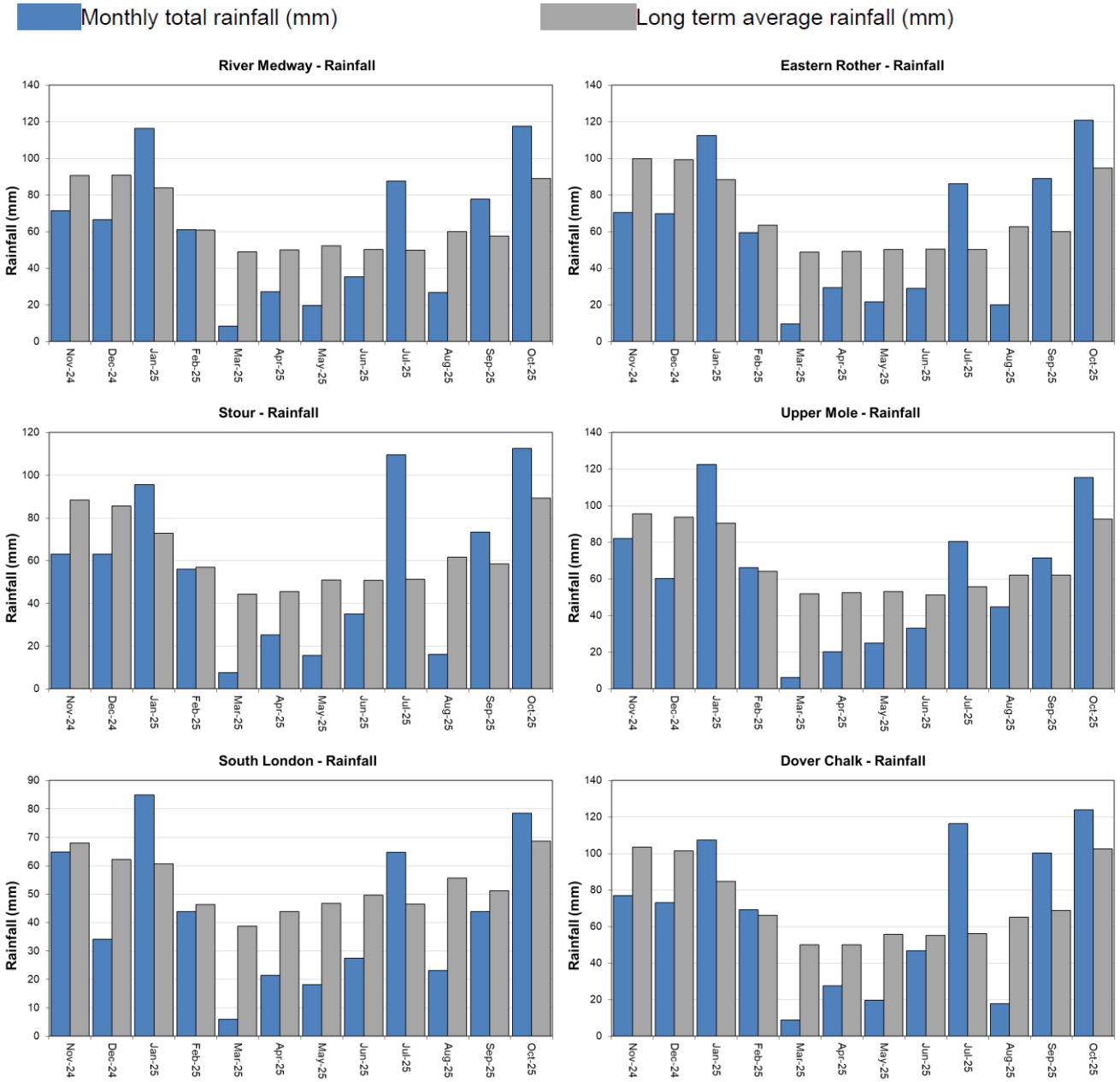
Figure 2.2: Total rainfall for hydrological areas for the current month (up to 31 October 2025), the last 3 months, the last 6 months, and the last 12 months,), classed relative of historic totals. The percentage of average uses the period of 1991 – 2020. Table available in the appendices with detailed information.

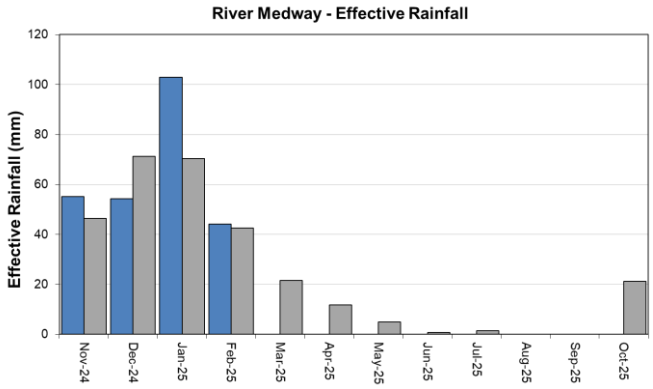


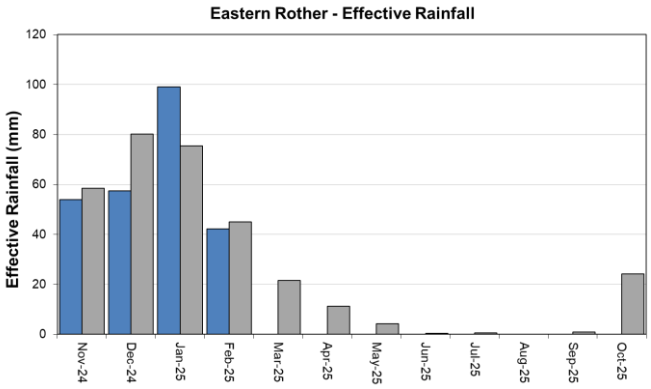
HadUK data for October 2023 onwards, based the Met Office 1km gridded rainfall dataset derived from rain gauges (Source: Met Office. Crown copyright, 2025). Provisional data based on Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. Includes material based on Ordnance Survey 1:50 000 maps with the permission of the controller of His Majesty's Stationery Office © Crown copyright. All rights reserved. Environment Agency, 100026380, 2025.

