Water Resources Management Plan
Annual Review 2024-25

June 2025

from Southern Water

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1 Introduction

Water companies in England and Wales are required to produce Annual Reviews as part of the Water Resources Management Plan (WRMP) process. The aim of the review is to provide an update on the progress against commitments in the WRMP. This is our Annual Review 2025 (AR25) against our WRMP 2019 (WRMP19).

We submitted our final draft WRMP 2024 (fdWRMP24) to Defra on 30 May 2025. We expect the Secretary of State for Defra to make a decision on our fdWRMP24 over the summer. As WRMP19 is our current published plan, our Annual Review 2025 (AR25) reports progress against it. We have however referred to our fdWRMP24 where relevant and have used it to provide a forward look. Similarly we submitted our final Drought Plan 2022 (DP22) to Defra on 20th January 2025 and await approval.

1.1 Our supply area

We supply water over an area extending from Kent in the east, through parts of Sussex, to Hampshire and the Isle of Wight (IOW) in the west. The total population in our supply area in 2024-25 was over 2.7 million.

Our supply area is divided into 14 water resource zones (WRZs) that are grouped into three larger, sub-regional supply areas: Western, Central and Eastern (Table 1 and Figure 1). There has been no change to our WRZ boundaries from WRMP19.

Groundwater makes up around 70% of our total water supply. Most of our it mainly comes from the chalk aquifer that sits under much of South East England. This groundwater is also important in maintaining flows to the River Test and River Itchen in Hampshire and other smaller chalk streams across Sussex and Kent.

River abstractions account for 23% of our water supplies. These include the Eastern Yar and Medina on the IOW; the rivers Test and Itchen in Hampshire; the Western Rother and River Arun in West Sussex; the Eastern Rother and River Brede in East Sussex; and the River Teise and River Medway in Kent.

Four surface water impounding reservoirs provide the remaining 7% of our water supplies. These are Bewl Water, Darwell, Powdermill and Weir Wood. South East Water is entitled to 25% of the yield from the River Medway Scheme, which incorporates the storage within Bewl Water Reservoir.

In addition to South East Water, we share borders with Affinity Water, Portsmouth Water, SES Water, South West Water, Thames Water and Wessex Water. Water is shared between us and a number of these companies through existing pipelines. We are looking to increase sharing of water with our neighbouring water companies through participation in the Water Resources South East (WRSE) group that comprises Affinity Water, Portsmouth Water, SES Water, South East Water and Thames Water in addition to Southern Water.

Table 1: Our main supply areas and the associated water resource zones.

Western Area	Central Area	Eastern Area
1. Hampshire Andover (HAZ) 2. Hampshire Kingsclere (HKZ) 3. Hampshire Winchester (HWZ) 4. Hampshire Rural (HRZ) 5. Hampshire Southampton East (HSE) 6. Hampshire Southampton West (HSW) 7. Isle of Wight (IOW)	8. Sussex North (SNZ) 9. Sussex Worthing (SWZ) 10. Sussex Brighton (SBZ)	11. Kent Medway East (KME) 12. Kent Medway West (KMW) 13. Kent Thanet (KTZ) 14. Sussex Hastings (SHZ)

