Monthly water situation report:

South-east England

1 Summary - December 2025

December was another month when around the long term average (LTA) rainfall was recorded across the south-east of England. There was 105% of the monthly LTA rainfall recorded, with around 20% of the monthly totals measured on 18 December. The western halves of Thames (THM) and Solent and South Downs (SSD) experienced rainfall in the above normal category for December while the rest of the south east had rainfall in the normal category. The soil moisture deficits (SMDs) fell during the month, particularly after the rainfall on 18 December, but rose slightly during the dry week at the end of the month to end generally above the LTA for December. Recharge reflected the distribution of rainfall and SMDs. Where the SMDs were very low, there was significant recharge.

Hydrographs for most of the key flow indicator sites responded strongly to the rainfall on December 18, then fell in response to the dry weather towards the end of the month. All 16 indicator sites were in the normal or above, category for December. There were 98 fluvial flood alerts and 15 fluvial flood warnings issued during the month. Groundwater levels at 14 of the indicator sites rose during December, with significant rises at responsive sites on the south coast. The majority of the key indicator sites recorded levels in the normal range for the month. The reservoir stocks have all risen across the south east.

1.1 Rainfall

December was another month when around the LTA rainfall was recorded across the south east. There was 105% of the monthly LTA rainfall recorded. December began quite wet with over 50% of the monthly total on average, in the first 8 days. The wettest day was 18 December when around 20% of the monthly total was recorded. The top 5 daily rainfall totals were measured on 18 December, all in SSD with the highest daily total of 37.2mm recorded at Petersfield, Western Rother Greensand. All top 5 totals were greater than 30mm. Both Hertfordshire and North London (HNL) and Kent and South London (KSL) recorded their highest daily totals on 18 December, albeit a little less than SSD with 24mm and 30mm respectively. The highest daily total for THM was 33.9mm, recorded at Rapsgate, Cotswolds West on 15 December when a band of heavy rainfall clipped the top of the Thames catchment and the western half of SSD.
The western halves of THM and SSD experienced rainfall in the above normal category for December while the rest of the south east had rainfall in the normal category. On average there were 14 ‘dry’ days (less than 0.2mm rainfall in a day). These were largely in the second

and last week of the month. The year ended with a particularly dry and cold snap across the south east, with a dusting of snow overnight on 30 December.

1.2 Soil moisture deficit and recharge

The SMDs fell during the month, particularly after the wet start to the month and rainfall on 18 December, but rose slightly during the dry week at the end of the month to be generally above the LTA for December. The SMDs for areal units towards the west fell to zero and remained close to zero during the month. However, the drier east still had significant SMDs at the end of December.

Recharge reflected the distribution of rainfall and SMDs. Where the SMDs were very low, there was significant recharge, for example Test Chalk and the Isle of Wight (both SSD) and the Cotswolds (THM). The recharge for SSD on average was greater than the LTA for December. By contrast, the average recharge for HNL was only 13%.

1.3 River flows

Unsurprisingly, hydrographs for most of the key flow indicator sites responded to the wet weather at the beginning of the month and strongly to the rainfall on December 18. Flows then fell in response to the dry weather towards the end of the month. This was particularly the case for the sites on the River Thames (THM) and rivers draining impermeable catchments, for example Lymington River at Brockenhurst (SSD) and the Medway at Teston and East Farleigh (KSL). All 16 indicator sites were in the normal or above category for December. Four sites were at notably high flows, including the Arun at Alfoldean (SSD) which had the 4th highest December flow on record, the highest since 2019. There were 98 flood alerts and 15 flood warnings issued during the month.

Area	HNL	THM	SSD	KSL	Total
Fluvial alerts	3	51	32	12	98
Warnings	0	1	13	1	15
Severe Warning	0	0	0	0	0
GW alerts	0	0	0	0	0
Total	3	52	45	13	113

1.4 Groundwater levels

Groundwater levels at 14 of the indicator sites rose during December. The exceptions were Stonor (Chilterns, THM) and Lilley Bottom (HNL) where levels continued to fall. Responsive boreholes on the south coast in SSD had the largest groundwater rises with Chilgrove levels rising by 22m and Houndean by 12m since November. The majority of the sites recorded levels in the normal range for the month. The 3 exceptions were Jackaments (THM) where levels were above normal; Sweeps Lane (KSL) with below normal levels and Chipstead (KSL) with exceptionally low levels. Chipstead had the third lowest level on record (started in 2002) and was the lowest level since 2011.

1.5 Reservoir stocks

The reservoir stocks have all risen across the south-east of England. However, stocks remained below average for December at all reservoirs except Farmoor (THM), Bough Beech (KSL) and Weir Wood (KSL) which ended the month above the LTA and Lower Lee (HNL) and Powdermill (KSL) which were both average for December.

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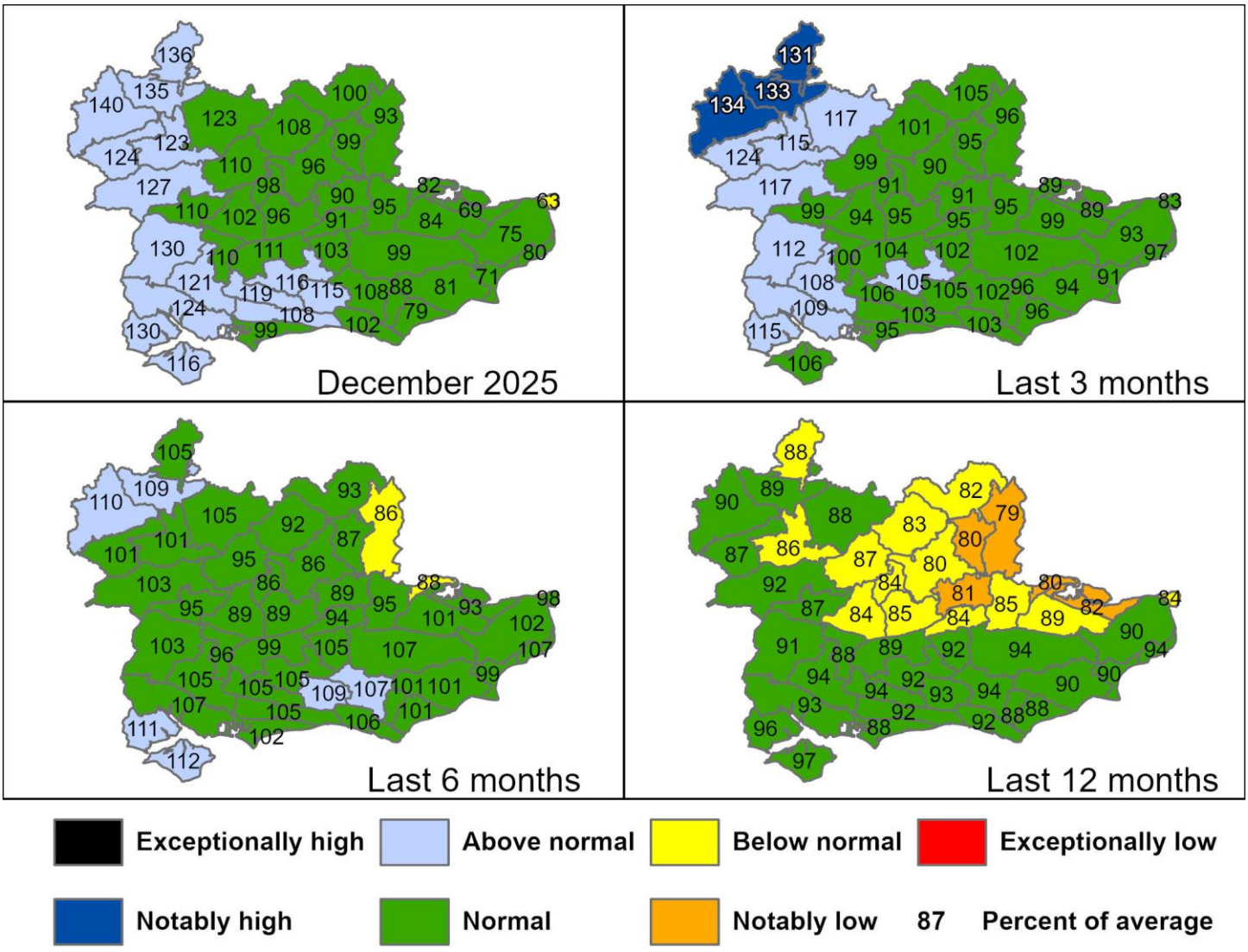
2 Maps

2.1 Rainfall map

Figure 2.1: Total rainfall for hydrological areas for the current month (up to 31 December 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. The numbers refer to percentage of the 1991-2020 long term average.

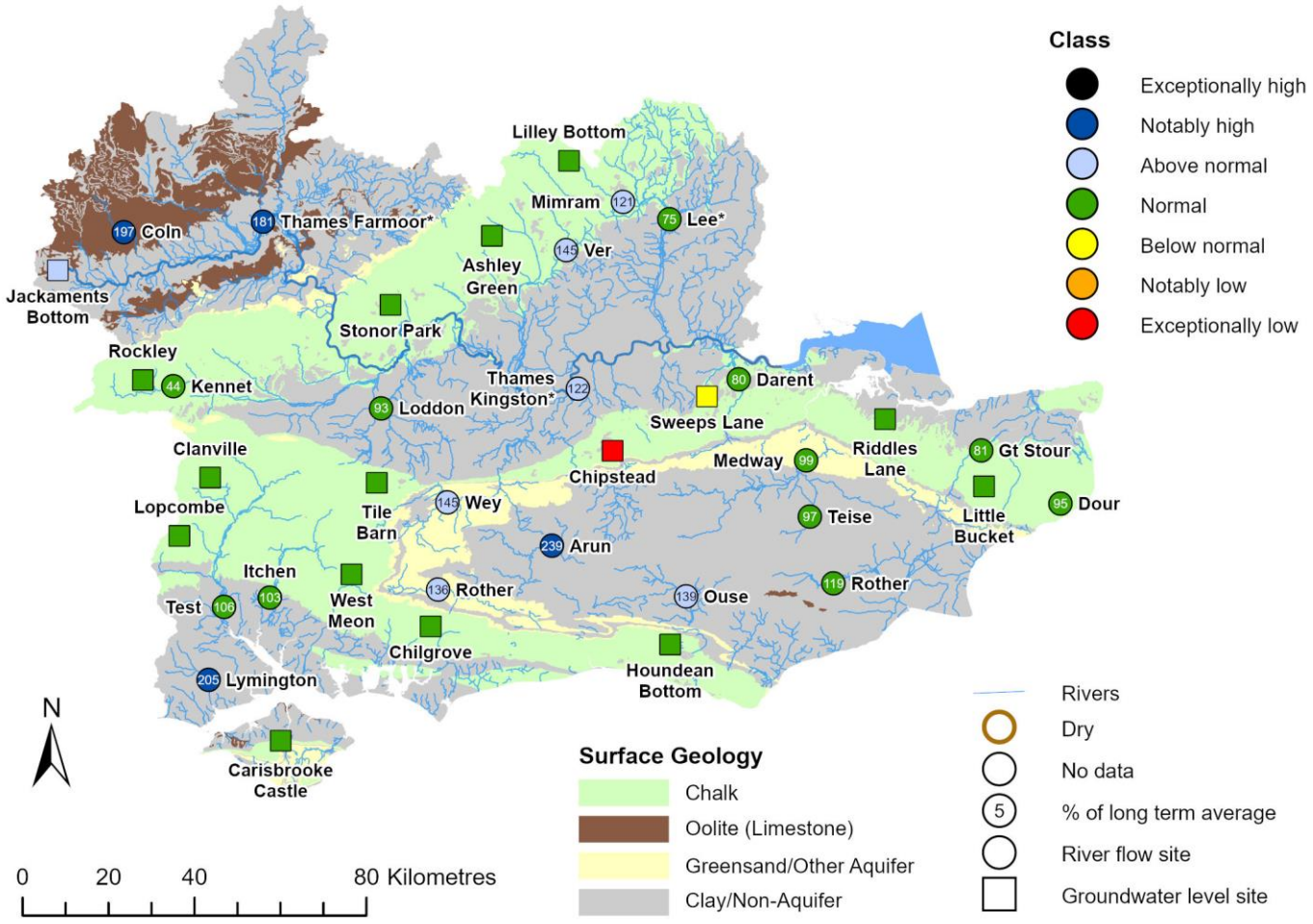


Rainfall data for Oct 2023 onwards, extracted from Environment Agency 1km gridded rainfall dataset derived from Environment Agency intensity rain gauges. (Source: Environment Agency. Crown Copyright 2026 AC0000807064). Rainfall data prior to Oct 2023 extracted from Met Office HadUK 1km gridded rainfall dataset derived from registered rain gauges. (Source: Met Office. Crown copyright, 2026).