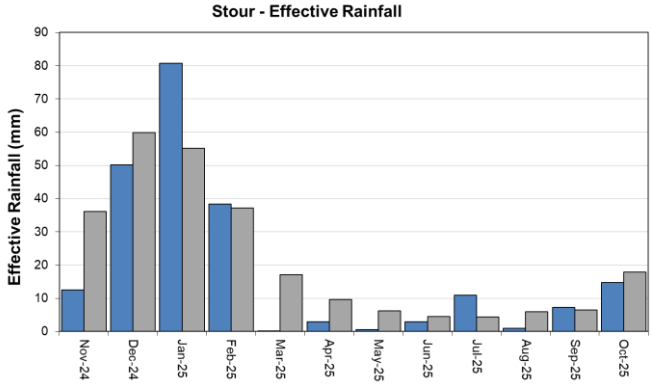
2.3 Rainfall and effective rainfall charts

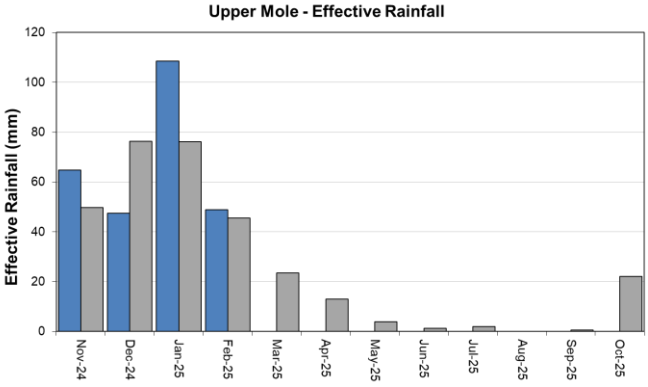
Figure 2.3: Monthly rainfall and effective rainfall totals for the past 12 months as a percentage of the 1991 to 2020 long term average (LTA) for a selection of areal units. HadUK rainfall data. (Source: Met Office. Crown copyright, 2025). EA effective rainfall data (Source EA Soil Moisture Model).

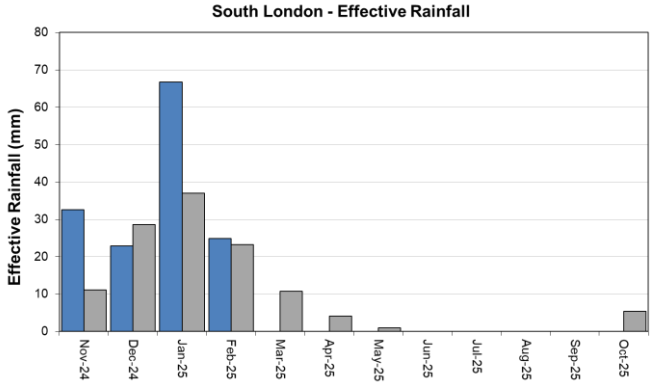


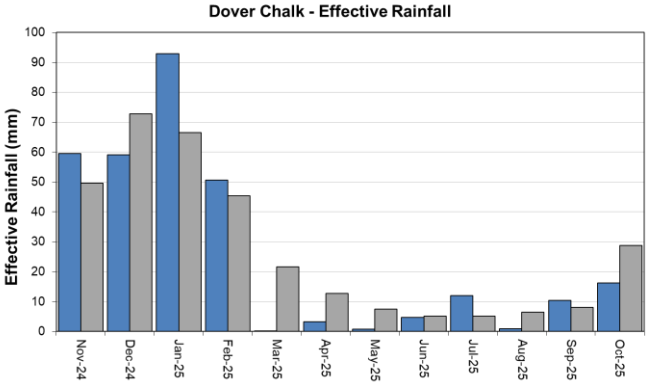

River Medway - Effective Rainfall
Effective Rainfall (mm)
0
20
40
60
80
100
120
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25


Eastern Rother - Effective Rainfall
Effective Rainfall (mm)
0
20
40
60
80
100
120
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25


Stour - Effective Rainfall
Effective Rainfall (mm)
0
10
20
30
40
50
60
70
80
90
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25


Upper Mole - Effective Rainfall
Effective Rainfall (mm)
0
20
40
60
80
100
120
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25


South London - Effective Rainfall
Effective Rainfall (mm)
0
10
20
30
40
50
60
70
80
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25


Dover Chalk - Effective Rainfall
Effective Rainfall (mm)
0
10
20
30
40
50
60
70
80
90
100
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25

2.4 Rainfall and effective rainfall table

Figure 2.4: This is a second estimate of areal rainfall and effective rainfall (percolation or runoff) for a selection of the hydrological areas across the Kent and South London area. There may be significant variation within each area which must be considered when interpreting these data. When additional meteorological data is available estimates are revised which will affect the period totals in section 2.5.

Number	Hydrological Area	Rainfall (mm) 31 day Total	October % LTA	Effective Rainfall (mm) 31 day Total	October % LTA
6230TH	North Downs - South London (W)	108	120%	15	62%
6505TH	Upper Mole	115	124%	0	0%
6508TH	South London	78	114%	0	0%
6706So	Darent	90	116%	12	76%
6707So	North Kent Chalk	113	137%	15	83%
6708So	Stour	113	125%	15	82%
6709So	Dover Chalk	124	119%	16	57%
6710So	Thanet Chalk	82	109%	10	111%
6809So	Medway	118	131%	0	0%
6810So	Eastern Rother	121	127%	0	0%

6811So	Romney Marsh	101	122%	0	0%
6812So	North West Grain	75	115%	0	0%
6813So	Sheppey	88	131%	0	0%
	Kent & South London Average	102	123%	6	41%

HadUK rainfall data. (Source: Met Office. Crown copyright, 2025).