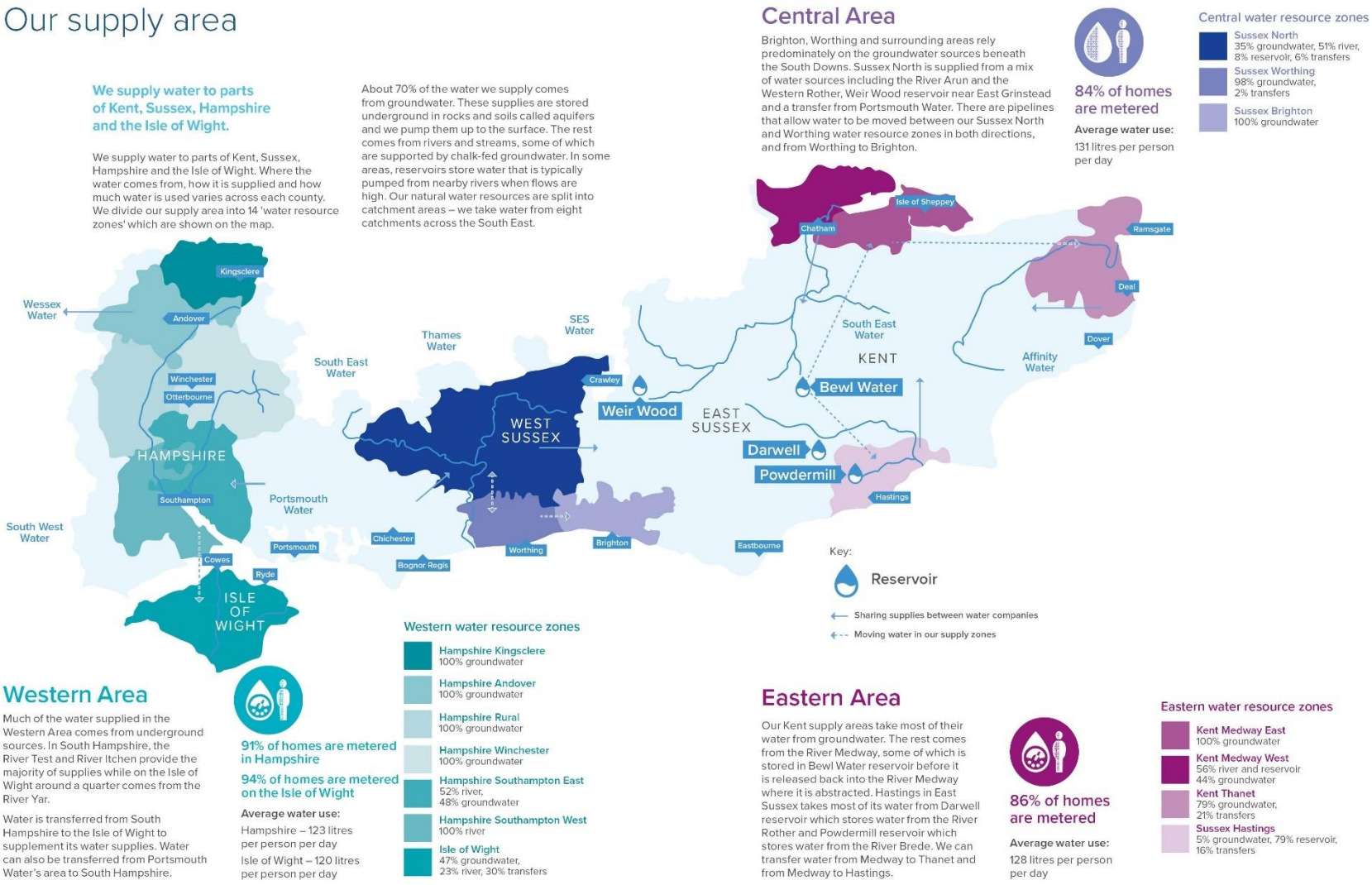

Figure 1: Southern Water supply area and Water Resource Zones.

1.2 Key highlights from AR25

- The summer of 2024-25 was warmer but wetter than long-term average. We had a healthy supply-demand balance across our area and did not implement any restrictions on our customers' water use. Our Deployable Output (DO) in 2024-25 is higher than was forecast in WRMP19.
- The Per Capita Consumption (PCC) in our supply area is among the lowest in the UK, despite the significant increase at the start of AMP7 due to COVID-19. Our industry leading position results from a combination of high household meter penetration in our supply area and an effective water efficiency programme. No targets were set in WRMP19 for reducing non-household demand but our water efficiency programme covered non-households over AMP7. We are mid-table in terms of leakage. We continue to make progress in reducing PCC and leakage. The steps we are taking in this regard are described in Section 7.1.
- The delivery dates for a number of AMP7 schemes have been revised. The revised dates along with progress updates are provided in Section 7.2 to Section 7.4.
- Our response to feedback on Annual Review 2024 (AR24) is given in Section 3. Water Available for Use (WAFU), outage, headroom and process losses figures used to populate the data tables accompanying this report are consistent with our Supply Demand Balance Index (SDBI) submission in May 2025 and WRMP19. However, the Distribution Input (DI), leakage, household consumption, non-household consumption and bulk transfer figures are slightly different. This is because the SDBI submission was based on interim 2024-25 water balance figures whereas the AR25 reported figures are based on our final 2024-25 water balance figures.
- There has been no change in our WRZ boundaries in the reporting year and we have made no changes to our WRZ boundaries for WRMP24. We are improving connectivity between our WRZs in Hampshire in the Western Area. We will review our WRZ boundaries once these connections are in place.
- Our target levels of service remain unchanged but we will need to rely on drought measures more frequently than planned in the Western Area until a long-term solution is in place to offset the loss of supply from licence changes that were implemented in 2018. More detail is provided in Section 4.
- Our outage in the reporting year has been higher than planned. We have a plan in place to signification reduce it over 2025-26 (see Section 2.2.2).
- The list of treatment works with Drinking Water Inspectorate (DWI) notices is attached as Appendix A.
- Our WRMP24 has been developed in close cooperation with WRSE. We are working with our neighbouring water companies to jointly develop solutions in order to optimise investments in the infrastructure and deliver benefits to a wider group of customers.
- There has been no change in our methodology for any components of the supply-demand balance. We commissioned an independent review of our water balance calculation methodology in 2024-25 to identify any improvements in our data collection and analysis. We plan to continue the data refinement exercise over 2025-26 in view of the recommendations from the review.
- In view of the dry start to 2025-26, we have appointed a Drought Manager and set up a Drought Management Group. We are closely monitoring the situation and also liaising with other water companies to streamline our messages around droughts and to coordinate any drought management measures that may need to be implemented this year.
- In the accompanying data tables, we have reported uplifted data for Dry Year Annual Average (DYAA) and Dry Year Critical Period (DYCP) conditions using the same uplift factors that were used for WRMP19.