2.2 River flows and groundwater levels map

Figure 2.2: Monthly mean river flow for indicator sites for December 2025, expressed as a percentage of the respective long term average and classed relative to an analysis of historic December monthly means Table available in the appendices with detailed information. Groundwater levels for indicator sites at the end of December 2025, classed relative to an analysis of respective historic December levels. Table available in the appendices with detailed information.

Flows at gauging stations in the Medway catchment (KSL) might be affected by upstream reservoir releases.



(Source: Environment Agency). © Ordnance Survey Crown Copyright and Database Rights 2026 AC0000807064. Geological map reproduced with kind permission from UK Groundwater Forum, BGS copyright NERC. © Ordnance Survey Crown Copyright and Database Rights 2026 AC0000807064.

3 Rainfall, effective rainfall and soil moisture deficit tables

3.1 Rainfall, effective rainfall and soil moisture deficit table

Figure 3.1: This is a second estimate of areal rainfall, effective rainfall (percolation or runoff) and SMDs for a selection of the hydrological areas across the south-east of England. 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 Figure 3.2.

Number	Hydrological Area	Rainfall (mm) 31 day Total	December % LTA	Effective Rainfall (mm) 31 day total	December % LTA	SMD (mm) Day 31	End Dec LTA
6010TH	Cotswolds - West (A)	128	140%	119	162%	4	3
6070TH	Berkshire Downs (G)	105	127%	64	113%	4	11
6130TH	Chilterns - West (M)	81	110%	11	25%	10	16
6162TH	North Downs - Hampshire (P)	109	110%	78	97%	4	4
6190TH	Wey - Greensand (S)	106	111%	74	98%	4	5
	Thames Average	90	118%	43	84%	9	12
	Thames Catchment Average	90	114%	42	80%	10	11
6140TH	Chilterns - East - Colne (N)	81	108%	11	25%	25	18
6600TH	Lee Chalk	62	100%	8	35%	62	42
6507TH	North London	61	96%	0	0%	51	24
6509TH	Roding	55	93%	0	0%	59	30
	Herts and North London	64	99%	4	13%	49	28
6230TH	North Downs - South London (W)	79	91%	16	26%	4	8
6706So	Darent	70	96%	10	24%	42	22

6707So	North Kent Chalk	65	84%	9	18%	15	16
6708So	Stour	64	75%	10	17%	2	12
6809So	Medway	90	100%	81	114%	4	5
	Kent & South London Average	67	84%	30	60%	33	26
6701So	Test Chalk	121	130%	91	125%	4	5
6702So	East Hampshire Chalk	127	121%	118	131%	4	2
6703So	West Sussex Chalk	122	108%	113	116%	4	3
6804So	Arun	114	116%	106	128%	4	2
6805So	Adur	115	114%	106	125%	4	2
	Solent & South Downs Average	115	111%	104	123%	4	4
	South East Average	88	105%	54	91%	19	15

HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

EA effective rainfall and soil moisture deficit data (Source EA Soil Moisture Model 2026.)

3.2 Seasonal summary table of rainfall and effective rainfall

Figure 3.2 This is a seasonal estimate of areal rainfall and effective rainfall (percolation or runoff) for a selection of the hydrological areas across the South east of England, 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.

Winter period 01/10/2025 to 31/12/2025

Number	Hydrological Area	Seasonal Rainfall (mm) Total	Seasonal Rainfall as % LTA	Seasonal Effective Rainfall (mm) Total	Seasonal Effective Rainfall as % LTA
6010TH	Cotswolds - West (A)	363	134%	180	113%
6070TH	Berkshire Downs (G)	300	117%	91	81%
6130TH	Chilterns - West (M)	237	99%	32	34%
6162TH	North Downs - Hampshire (P)	306	100%	105	65%
6190TH	Wey - Greensand (S)	306	104%	102	66%
	Thames Average	266	111%	57	57%
	Thames Catchment Average	265	108%	58	56%
6140TH	Chilterns - East - Colne (N)	239	102%	32	35%
6600TH	Lee Chalk	208	105%	27	54%
6507TH	North London	186	90%	0	0%
6509TH	Roding	183	96%	0	0%
	Herts and North London	202	97%	12	21%
6230TH	North Downs - South London (W)	253	94%	40	32%

6706So	Darent	216	95%	29	36%
6707So	North Kent Chalk	237	99%	32	34%
6708So	Stour	244	93%	34	30%
6809So	Medway	276	102%	100	72%
	Kent & South London Average	231	94%	48	50%
6701So	Test Chalk	323	112%	119	82%
6702So	East Hampshire Chalk	348	108%	175	92%
6703So	West Sussex Chalk	348	103%	198	94%
6804So	Arun	315	105%	145	86%
6805So	Adur	319	105%	174	98%
	Solent & South Downs Average	325	104%	160	92%
	South East Average	267	103%	81	69%

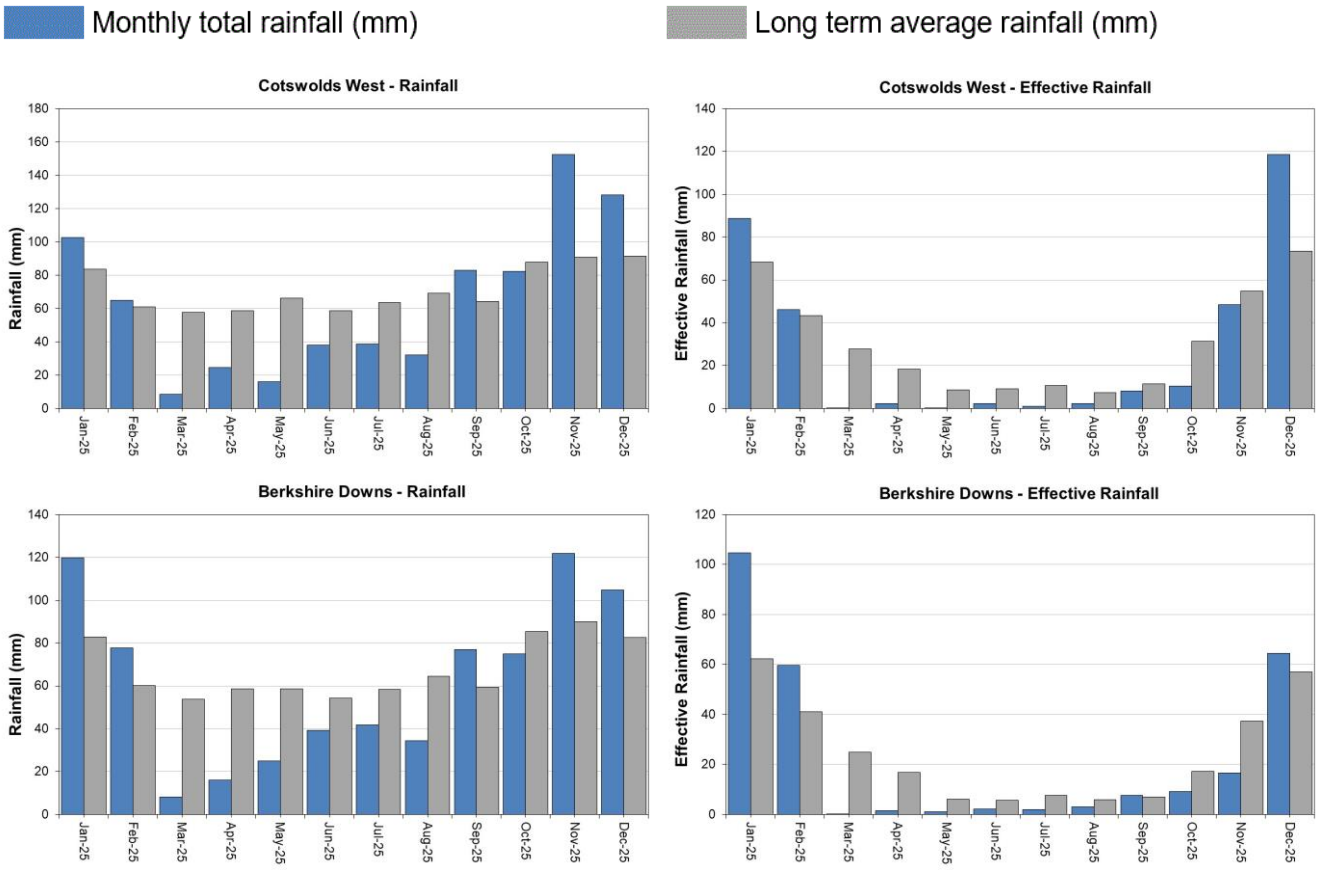
HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