EA effective rainfall data (Source EA Soil Moisture Model)

2.5 Seasonal summary table of rainfall and effective rainfall

Figure 2.5: This is a seasonal estimate of areal rainfall and effective rainfall (percolation or runoff) for a selection of the hydrological areas across the Kent and South London area, expressed as totals and as a percentage of the LTA. There may be significant variation within each area which must be considered when interpreting these data. When additional meteorological data is available estimates are revised which will affect the period totals.

Summer period 01/10/2025 to 31/10/2025

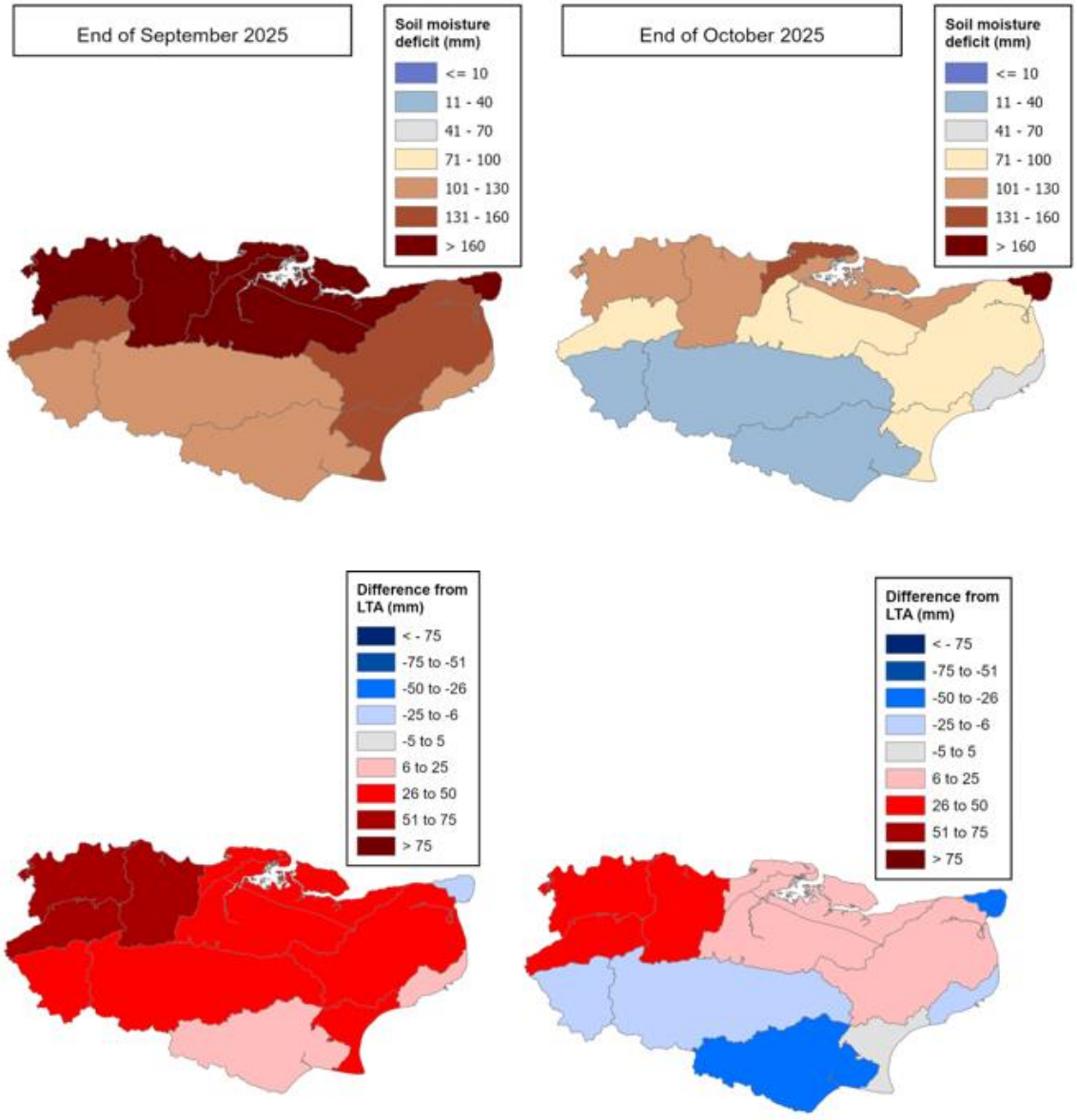
Number	Hydrological Area	Seasonal Rainfall (mm) Total	% LTA	Seasonal Effective Rainfall (mm) Total	% LTA
6230TH	North Downs - South London (W)	108	120%	15	61%
6505TH	Upper Mole	115	124%	0	0%
6508TH	South London	78	114%	0	0%
6706So	Darent	90	116%	12	76%
6707So	North Kent Chalk	113	137%	15	83%
6708So	Stour	113	125%	15	82%
6709So	Dover Chalk	124	119%	16	57%
6710So	Thanet Chalk	82	109%	10	111%
6809So	Medway	118	131%	0	0%
6810So	Eastern Rother	121	127%	0	0%

6811So	Romney Marsh	101	122%	0	0%
6812So	North West Grain	75	115%	0	0%
6813So	Sheppey	88	131%	0	0%
	Kent & South London Average	102	123%	6	41%