2 Supply-demand balance in the reporting year

2.1 Weather

Summer 2024, like all summers in AMP7 with the exception of 2021-22, was warmer than usual (Figure 2). In terms of total rainfall over the summer, it was also wetter than usual. However, this is primarily due to a very wet September (Figure 3). Excluding September, total rainfall from April to August in 2024 (276mm) was lower than in 2023-24 (308mm) over the corresponding period.

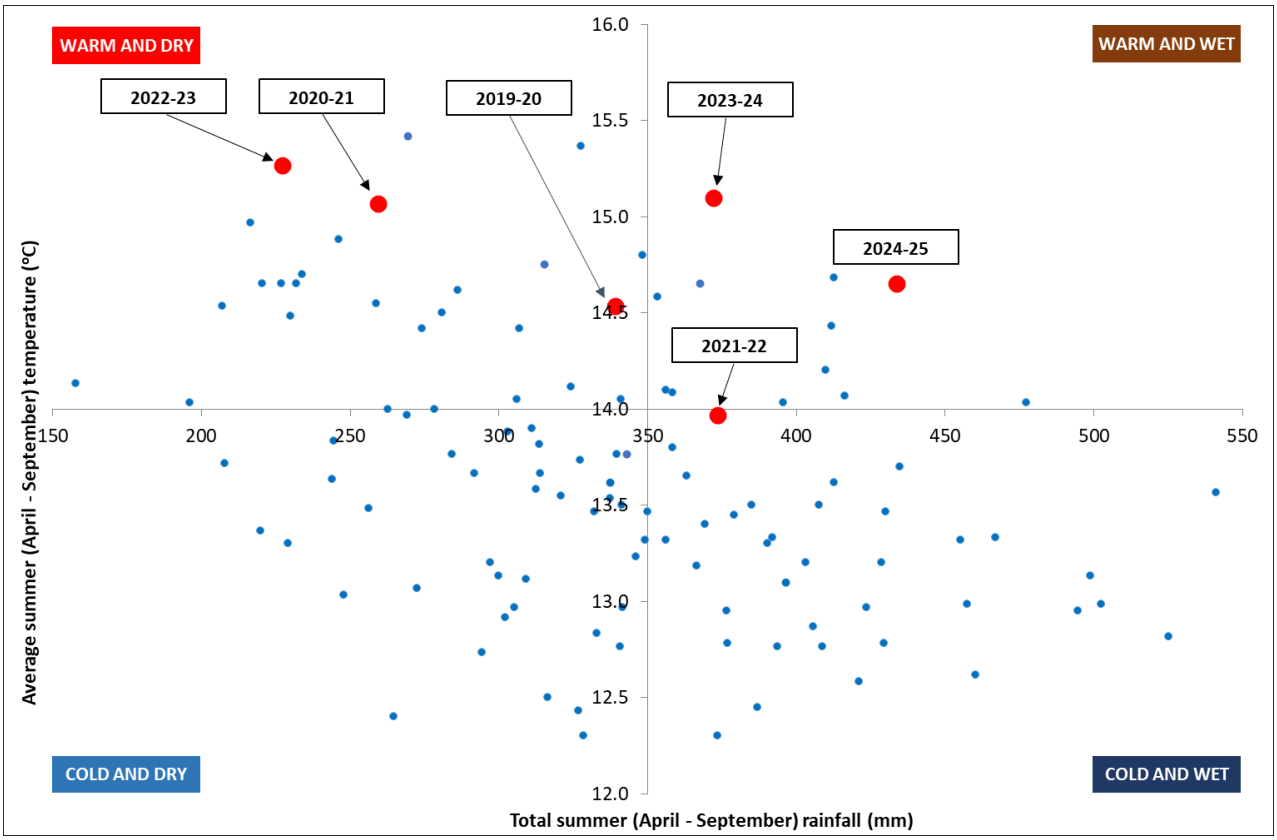

Figure 2: Total rainfall and average summer temperature values from 1910-11 to 2024-25

Total rainfall over 2024-25 (850mm) was higher than the long term average (790mm) but that was also primarily due to the rainfall in September 2024 being 2.5 times higher than the long-term average (Figure 3). June and August had much lower rainfall than the long-term average. This resulted in total rainfall over the summer months being lower than the long-term average even though total rainfall over the year was higher. Average monthly temperatures were either close to or higher than the long-term average. This is also true for the very wet September. January was the only month with the average temperature slightly lower than the long-term average (Figure 4).