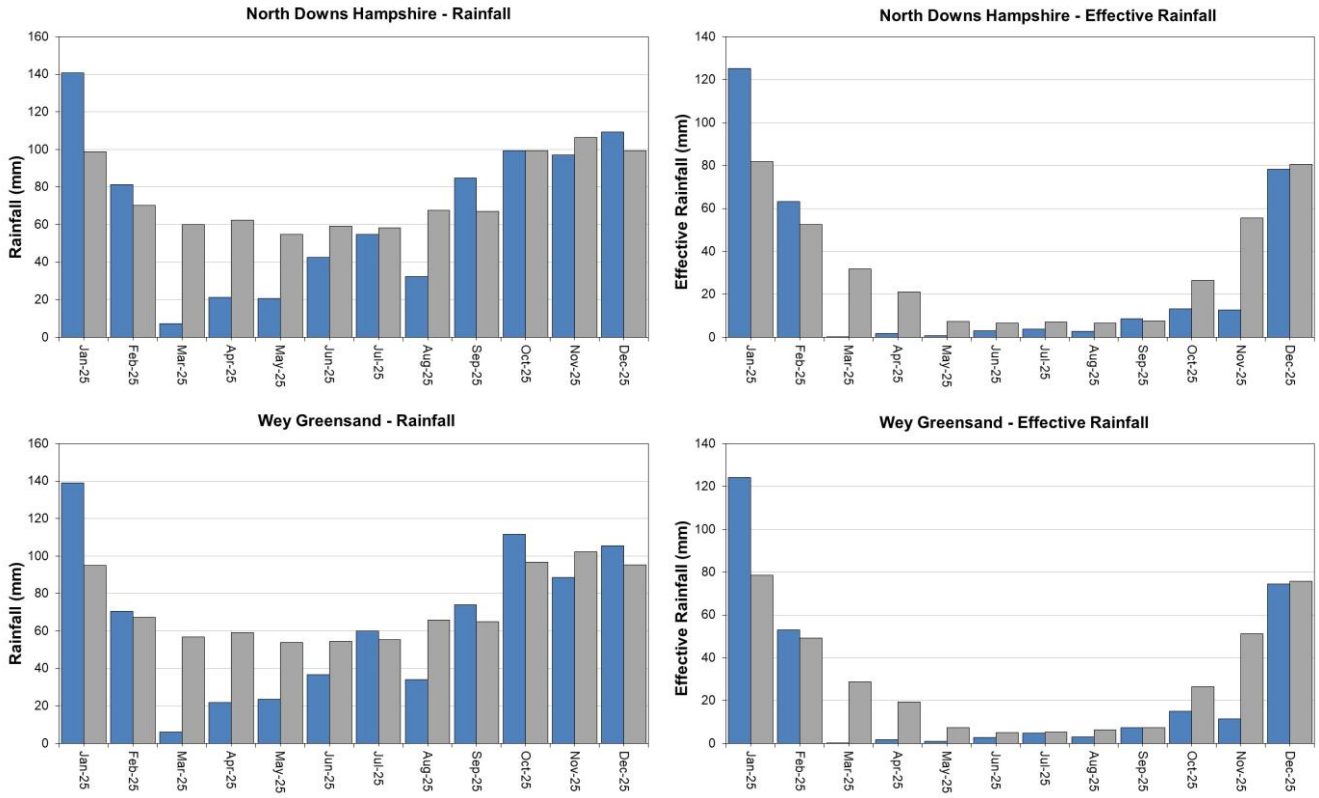
EA effective rainfall data (Source EA Soil Moisture Model 2026.)

4 Thames

4.1 Thames Rainfall and effective rainfall charts

Figure 4.1: Monthly rainfall and effective rainfall totals for the past 24 months compared to the 1991 to 2020 long term average for a selection of areal units.



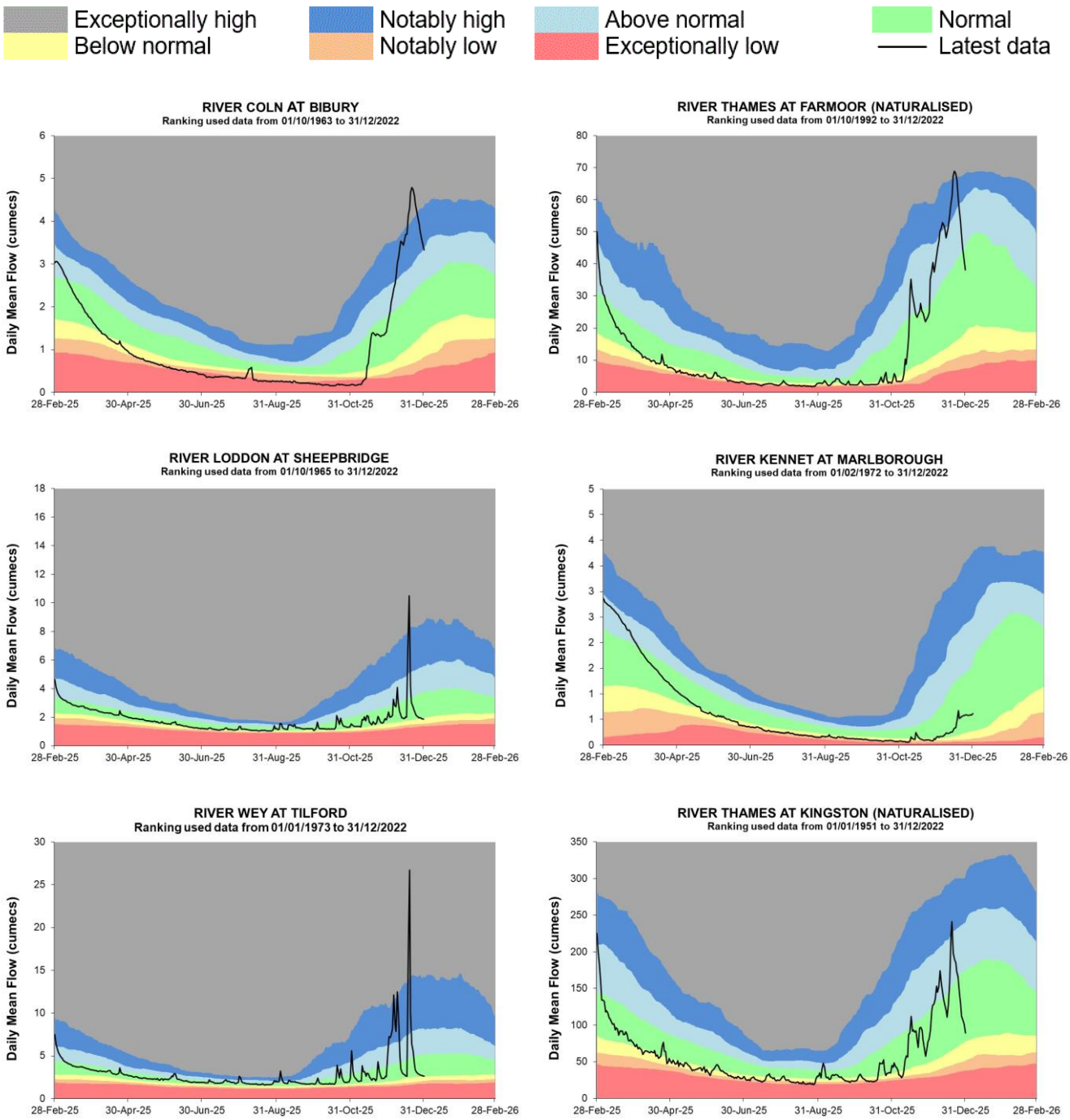


HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

EA effective rainfall data (Source EA Soil Moisture Model, 2026).

4.2 Thames River flow charts

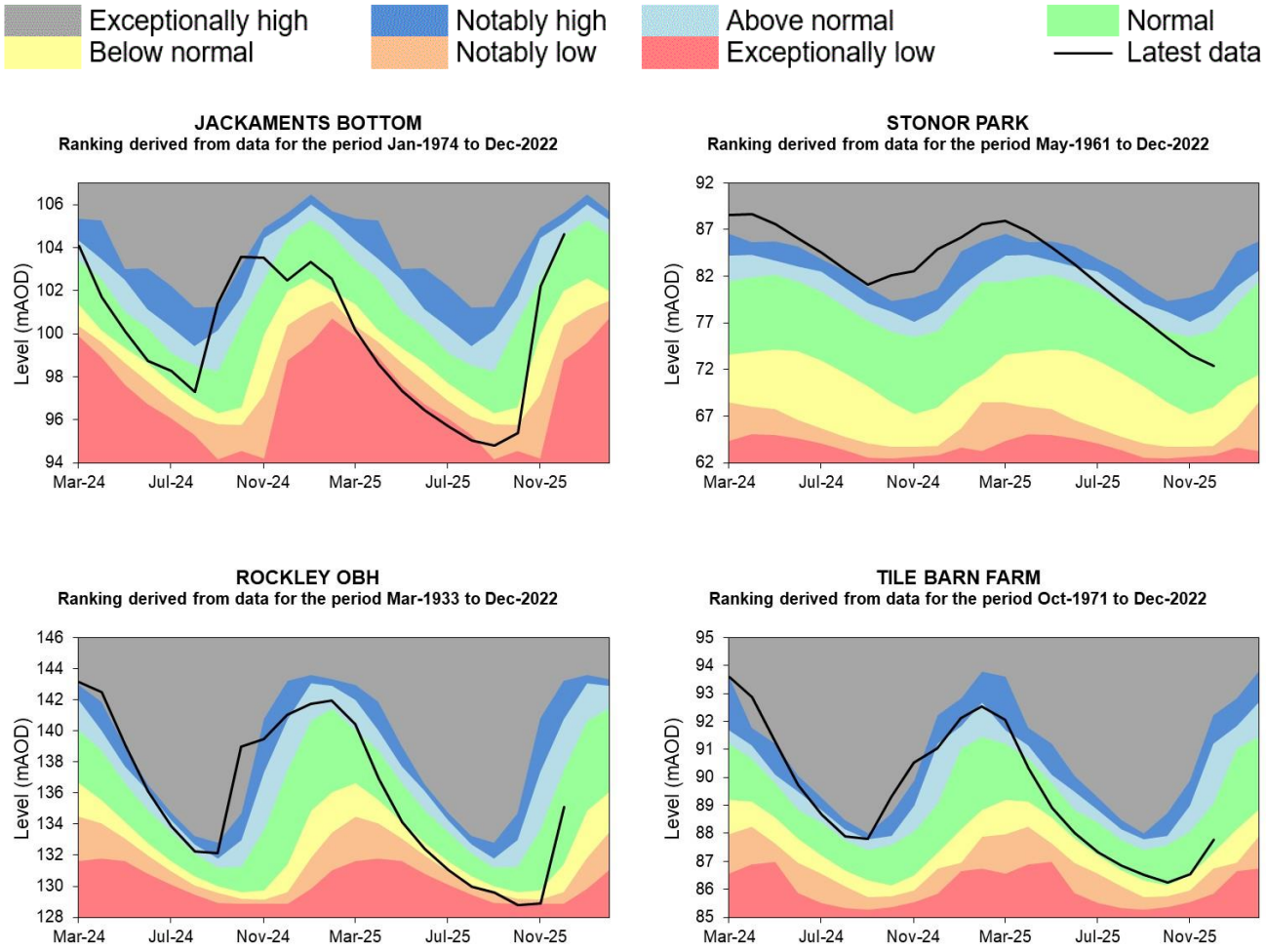
Figure 4.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



Source: Environment Agency. 2026

4.3 Thames Groundwater level charts

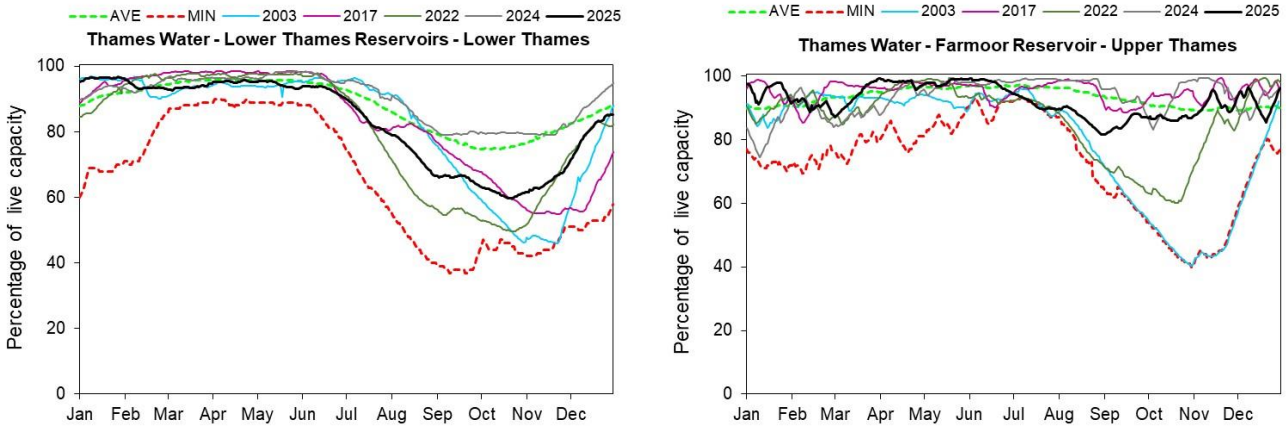
Figure 4.3: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels. Long Sutton will be replacing Tile Barn Farm in January 2026.