3 Soil moisture deficit

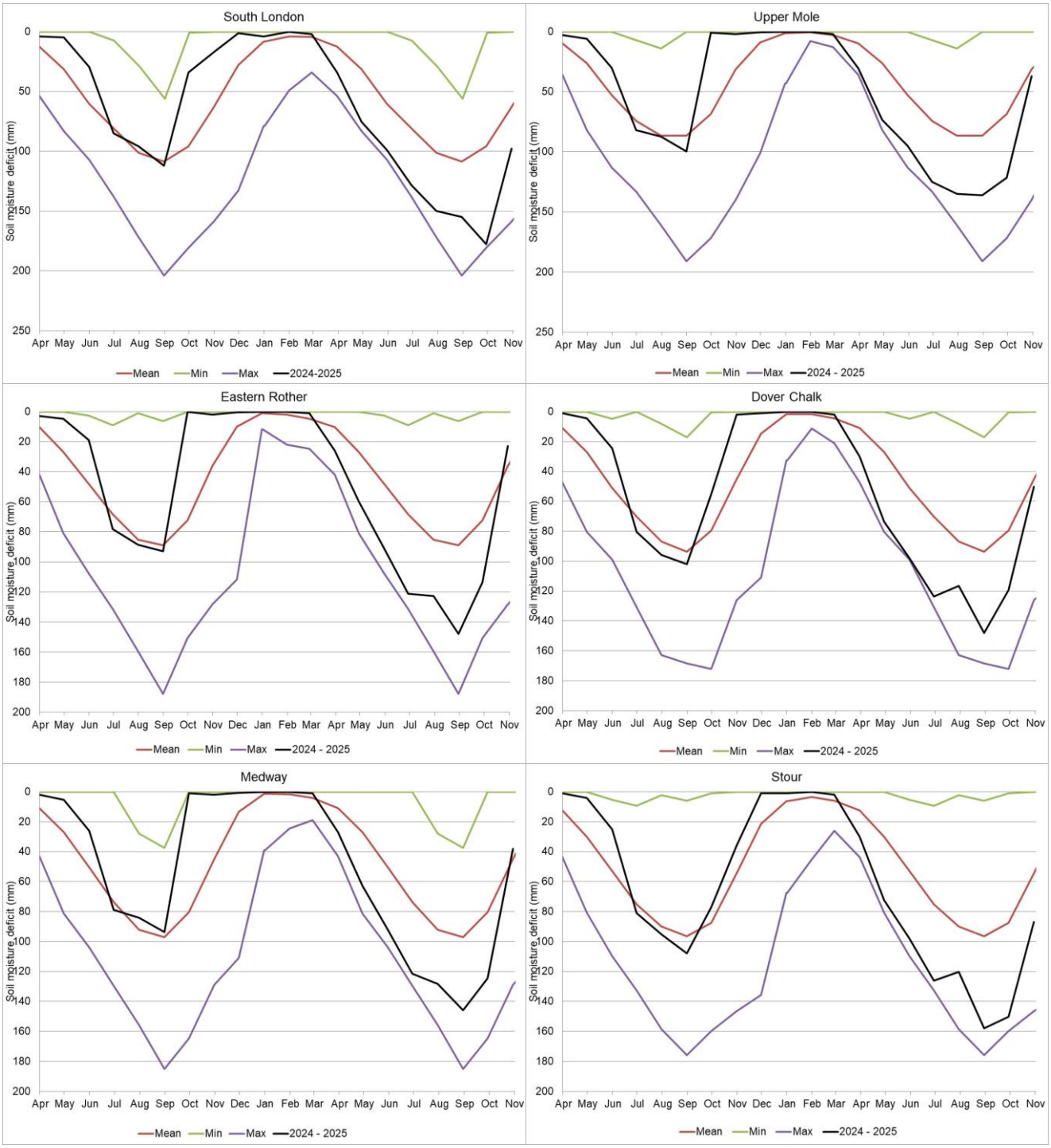
3.1 Soil moisture deficit map

Figure 3.1: Soil moisture deficits for weeks ending 30 September (left panel) and 31 October 2025 (right panel). Top row shows actual soil moisture deficits (mm) and bottom row shows the difference (mm) of the actual from the 1991 to 2020 long term average soil moisture deficits. EA Soil Moisture Deficit data (Source EA Soil Moisture Model).



3.2 Soil moisture deficit charts

Figure 3.2: Latest soil moisture deficit compared to maximum, minimum, and 1991 to 2020 long term average. EA soil moisture deficit data (Source EA Soil Moisture Model).



3.3 Soil moisture deficit table

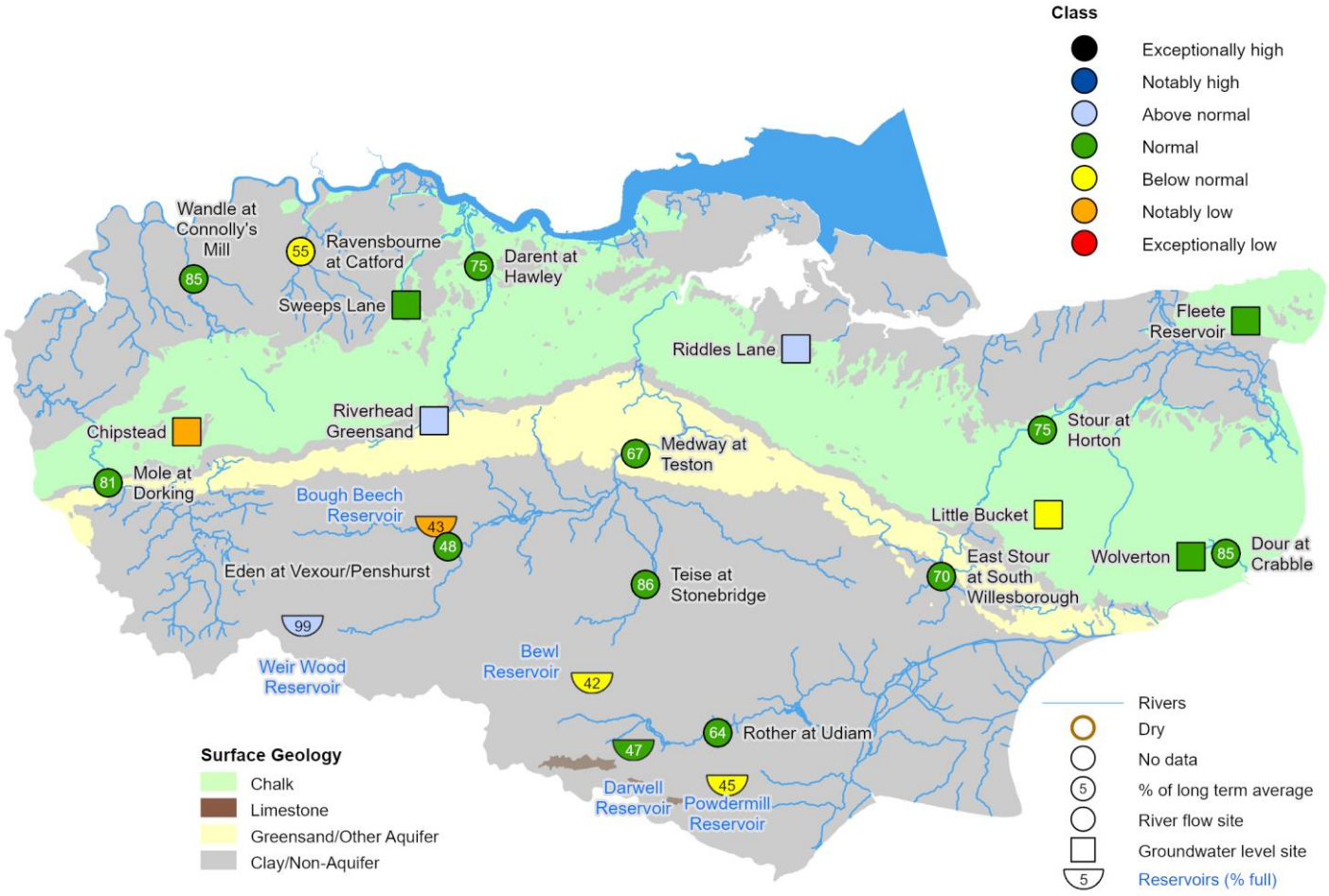
Figure 3.3: This is a second estimate of soil moisture deficit for the hydrological areas across the Kent and South London area. There may be significant variation within each area which must be considered when interpreting these data. EA soil moisture deficit data (Source EA Soil Moisture Model).