The winter (November to February) was among the wettest on record which meant that our resources were in a healthy position at the start of 2024-25. We therefore did not require to rely on Temporary Use Bans (TUBs), Non Essential Use Bans (NEUBs) or supply-side drought permits or orders to maintain supplies in any of our WRZs. The winter rainfall in 2024-25 was close to the long-term average but the spring and early summer months in 2025-26 have been much drier.

For the purpose of reporting, we have considered this to be a normal year and have applied the uplift factors in full when completing the adjusted DYAA and DYCP tables.

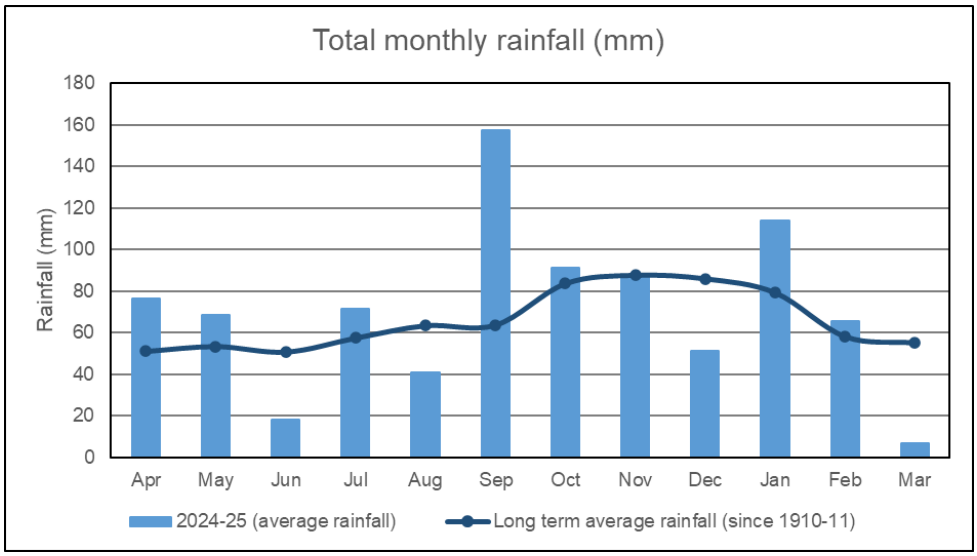

Figure 3: Total monthly rainfall in 2024-25 and its comparison with long-term average based on Met Office data for South East and Central South England.

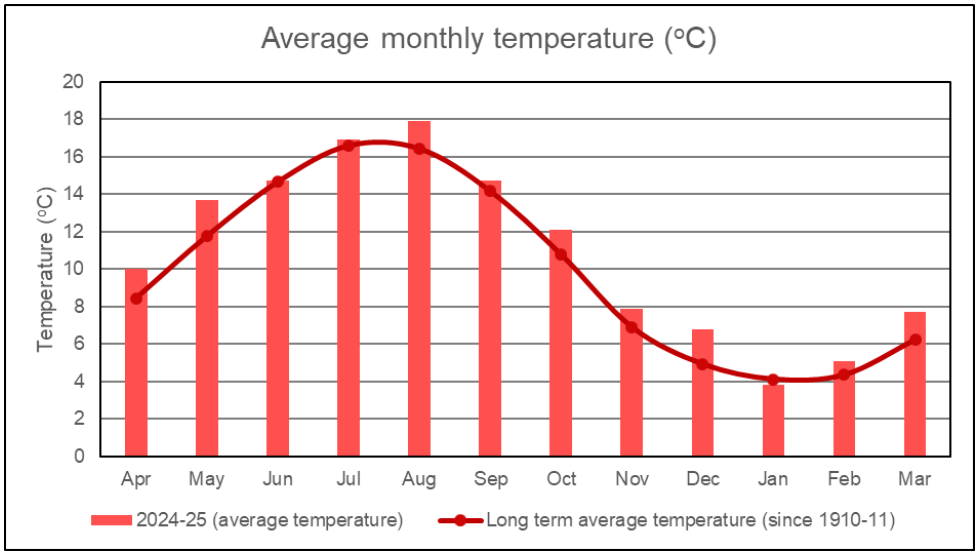

Figure 4: Average monthly temperature during 2024-25 and its comparison with long-term average based on Met Office data for South East and Central South England.