Source: Environment Agency, 2026.

4.4 Thames Reservoir stocks

Figure 4.4: End of month regional reservoir stocks compared to long term maximum, minimum and average stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.

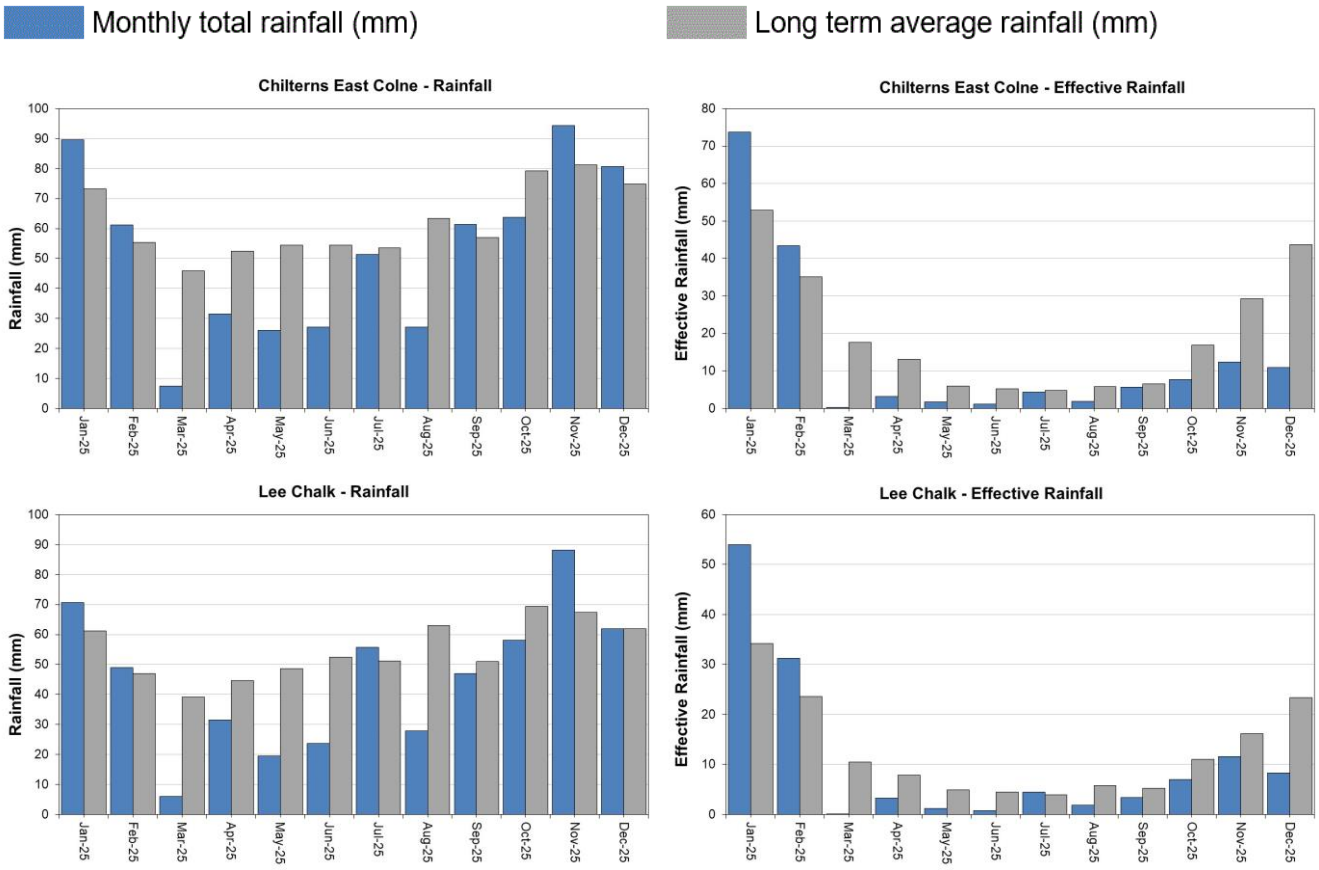


(Source: water companies).

5 Hertfordshire and North London (HNL)

5.1 HNL Rainfall and Effective rainfall charts

Figure 5.1: Monthly rainfall and effective rainfall totals for the past 24 months compared to the 1991 to 2020 long term average for a selection of areal units.



HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

EA effective rainfall data (Source EA Soil Moisture Model, 2026).

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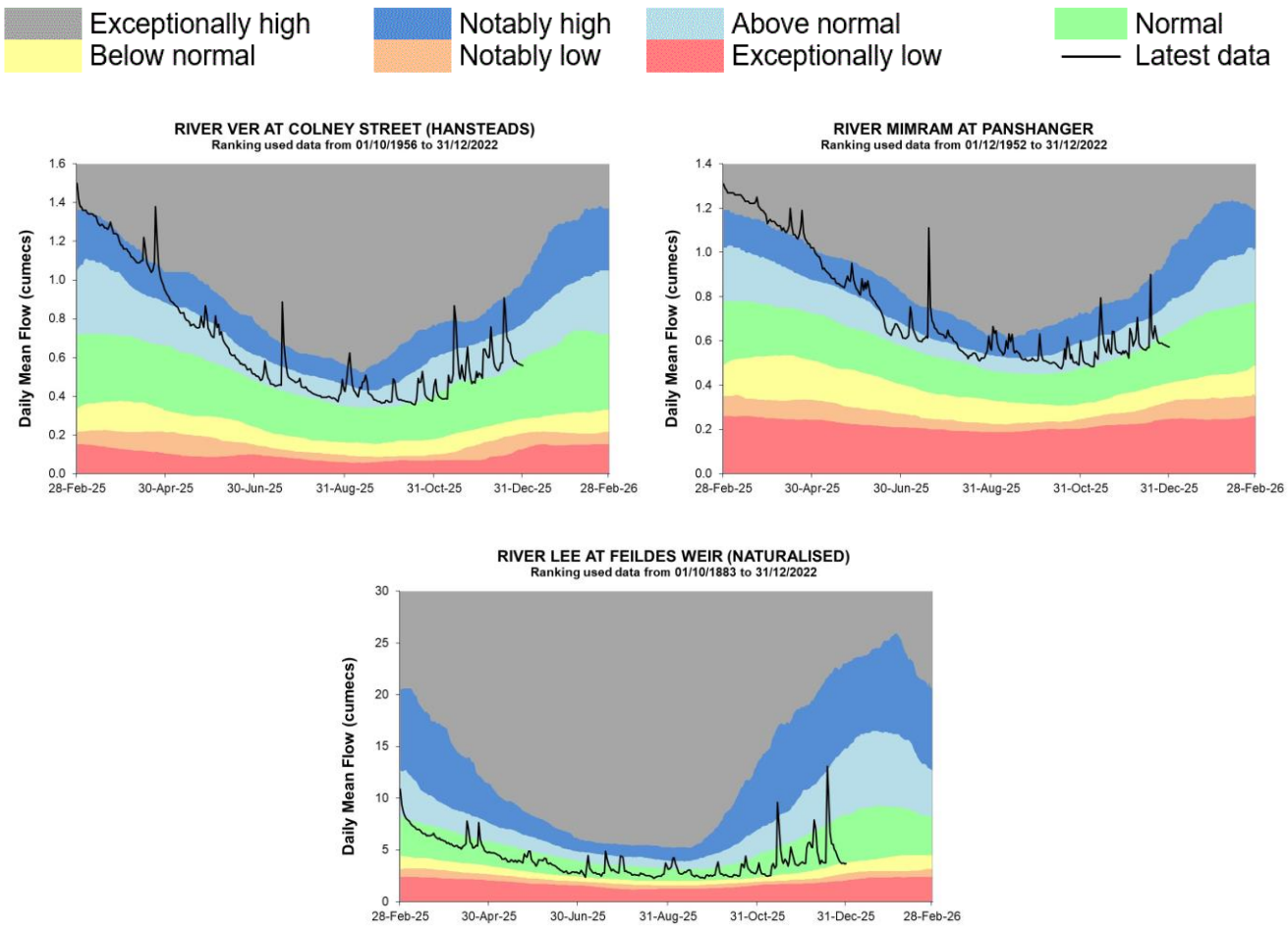

Source: Environment Agency. 2026

5.3 HNL Groundwater level charts

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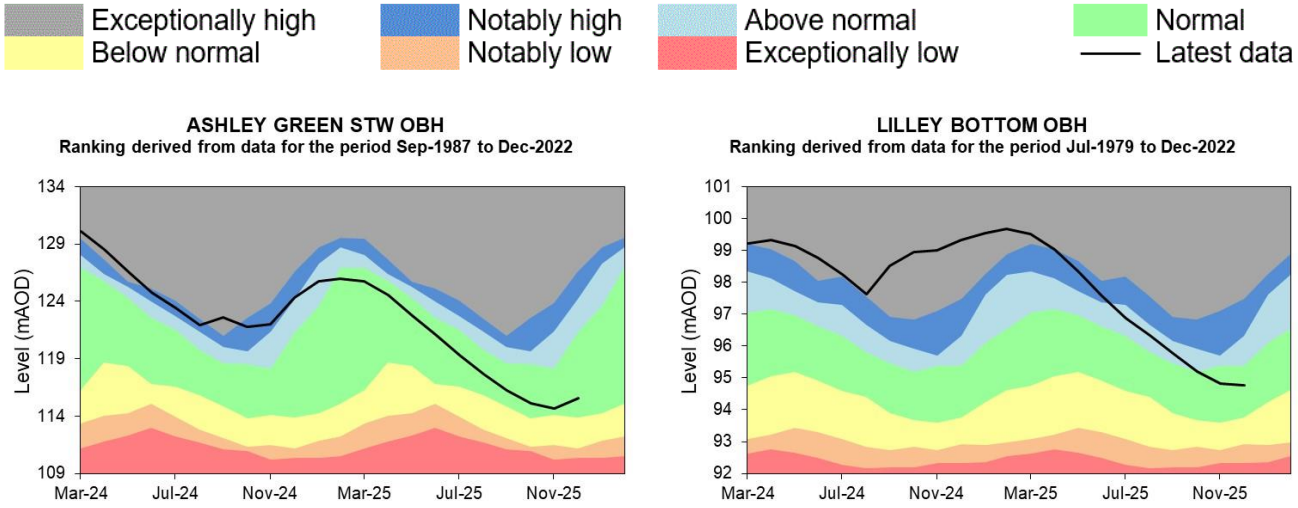
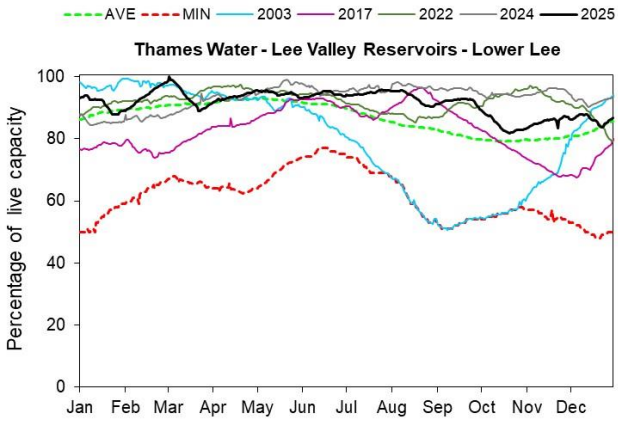


Source: Environment Agency, 2026.