Number	Hydrological Area	SMD (mm) Day 31	End October LTA
6230TH	North Downs - South London (W)	98	70
6505TH	Upper Mole	37	56
6508TH	South London	129	94
6706So	Darent	126	89
6707So	North Kent Chalk	97	82
6708So	Stour	87	77
6709So	Dover Chalk	50	67
6710So	Thanet Chalk	171	203
6809So	Medway	38	59
6810So	Eastern Rother	23	54
6811So	Romney Marsh	72	70
6812So	North West Grain	144	123
6813So	Sheppey	125	110
	Kent & South London Average	92	89

4 River flows, groundwater levels and reservoir stocks

4.1 River flows, groundwater levels and reservoir stocks map

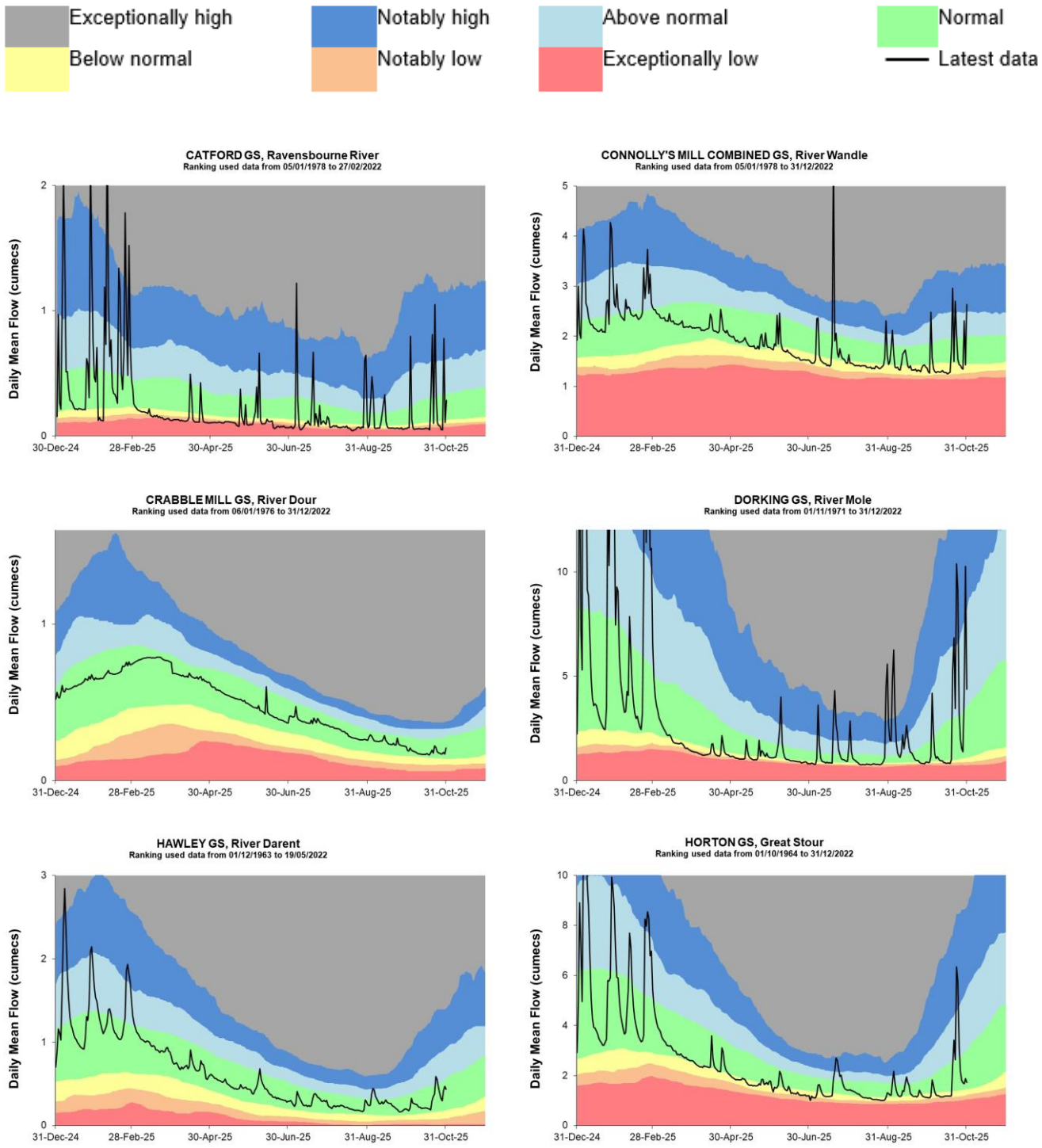
Figure 4.1: Monthly mean river flows* for indicator sites for October 2025, expressed as a percentage of the respective long term average (period 1992 – 2020) and classed relative to an analysis of historic October monthly means. End of month groundwater levels for indicator sites for October 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic October levels. Tables available in the appendices with detailed information. End of month levels for reservoirs** for October 2025, expressed as percent full. (Source: Water Companies).