In view of the exceptionally dry spring and early summer in 2025, we have appointed a drought manager and are closely monitoring the situation. We are also liaising with other water companies and regulators to ensure consisting messaging around droughts and to coordinate any drought management measures that may need to be implemented. At the time of writing, we have reached the 90 day trigger on the River Test in Hampshire and are drafting our Drought Permit application.

2.2 Supply

2.2.1 Deployable output

The Deployable Output (DO) in the reporting year was 730.7Ml/d which is 7.6Ml/d higher than the 2024-25 DO in WRMP19 under the Dry Year Annual Average (DYAA) scenario.

Changes in DO at the WRZ level and reasons for changes, where applicable, are given in Table 2. As can be seen from the table, there has been a major reduction in DO in SNZ due to non-availability of Weir Wood Reservoir and the delay in delivering a groundwater scheme at West Chiltington water supply works (WSW). The DO in KMW has increased as the River Medway Scheme, which WRMP19 assumed to be unavailable due to a pesticide issue, is available. The changes in DO are included in our 2024-25 SDBI calculation.

Table 2: Deployable Output in the reporting year its comparison with WRMP19 (DYAA scenario) forecast.

WRZ	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)	Reason for change
HAZ	22.4	23.8	Near Whitchurch WSW (1.43Ml/d) is now available.
HKZ	8.7	8.7	
HWZ	24.2	24.2	
HRZ	12.6	12.6	
HSE	83.2	83.2	
HSW	83.0	83.0	
IOW	27.8	27.8	
SNZ	56.3	47.8	DO from Weir Wood Reservoir (6.69Ml/d) and West Chiltington WSW removed due to non-availability of these options. Bulk import from SES Water (1.3Ml/d) that was not included in WRMP19 added.
SWZ	60.3	59.7	DO from North Worthing WSW (0.56Ml/d) removed.
SBZ	96.3	98.8	North Falmer A WSW (2.5Ml/d) that was assumed to be unavailable in WRMP19 still available.
KME	89.3	89.3	
KMW	87.8	99.9	River Medway Scheme (16.50)Ml/d) included as a drought option and the pesticide removal scheme (4.45Ml/d) removed.
KTZ	48.1	48.8	DO from West Sandwich and Sandwich WSWs reduced (0.24M/d) due to pesticide issue and DO from North Dover WSW (0.92Ml/d) added as the source is still operational.
SHZ	23.1	23.1	
SWS	**723.1**	**730.7**	

Our abstraction licences on the River Itchen are up for renewal. The Environment Agency is considering introducing a higher Hands-off Flow (HoF) threshold on the river as part of the conditions for licence renewal. If implemented, this will have serious implications on our supply position in HSE and could mean that we have to impose TUBs and NEUBs and apply for a drought permit or order on the River Test under weather conditions that may otherwise not qualify as a drought. We are in discussion with the Environment Agency to better understand the evidence behind the proposed increase in HoF and its impact on our security of supply in the Hampshire area in the short to medium term.

In forecasting supply for WRMP24, we adopted a system-based approach along with other WRSE companies. DO at the WRZ level is no longer the sum of DO of individual sources under different planning scenarios. We now use a water resources network modelling tool (Pywr) to calculate DO at the WRZ level that takes networks constraints and conjunctive use benefits into account and can also incorporate climate change impacts on future supplies. As part of WRMP24, we developed Pywr models for each of our three

supply areas, including a separate model for the IOW. We are working with WRSE and our neighbouring companies to further refine and integrate these models so we can better understand the operation of bulk supplies and shared sources between the companies.

2.2.2 Outage

The outturn outage is higher than forecast in WRMP19 (Table 3). The figures reported in Table 3 are consistent with the figures used in our 2024-25 SDBI submission. Outage in half of WRZs is below the WRMP19 position. The bulk of the increase is due to significantly higher than planned outage in HRZ, HSW, IOW, SBZ and KTZ.

Table 3: Outage in the reporting year and its comparison with WRMP19 (DYAA scenario) forecast.