5.4 HNL Reservoir stocks

Figure 5.4: End of month regional reservoir stocks compared to long term maximum, minimum and average stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.

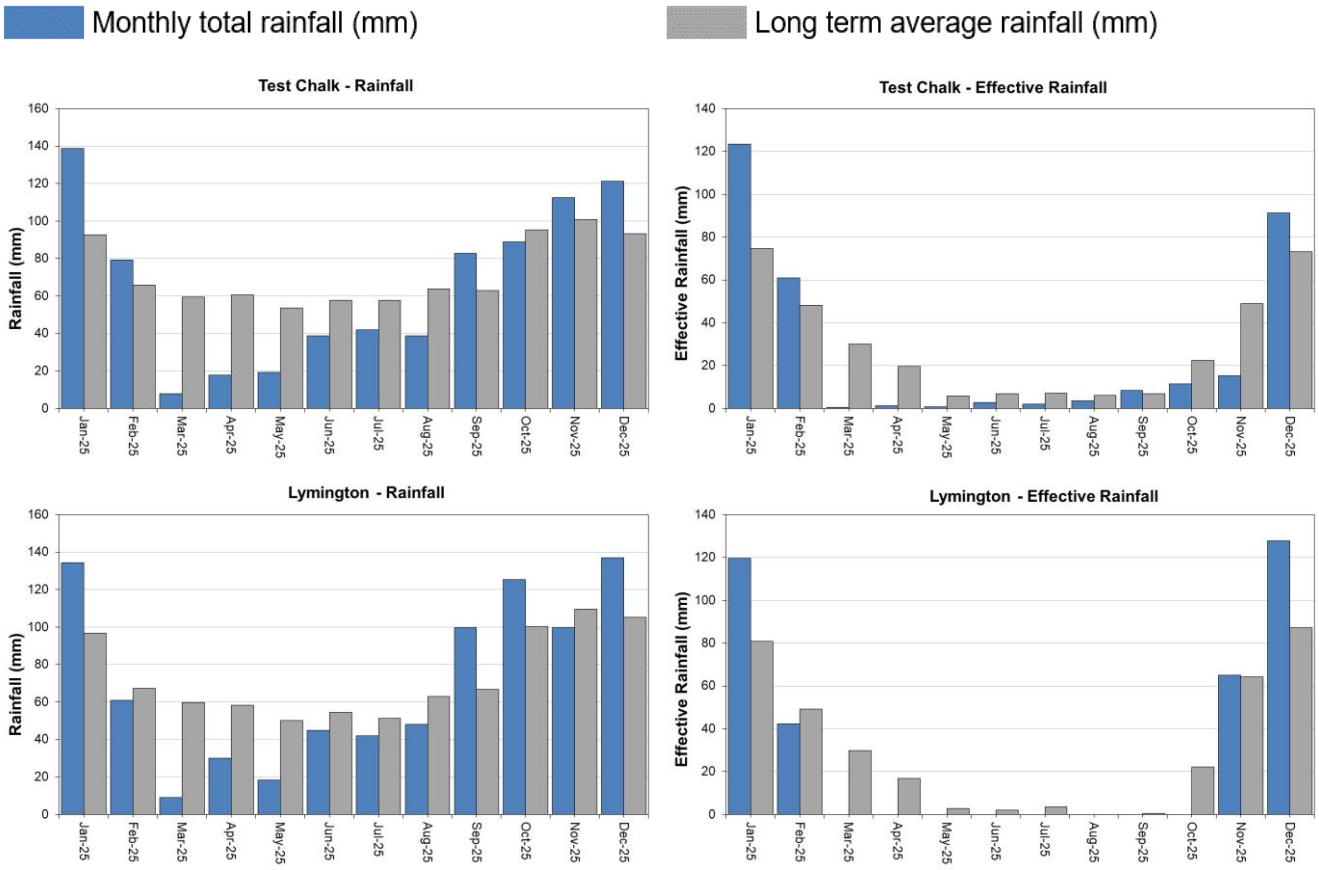


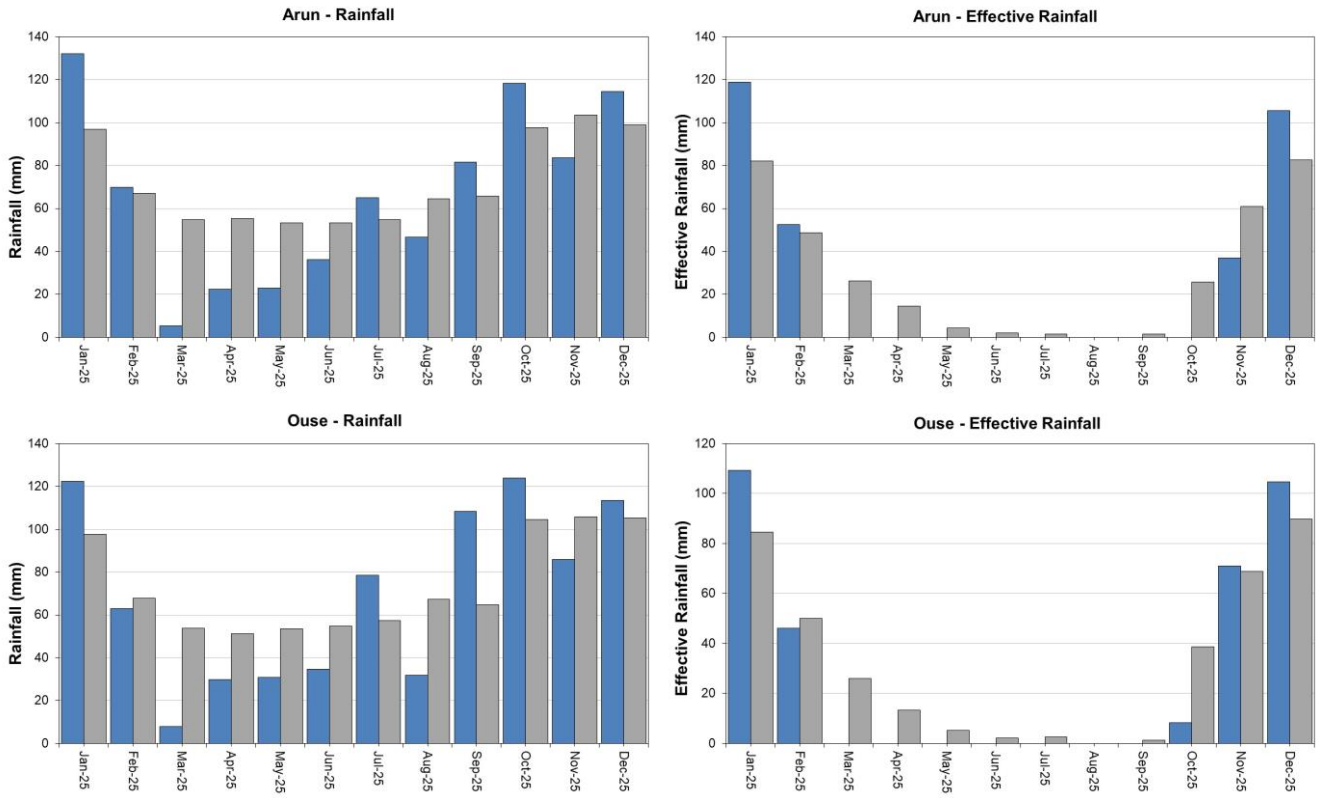
(Source: water companies).

6 Solent and South Downs (SSD)

6.1 SSD Rainfall and Effective Rainfall charts

Figure 6.1: Monthly rainfall and effective rainfall totals for the past 24 months as a percentage of the 1991 to 2020 long term average for a selection of areal units.