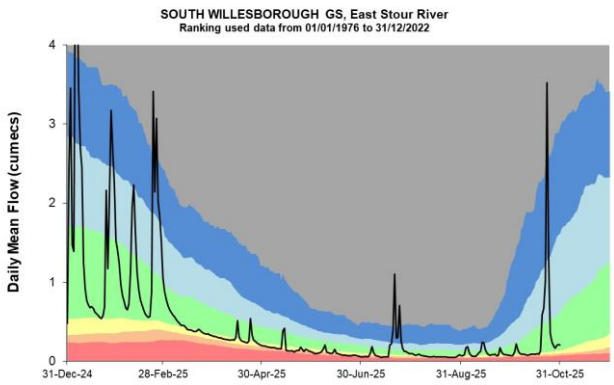


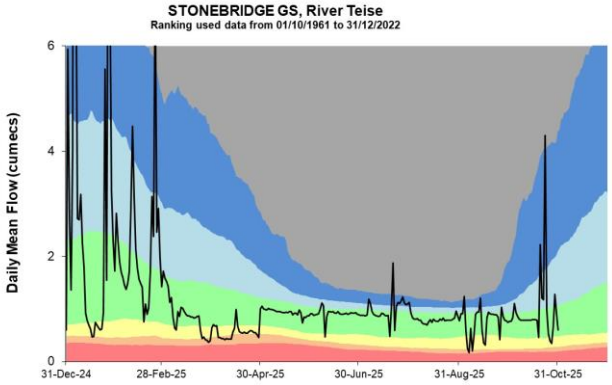
*Flows at gauging stations in the Medway catchment might be affected by upstream reservoir releases
**Weir Wood reservoir is currently offline

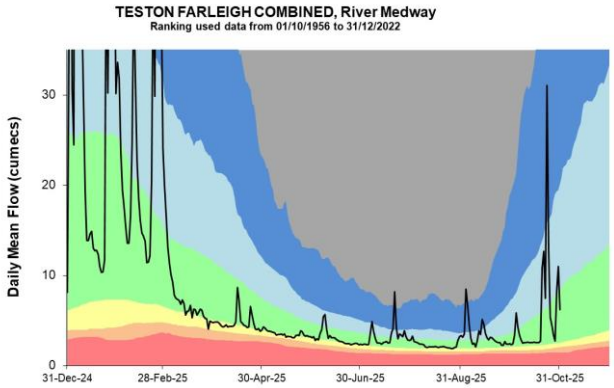
4.2 River flow charts

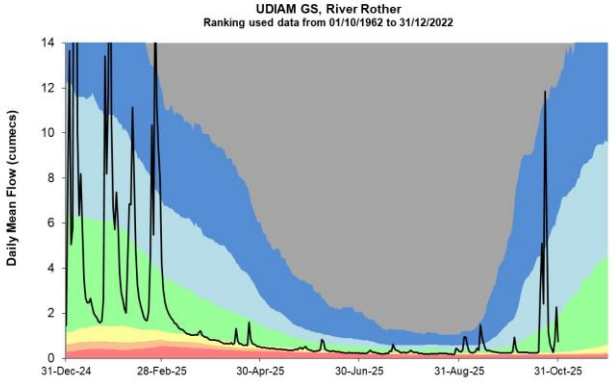
Figure 4.1: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.