Water Resource Zone	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
HAZ	2.1	0.1
HKZ	0.1	0.1
HWZ	0.4	0.0
HRZ	0.3	2.6
HSE	0.3	0.0
HSW	1.6	4.0
IOW	1.7	5.1
SNZ	0.9	0.3
SWZ	2.1	3.8
SBZ	5.6	11.1
KME	6.7	6.6
KMW	5.3	1.9
KTZ	6.6	5.7
SHZ	0.9	1.2
Southern Water	**34.6**	42.6

We have an outage reduction strategy in place that aims to reduce outage by nearly 16Ml/d during 2025 (Table 4). Work on Rookley WSW (0.9Ml/d) and Ventnor WSW on the IOW (1.2Ml/d) has already been completed. Sampling results are awaited before the sites can be returned to service. This will take net reduction in outage over 2025 to 18Ml/d.

Table 4: Outage recovery plan 2025.

Water Resource Zone	Site	Outage recovery (Ml/d)	Return to service date
HSE	Itchen WSW	2.0	30/06/2025
KME	Hartlip Hill WSW	3.0	*31/12/2025
KME	Gillingham WSW	0.9	30/06/2025
KME	Hartlip WSW	2.5	21/07/2025
KTZ	West Sandwich WSW	6.5	31/12/2025
SHZ	Rye WSW	1.0	31/07/2025
Total		**15.9**	

*To be confirmed

We have Drinking Water Inspectorate (DWI) notices at a number of our water supply works. The vast majority of these notices are linked to water quality and resilience improvements. A full list is given in Appendix 1. The work in most cases is to be completed by 2030.

2.2.3 Bulk imports and exports

We currently have bulk supply agreements with Affinity Water, Portsmouth Water, SES Water, South East Water and Wessex Water. Bulk imports and exports planned in WRMP19 and their comparison with 2024-25 outturn figures are given in Table 5 and Table 6 respectively. HWZ, HRZ, HSE, IOW and SBZ do not share water with any of the water companies mentioned above. The bulk exports in these WRZs are to New Appointments and Variations (NAVs). We have a bulk import from SES Water into SNZ for up to 1.3Ml/d that was not included WRMP19. We now plan to increase to 4Ml/d as part of our WRMP24.

Table 5: Bulk imports in the reporting year and their comparison with WRMP19 (DYAA scenario) forecast.

Water Resource Zone	Donor company	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
HAZ		0.0	0.0
HKZ		0.0	0.0
HWZ		0.0	0.0
HRZ		0.0	0.0
HSE	Portsmouth Water	24.0	3.1
HSW		0.0	0.0
IOW		0.0	0.0
SNZ	Portsmouth Water	15.0	4.9
SWZ		0.0	0.0
SBZ		0.0	0.0
KME		0.0	0.0
KMW		0.0	0.0
KTZ		0.0	0.0
SHZ	South East Water	13.3	0.0
Southern Water		**52.3**	8.0

Table 6: Bulk exports in the reporting year and their comparison with WRMP19 (DYAA scenario) forecast.

Water Resource Zone	Recipient company	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
HAZ	Wessex Water	0.3	0.3
HKZ		0.0	0.00
HWZ		0.0	0.1
HRZ		0.0	0.0
HSE		0.0	0.4
HSW	Large industrial user	10.0	3.2
IOW		0.0	0.0
SNZ	South East Water	5.4	3.7
SWZ		0.0	0.0
SBZ		0.0	0.1
KME	South East Water	6.8	0.4
KMW	South East Water	12.4	32.7
KTZ	Affinity Water	0.1	0.2
SHZ	South East Water	8.0	2.3
Southern Water		**43.9**	43.4

There have been no changes to our existing bulk supply agreements in the reporting year. We are currently undertaking work, along with South East Water, on the Bewl-Darwell system and the River Medway Scheme in order to understand the changes that may be needed in the future operation of these schemes, and consequently on the bulk supply agreements between the two companies.

Portsmouth Water is currently assessing its resources position, especially with regard to the bulk supply to SNZ (up to 15Ml/d). The agreement governing this supply may need to be amended once the assessment is complete.

Going forward, we are looking to share supplies with our neighbouring water companies. In addition to continuing with existing bulk supply agreements, where feasible, our WRMP24 includes bulk import from Portsmouth Water to HSE for up to 21Ml/d from 2031-32, bi-directional bulk supplies of 10Ml/d each with both SES Water (from 3033-34) and South East Water (from 2039-40) and a large 120Ml/d bulk import from Thames Water as part of T2ST (from 2039-40).

2.3 Demand

2.3.1 Household demand

Despite experiencing higher than planned PCC levels over AMP7, our PCC is among the lowest in the industry. We had the second lowest PCC (3-year rolling average) among water companies in England and Wales 2023-24. Our 3-year rolling average PCC of 131l/h/d was significantly lower than the 137l/h/d national average (Figure 5).