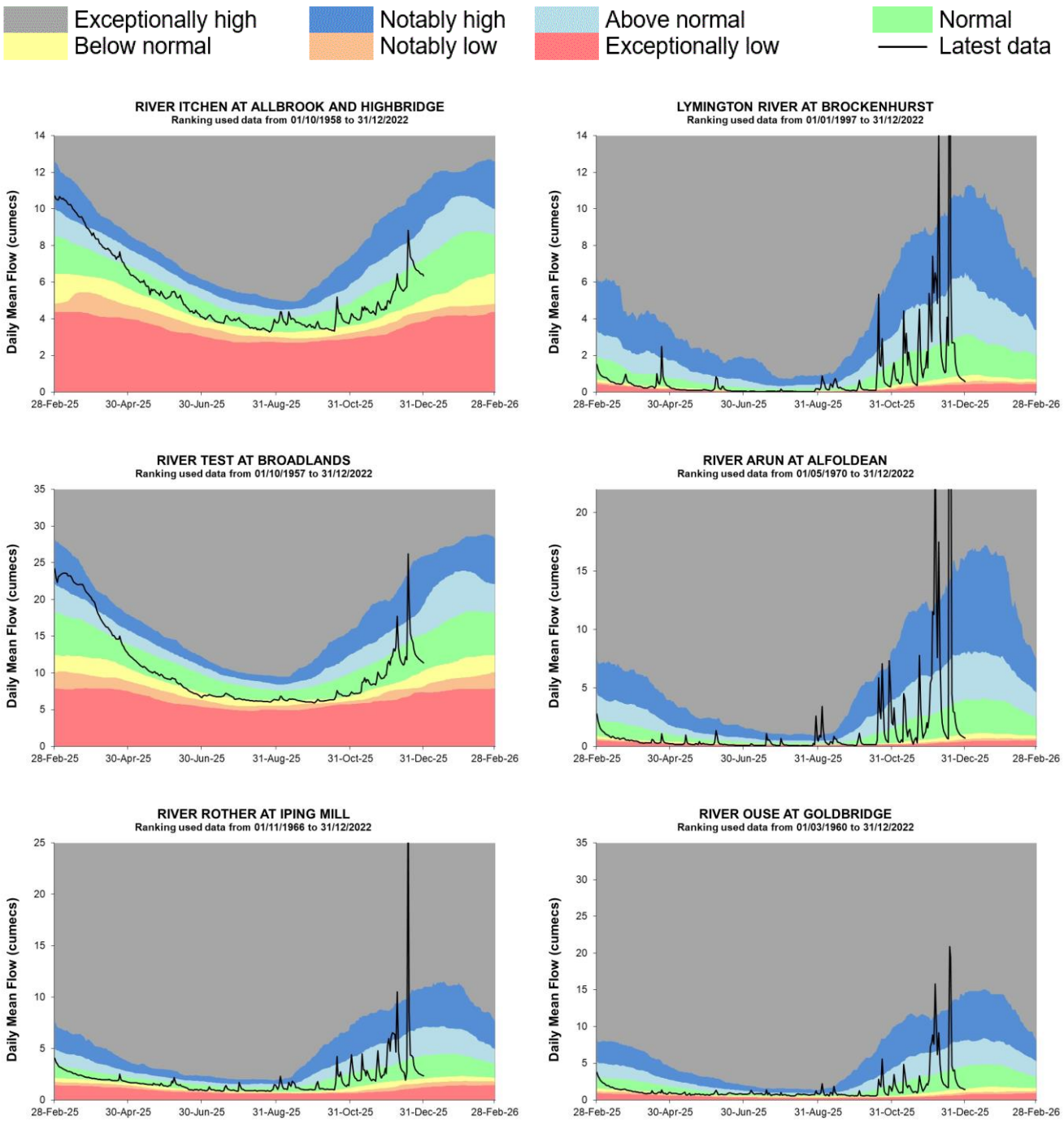


HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

EA effective rainfall data (Source EA Soil Moisture Model, 2026).

6.2 SSD River flow charts

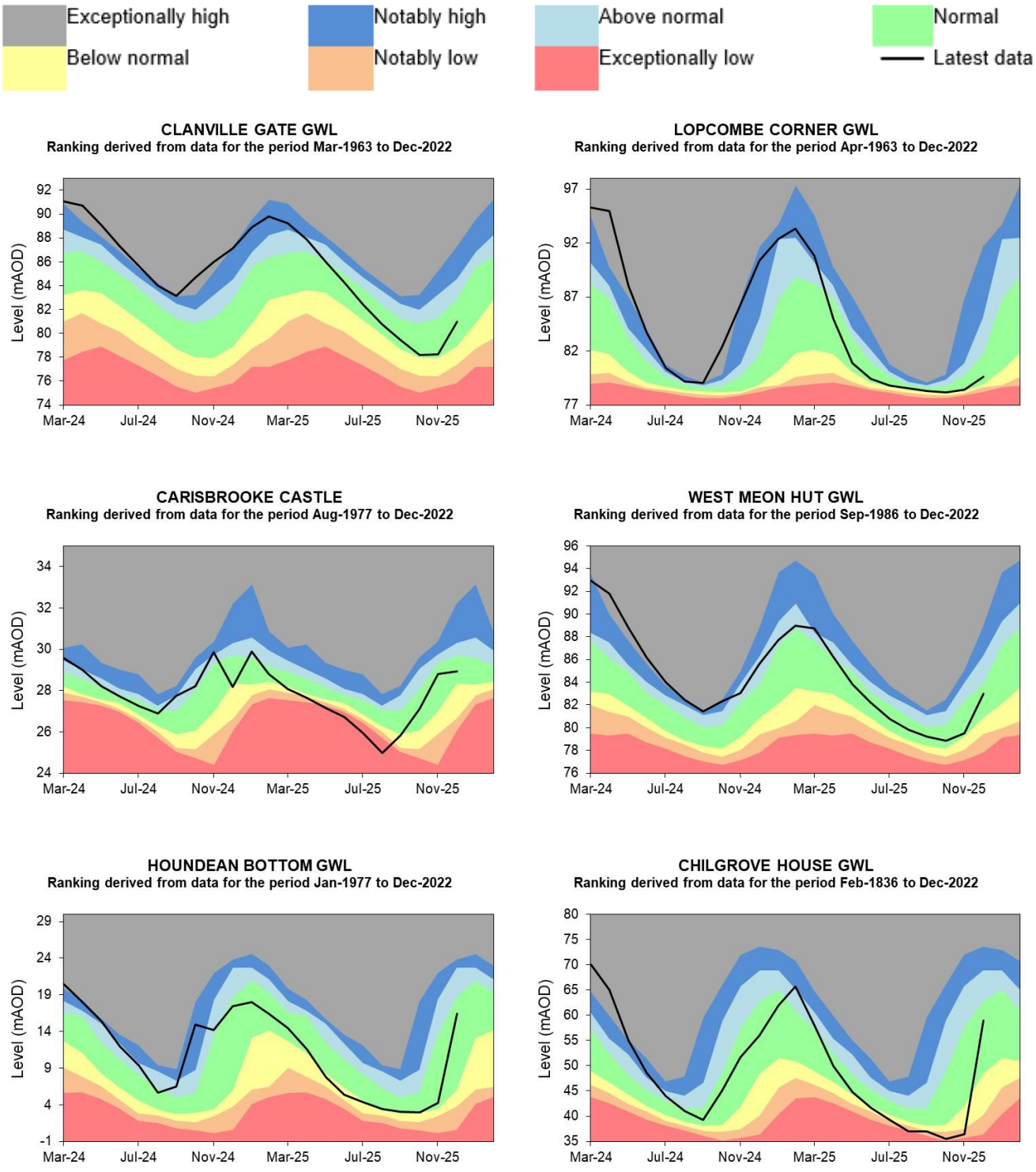
Figure 6.2: Daily mean river flow for index sites over the past year, compared to an analysis of historic daily mean flows, and long term maximum and minimum flows.



Source: Environment Agency. 2026

6.3 SSD Groundwater levels

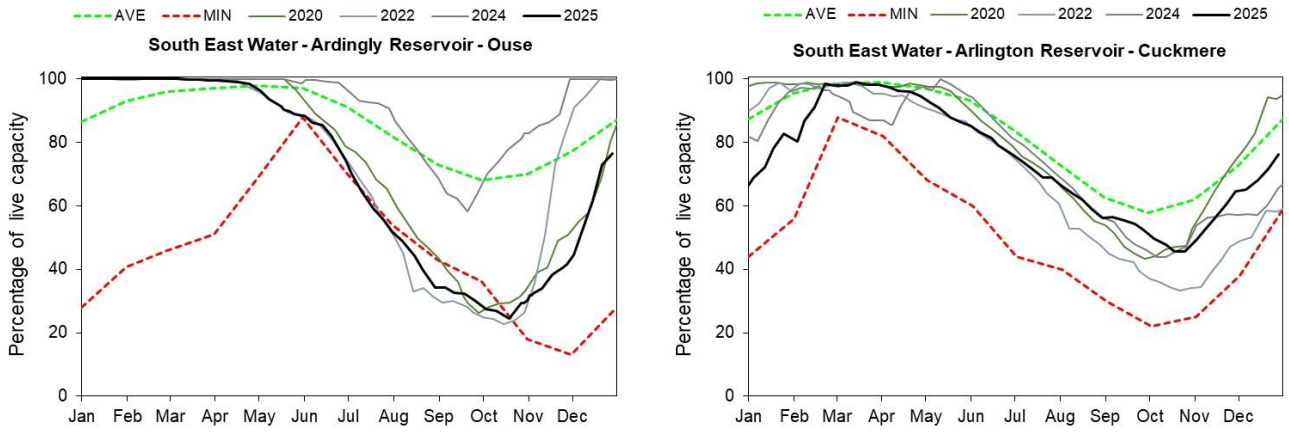
Figure 6.3: End of month groundwater levels at index groundwater level sites for major aquifers. 22 months compared to an analysis of historic end of month levels and long term maximum and minimum levels.



Source: Environment Agency, 2026.

6.4 SSD Reservoir stocks

Figure 6.4: End of month regional reservoir stocks compared to long term maximum, minimum and average stocks. Note: Historic records of individual reservoirs and reservoir groups making up the regional values vary in length.