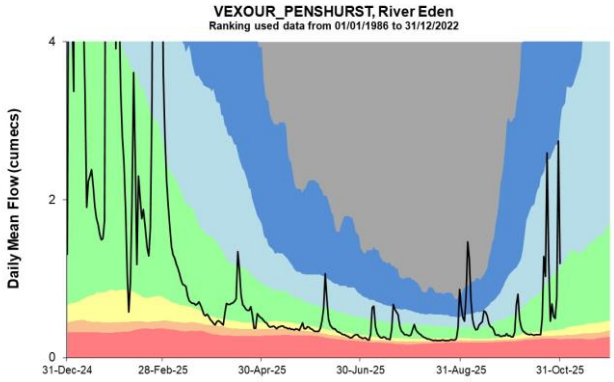










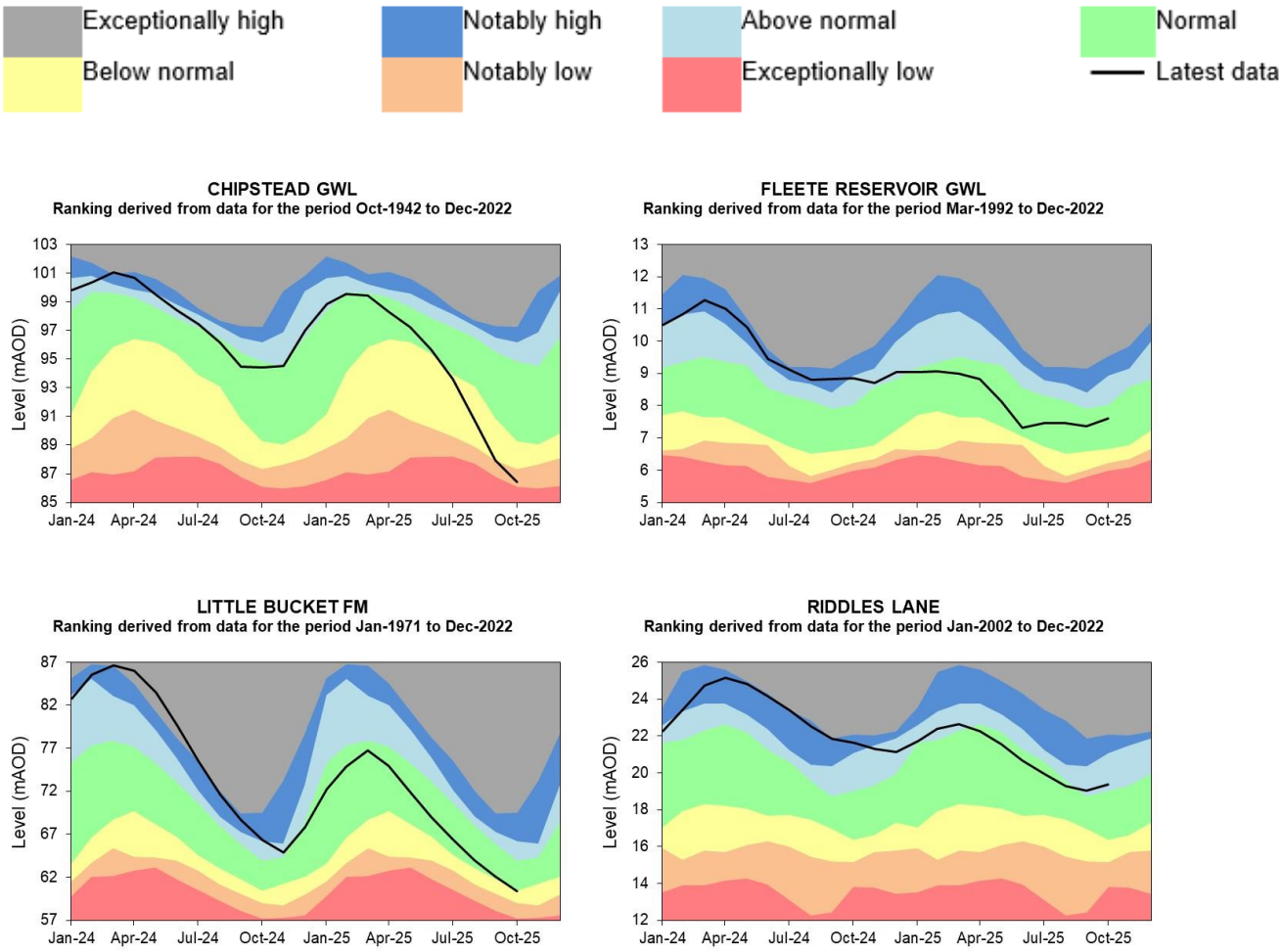


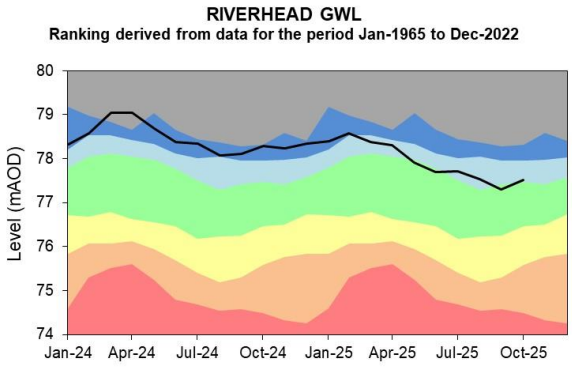
Source: Environment Agency.

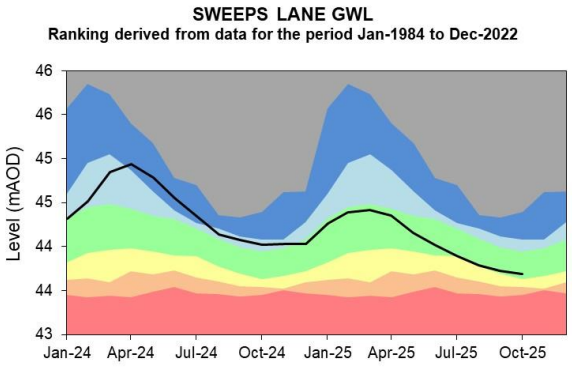
5 Groundwater levels

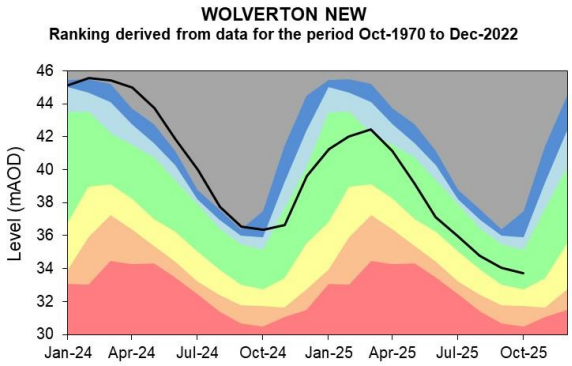
5.1 Groundwater level charts

Figure 5.1: 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.







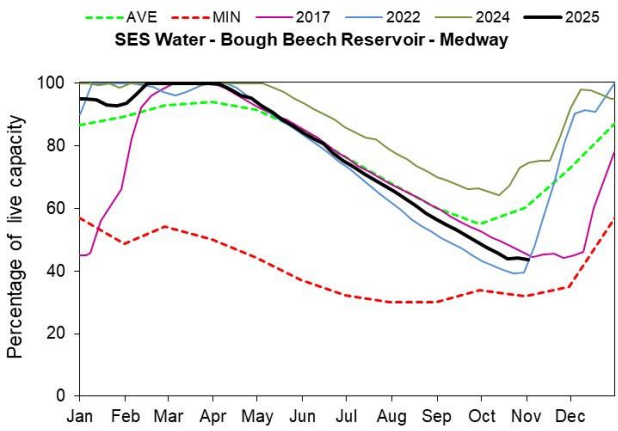


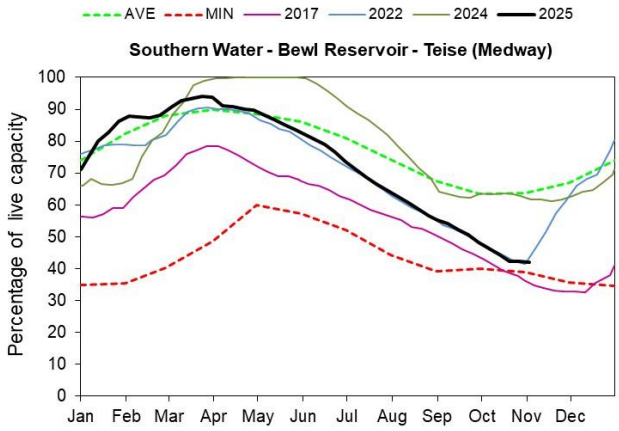
Source: Environment Agency, 2025.