Our higher-than-planned PCC over AMP7 has been driven by COVID-19. COVID-19 led to an increase in household demand during 2020-21 and 2021-22 as customers worked from home and made changes to their personal hygiene routines. Consequently, we revised our 2024-25 PCC forecast to 127.5 litres per head per day (l/h/d) under Normal Year Annual Average (NYAA) conditions. This is higher than our starting position for the 2020-25 planning period.

Social distancing rules introduced during COVID-19 also impacted progress on our two key water efficiency initiatives; home visits and increase in domestic meter penetration to 92% in the Western and Central areas. We resumed in-person home visits posting lifting of COVID-19 restrictions but have deferred the increase in meter penetration to AMP8 and also expanded it to include the Eastern Area.

PCC has reduced following the lifting of pandemic restrictions as people have returned to the workplace. However, a significant proportion of the workforce continues to work from home for at least part of the week. PCC therefore continues to remain higher than was forecast in WRMP19. The average PCC in 2024-25 (127.2l/h/d) is in line with our revised 2024-25 forecast figure of 127.5l/h/d. It has however increased slightly from 126.7l/h/d reported in 2023-24. The breakdown by 2024-25 outturn PCC by WRZ is given in Table 7 along with a comparison of WRMP19 forecast PCC figures.

Outturn PCC in most of the Western Area was lower than the WRMP19 forecast position. PCC in the Central and Eastern areas, with the exception of SWZ, was higher than WRMP19 forecast position.

We revised our population and property growth forecast for WRMP24. The forecast was initially revised for the draft WMRP24 (dWRMP24) in 2020 and updated for the revised draft WRMP24 (rdWRMP24) in 2023. We have adopted the revised population numbers for regulatory reporting. Property numbers for the reporting year continue to be based on data from our billing system. As mentioned above, we revised our PCC forecast for AMP7 following COVID-19 but there have been no further changes to our AMP7 demand forecast in 2024-25. We have developed a new growth forecast for WRMP24.