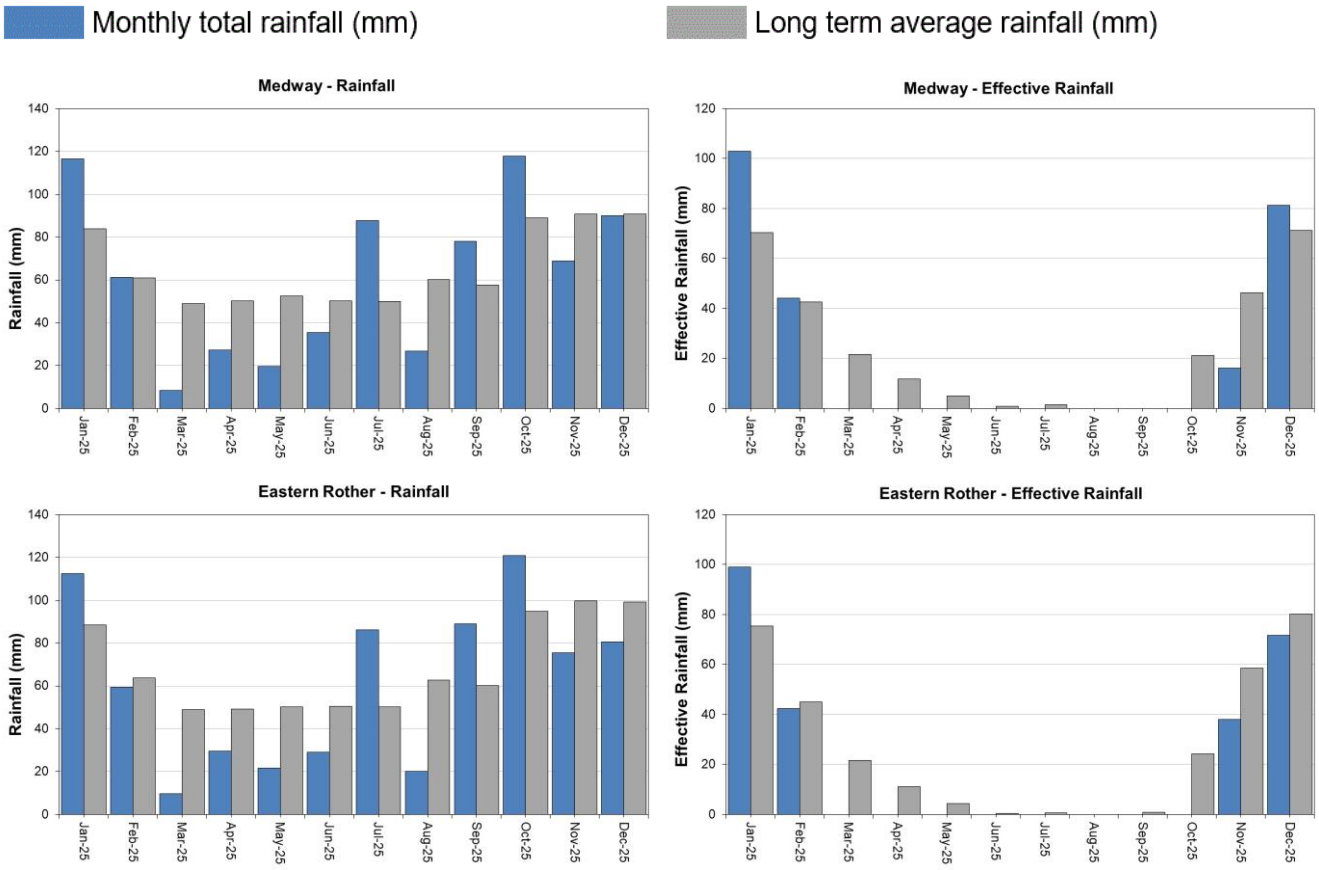


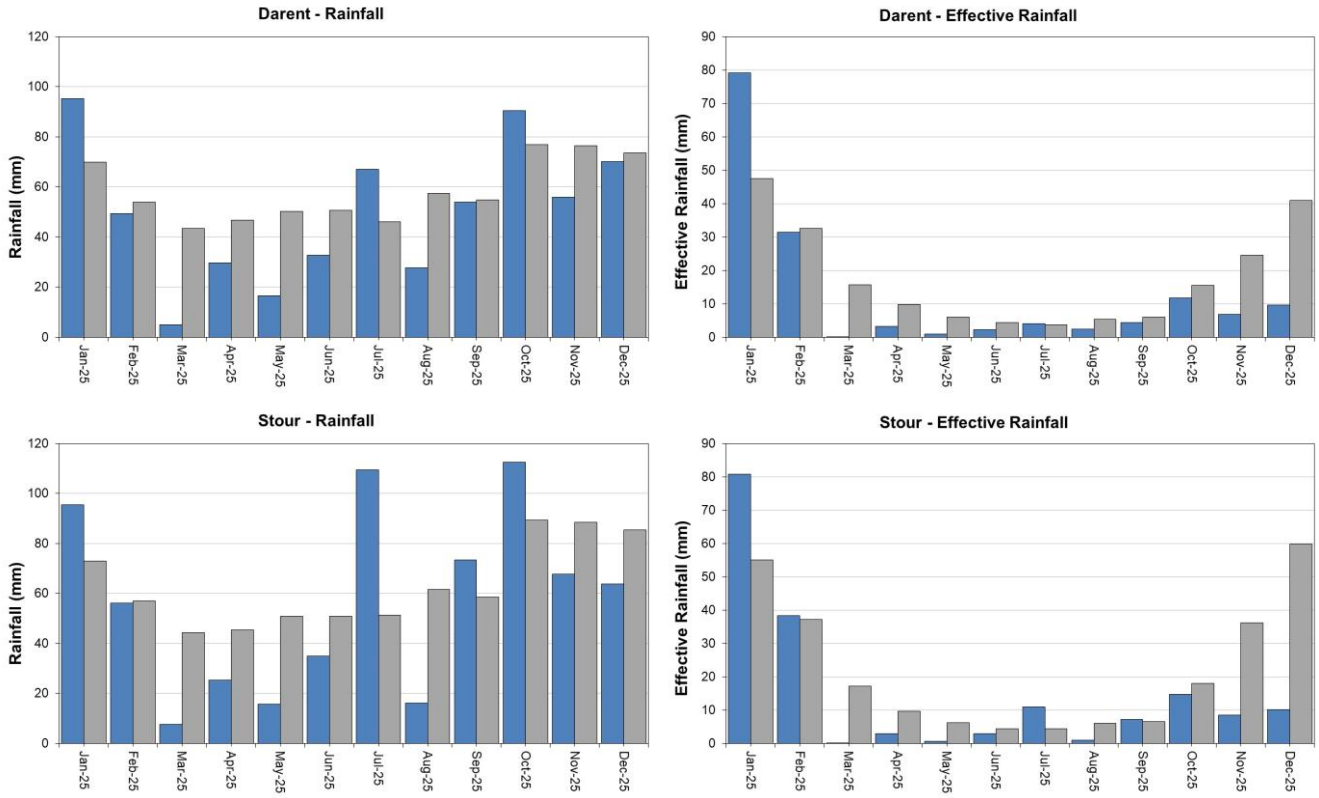
(Source: water companies).

7 Kent and South London (KSL)

7.1 KSL Rainfall and Effective Rainfall charts

Figure 7.1: Monthly rainfall and effective rainfall totals for the past 24 months compared to the 1991 to 2020 long term average for a selection of areal units.



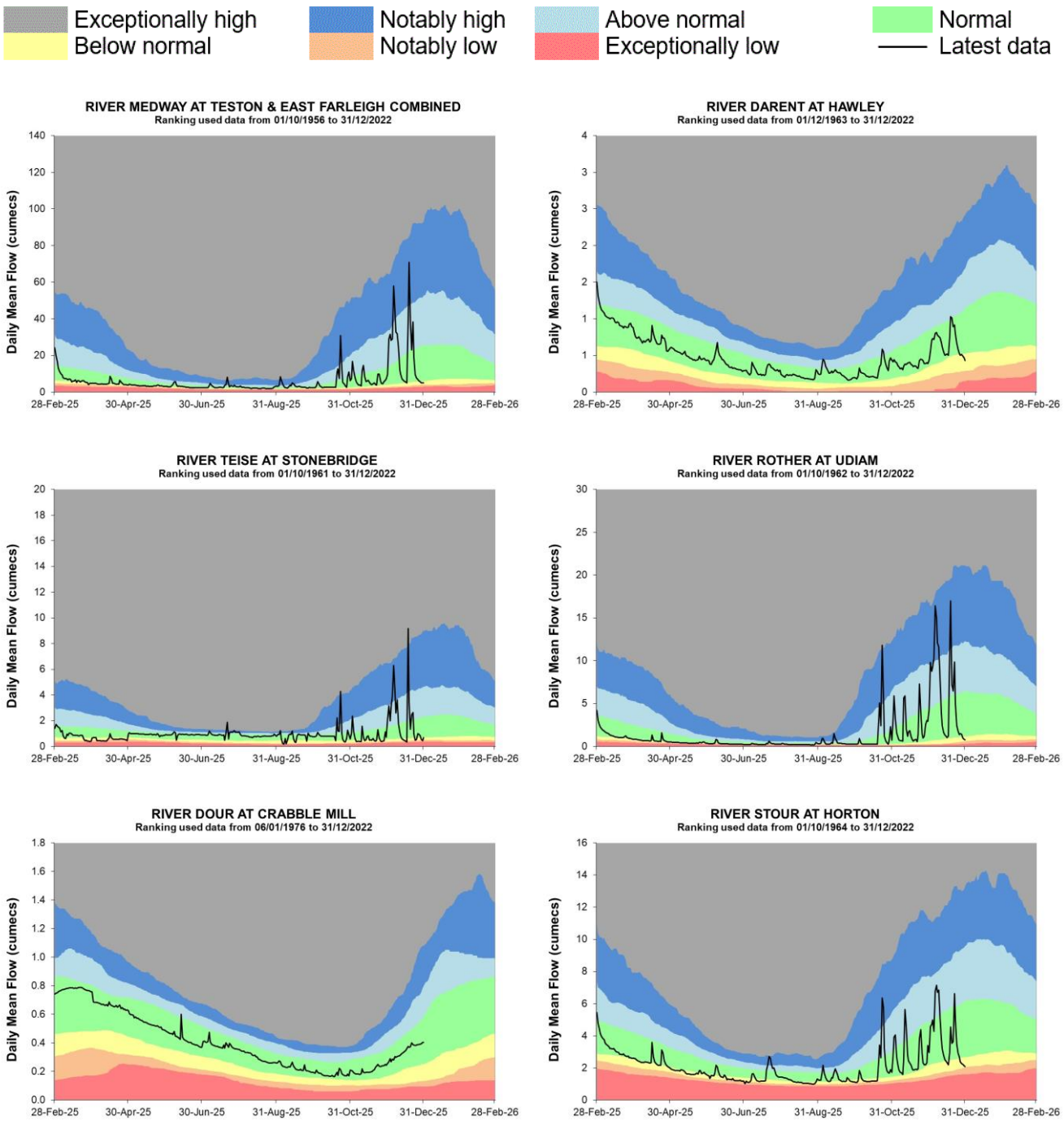


HadUK rainfall data. (Source: Met Office. Crown copyright, 2026).

EA effective rainfall data (Source EA Soil Moisture Model, 2026).

7.2 KSL River flow charts

Figure 7.2: 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.



Source: Environment Agency. 2026 .

7.3 KSL Groundwater levels

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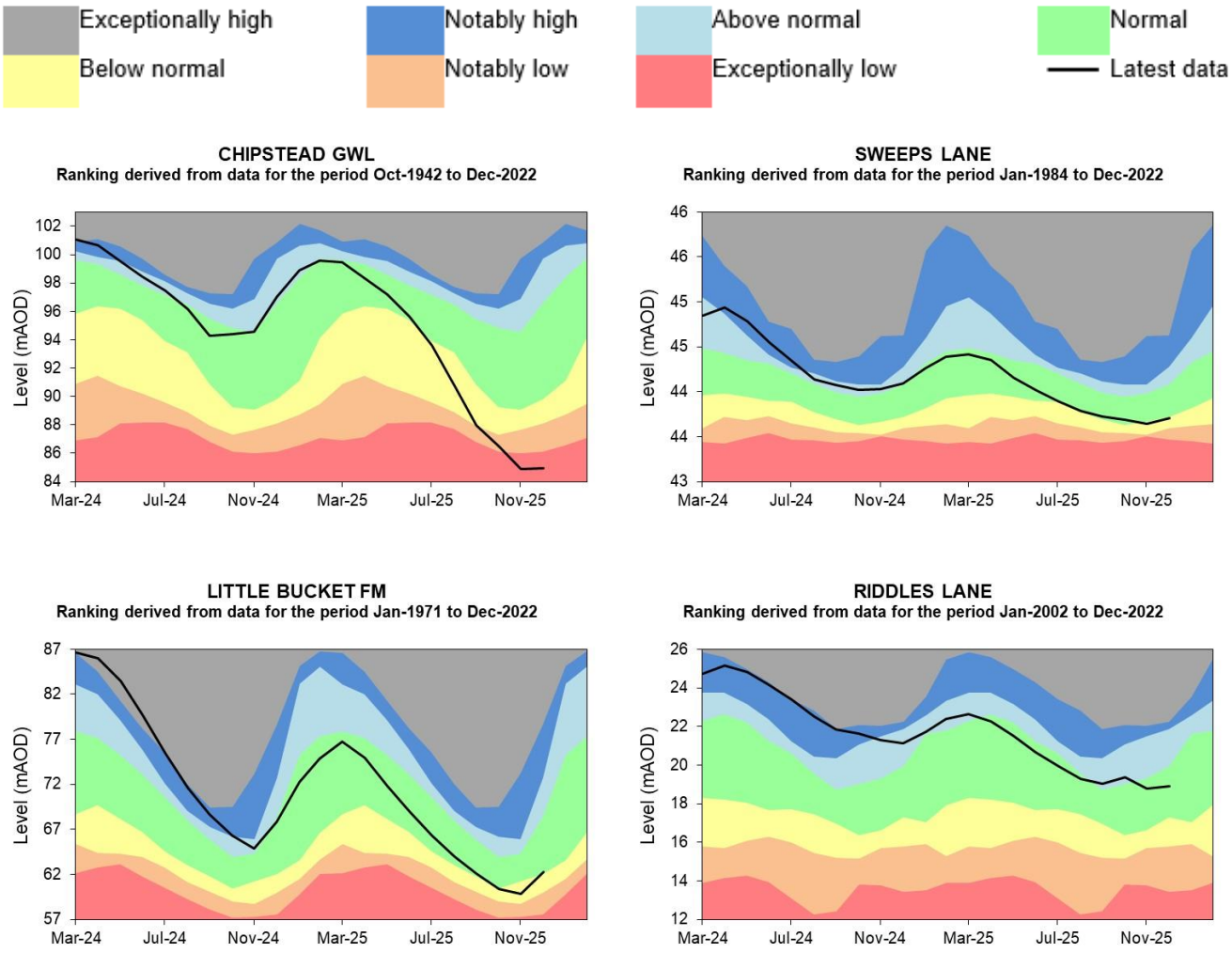