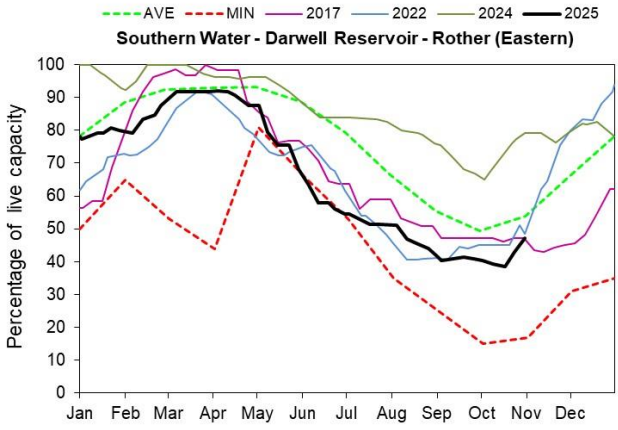
6 Reservoir stocks

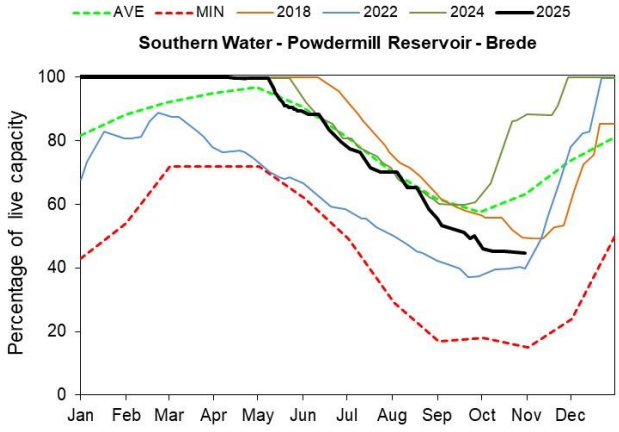
6.1 Reservoir stocks charts

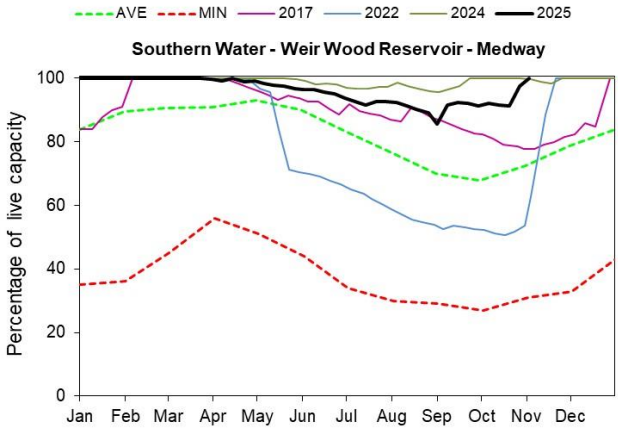
Figure 7.1: End of month regional reservoir stocks compared to long term maximum, minimum and average stocks. (Source: Water Companies). Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.











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	Oct 2025 rainfall % of long term average 1991 to 2020	Oct 2025 band	Aug 2025 to October cumulative band	May 2025 to October cumulative band	Nov 2024 to October cumulative band
North Downs - South London	121	Normal	Normal	Below normal	Below normal
Upper Mole	124	Above Normal	Normal	Normal	Normal
South London	114	Normal	Normal	Below normal	Notably low
River Darent	117	Normal	Normal	Below normal	Below normal
North Kent Chalk	137	Above Normal	Normal	Normal	Below normal
Stour	126	Above Normal	Normal	Normal	Normal
Dover Chalk	121	Normal	Normal	Normal	Normal
Thanet Chalk	109	Normal	Normal	Normal	Below normal
River Medway	132	Above Normal	Normal	Normal	Normal
Eastern Rother	128	Above Normal	Normal	Normal	Normal

Romney Marsh	123	Normal	Normal	Normal	Normal
North West Grain	116	Normal	Normal	Below normal	Notably low
Sheppey	131	Above Normal	Normal	Normal	Notably low

8.2 River flows table

Site name	River	Catchment	Oct 2025 band	Sep 2025 band
Catford Gs	River Ravensbourne	Ravensbourne	Below normal	Below normal
Connolly's Mill Combined Gs	River Wandle	Wandle	Normal	Below normal
Crabble Mill Gs	River Dour	Dour	Normal	Normal
Dorking Gs	River Mole	Mole Surrey	Normal	Above normal
Hawley Gs	River Darent and Cray	Darent and Cray	Normal	Normal
Horton Gs	Great Stour River	Great Stour	Normal	Normal
South Willesborough Gs	East Stour River	East Stour	Normal	Normal
Stonebridge Gs	River Teise	Teise	Normal	Normal
Teston Farleigh Combined	River Medway	Medway (Middle)	Normal	Normal
Udiam Gs	River Rother	Rother (Kent)	Normal	Normal
Vexour_penshurst	River Eden	Eden (Kent)	Normal	Normal

8.3 Groundwater table

Site name	Aquifer	End of Oct 2025 band	End of Sep 2025 band
Fleete Reservoir Gwl	Isle Of Thanet Chalk	Normal	Normal
Chipstead Gwl	Epsom North Downs Chalk	Notably low	Below normal
Little Bucket Fm	East Kent Chalk - Stour	Below normal	Normal
Riddles Lane	North Kent Swale Chalk	Above normal	Above normal
Riverhead Gwl	Kent Greensand	Above normal	Normal
Sweeps Lane Gwl	West Kent Chalk	Normal	Normal
Wolverton New	East Kent Chalk - Stour	Normal	Normal