Source: Environment Agency. 2026

7.4 KSL Reservoir stocks

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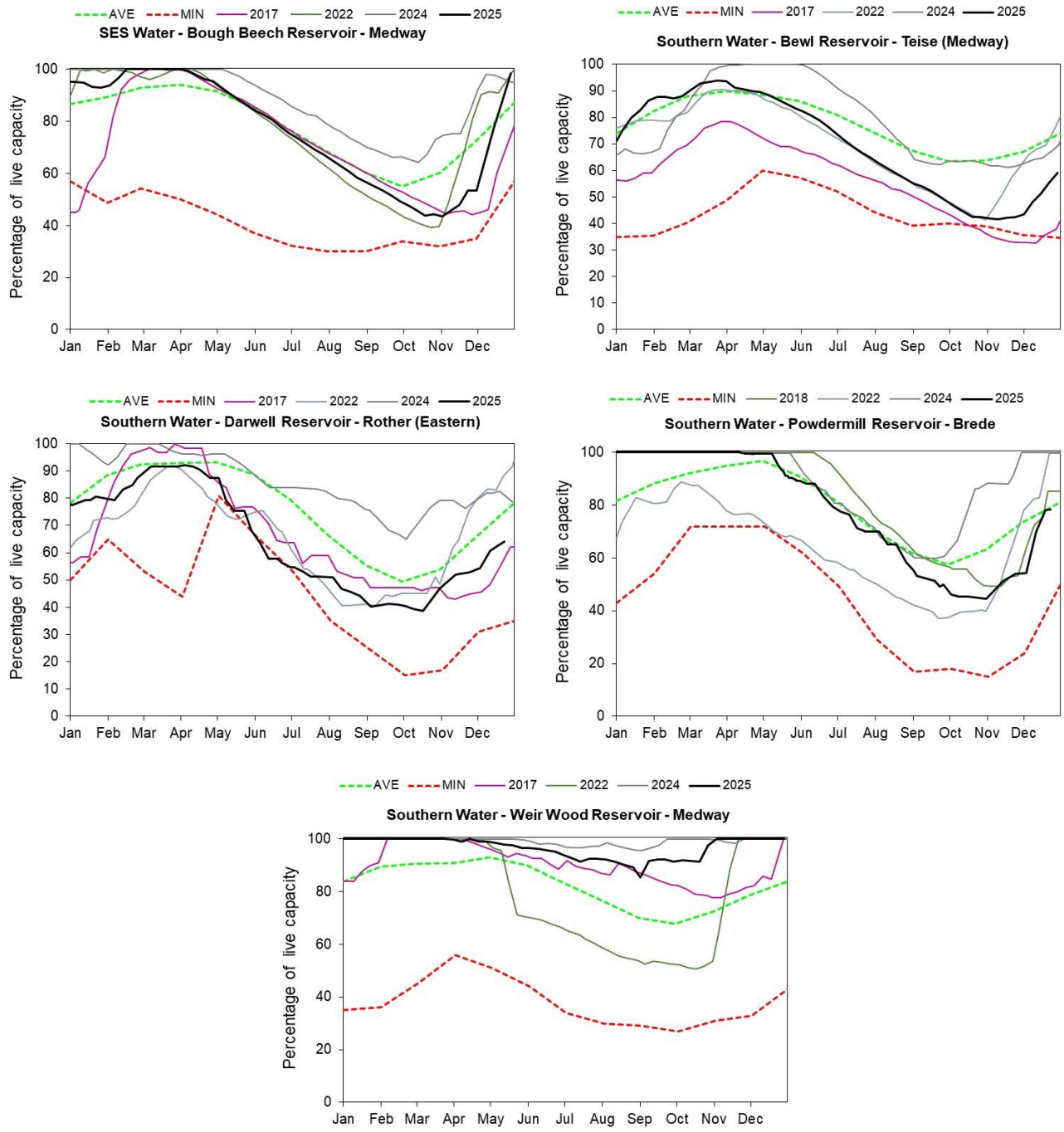

(Source: water companies).

8 Glossary

8.1 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).

8.2 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.

9 Appendices

9.1 Rainfall table

Hydrological area	Dec 2025 rainfall % of long term average 1991 to 2020	Dec 2025 band	Oct 2025 to December cumulative band	Jul 2025 to December cumulative band	Jan 2025 to December cumulative band
Cotswold West	140	Above Normal	Notably high	Above normal	Normal
Cotswold East	135	Above Normal	Notably high	Above normal	Normal
Berkshire Downs	127	Above Normal	Above normal	Normal	Normal
Chilterns West	110	Normal	Normal	Normal	Below normal
Chilterns East Colne	108	Normal	Normal	Normal	Below normal
North Downs - Hampshire	110	Normal	Normal	Normal	Normal
North Downs - South London	91	Normal	Normal	Normal	Below normal
Upper Thames	125	Above Normal	Above normal	Normal	Normal
Upper Cherwell	136	Above Normal	Notably high	Normal	Below normal
Thame	123	Normal	Above normal	Normal	Normal
Loddon	103	Normal	Normal	Normal	Below normal
Lower Wey	96	Normal	Normal	Normal	Below normal
Upper Mole	103	Normal	Normal	Normal	Normal
Lower Lee	99	Normal	Normal	Normal	Notably low
North London	96	Normal	Normal	Normal	Below normal
South London	90	Normal	Normal	Normal	Notably low
Roding	93	Normal	Normal	Below normal	Notably low
Ock	123	Above Normal	Above normal	Normal	Below normal
Enborne	110	Normal	Normal	Normal	Normal
Cut	98	Normal	Normal	Normal	Below normal
Lee Chalk	100	Normal	Normal	Normal	Below normal

River Test	130	Above Normal	Above normal	Normal	Normal
East Hampshire Chalk	121	Above Normal	Above normal	Normal	Normal
West Sussex Chalk	108	Above Normal	Normal	Normal	Normal
East Sussex Chalk	102	Normal	Normal	Normal	Normal
Sw Isle Of Wight	116	Above Normal	Normal	Above normal	Normal
River Darent	95	Normal	Normal	Normal	Below normal
North Kent Chalk	84	Normal	Normal	Normal	Below normal
Stour	75	Normal	Normal	Normal	Normal
Dover Chalk	80	Normal	Normal	Normal	Normal
Thanet Chalk	63	Below Normal	Normal	Normal	Below normal
Western Rother Greensand	119	Above Normal	Normal	Normal	Normal
Hampshire Tertiaries	124	Above Normal	Above normal	Normal	Normal
Lymington River Avon Water And O	130	Above Normal	Above normal	Above normal	Normal
Sussex Coast	99	Normal	Normal	Normal	Normal
River Arun	116	Above Normal	Above normal	Normal	Normal
River Adur	115	Above Normal	Normal	Above normal	Normal
River Ouse	108	Normal	Normal	Above normal	Normal
Cuckmere River	88	Normal	Normal	Normal	Normal
Pevensey Levels	79	Normal	Normal	Normal	Normal
River Medway	99	Normal	Normal	Normal	Normal
Eastern Rother	81	Normal	Normal	Normal	Normal
Romney Marsh	71	Normal	Normal	Normal	Normal
North West Grain	82	Normal	Normal	Below normal	Notably low
Sheppy	69	Normal	Normal	Normal	Notably low

9.2 River flows table

Site name	River	Catchment	Dec 2025 band	Nov 2025 band
Colney Street_hansteads		Colne	Above normal	Above normal
Feildes Weir (nat)	Lee (middle)	Lee	Normal	Normal
Panshanger	Mimram	Lee	Above normal	Above normal
Crabble Mill Gs	Dour	Little Stour	Normal	Normal
Hawley Gs	Darent	Darent and Cray	Normal	Normal
Horton Gs	Great Stour	Stour Kent	Normal	Normal
Stonebridge Gs	Teise	Teise	Normal	Below normal
Teston Farleigh Combined	Medway100	Medway Estuary	Normal	Normal
Udiam Gs	Rother	Rother Kent Lower	Normal	Normal
Alfoldean Gs	Arun	Arun	Notably high	Normal
Allbrook Gs And Highbridge	Itchen (so)	Itchen	Normal	Normal
Broadlands	Test	Test Lower	Normal	Normal
Brockenhurst Gs	Lymington	New Forest	Notably high	Normal
Goldbridge Gs	Ouse (so)	Ouse Sussex	Above normal	Normal
Iping Mill Gs	Rother	West Rother	Above normal	Normal
Farmoor (naturalised)	River Thames	Thames	Notably high	Normal
Kingston (naturalised)	River Thames	Thames North Bank	Above normal	Normal
Marlborough	River Kennet	Kennet	Normal	Below normal
Sheepbridge	River Loddon	Loddon	Normal	Normal
Tilford	River Wey	Wey Addleston Bourne	Above normal	Normal

9.3 Groundwater table

Site name	Aquifer	End of Dec 2025 band	End of Nov 2025 band
Ashley Green Stw	Mid-chilterns Chalk	Normal	Normal
Lilley Bottom	Upper Lee Chalk	Normal	Normal
Little Bucket Fm	East Kent Chalk - Stour	Normal	Below normal
Chipstead Gwl	Epsom North Downs Chalk	Exceptionally low	Exceptionally low
Riddles Lane	North Kent Swale Chalk	Normal	Normal
Sweeps Lane Gwl	West Kent Chalk	Below normal	Below normal
Houndean Bottom Gwl	Brighton Chalk Block	Normal	Normal
Chilgrove House Gwl	Chichester-worthing-portsdown Chalk	Normal	Notably low
Carisbrooke Castle	Isle Of Wight Central Downs Chalk	Normal	Normal
West Meon Hut Gwl	River Itchen Chalk	Normal	Normal
Clanville Gate Gwl	River Test Chalk	Normal	Normal
Lopcombe Corner Gwl	River Test Chalk	Normal	Normal
Tile Barn Farm	Basingstoke Chalk	Normal	Normal
Rockley Obh	Berkshire Downs Chalk	Normal	Notably low
Jackaments Bottom Obh	Burford Oolitic Limestone (inferior)	Above normal	Normal
Stonor Estate	South-west Chilterns Chalk	Normal	Normal

9.4 South-east England areal units for reference