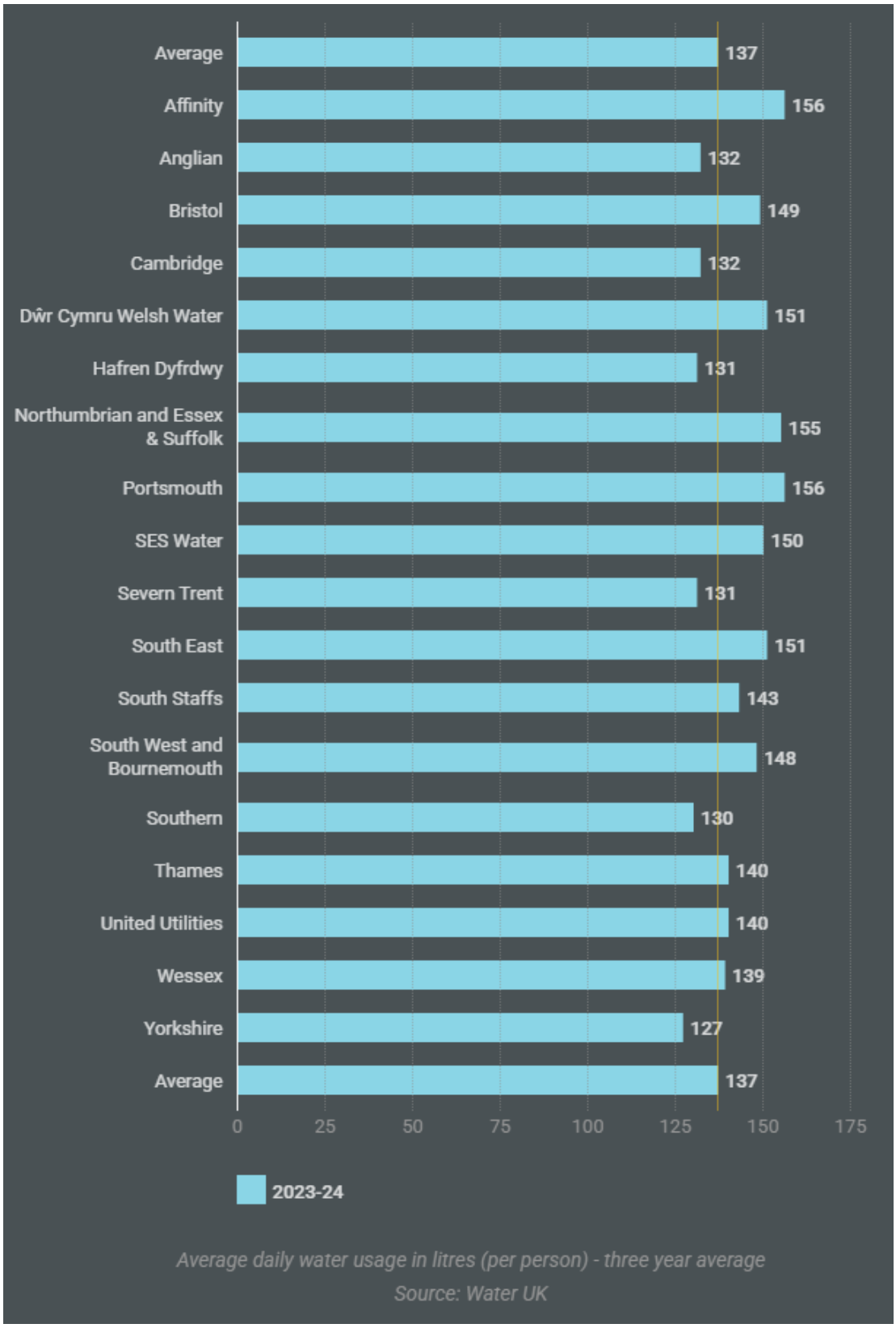

Figure 5: Comparison of 3-year average PCC figures in 2023-24 for water companies in England and Wales (DiscoverWater (en-GB)).

Table 7: Outturn PCC figures and their comparison with WRMP19 forecast.

Water Resource Zone	WRMP19 DYAA (l/h/d)	2024-25 (l/h/d)
HAZ	116.8	129.0
HKZ	157.3	140.7
HWZ	128.3	121.8
HRZ	137.7	133.9
HSE	124.2	122.0
HSW	117.9	118.6
IOW	135.2	119.9
SNZ	127.7	132.1
SWZ	134.7	128.3
SBZ	119.2	132.6
KME	120.9	125.9
KMW	122.1	126.9
KTZ	119.2	127.6
SHZ	129.2	139.9
Southern Water	**124.3**	127.2

Adjustment to PCC for DYAA scenario

As discussed in Section 2.1, 2024-25 was warmer but wetter than normal. We apply uplift factors to adjust NYAA demand to DYAA and Dry Year Critical Period (DYCP) demand. No other component of demand is adjusted for DYAA. The DYAA and DYCP uplift factors derived for WRMP19 are given in Table 8. 2024-25 PCC figures adjusted for DYAA scenario are given in Table 9.

Table 8: Uplift factors applied to household demand for DYAA and DYCP scenarios in WRMP19.

Water Resource Zone	DYAA uplift factor	DYCP uplift factor
HAZ	1.03	1.33
HKZ	1.19	1.57
HWZ	1.15	1.37
HRZ	1.15	1.37
HSE	1.15	1.37
HSW	1.15	1.37
IOW	1.16	1.52
SNZ	1.10	1.37
SWZ	1.23	1.44
SBZ	1.03	1.19
KME	1.11	1.34
KMW	1.11	1.34
KTZ	1.04	1.31
SHZ	1.04	1.28
Southern Water	**1.11**	**1.34**

Once adjusted for DYAA, outturn PCC is consistently higher than WRMP19 forecast position with the exception of HKZ and IOW, which show slightly lower PCC than forecast.

Table 9: Outturn PCC figures adjusted for DYAA and their comparison with WRMP19 DYAA forecast.

Water Resource Zone	WRMP19 DYAA (l/h/d)	2024-25 DYAA (l/h/d)
HAZ	116.8	132.5
HKZ	157.3	156.6
HWZ	128.3	132.6
HRZ	137.7	150.3
HSE	124.2	141.5
HSW	117.9	130.5
IOW	135.2	135.0
SNZ	127.7	142.2
SWZ	134.7	153.1
SBZ	119.2	135.8
KME	120.9	137.1
KMW	122.1	145.4
KTZ	119.2	128.9
SHZ	129.2	139.8
Southern Water	**124.3**	139.2

In view of increased working from home following COVID-19, higher PCC figures in Table 8 and Table 9 are not surprising. COVID-19 also meant that water efficiency initiatives such as home visits and increasing meter penetration had to be suspended during periods of lockdown during 2020-21 and 2021-22.

2.3.2 Non-household demand

Non-household demand in 2024-25 was lower than forecast in WRMP19 (Table 10). The total number of non-households in 2024-25 is also much lower (54,853) than was forecast in WRMP19 (62,641). This suggests that slower recovery post COVID-19 can in part be due to tougher economic climate. No adjustment is applied to non-household demand for DYAA or DYCP conditions.

Some WRZs show higher non-household consumption than forecast in WRMP19 but the increases are relatively modest.

Table 10: Non-household demand in the reporting year its comparison with WRMP19 (DYAA scenario)

Water Resource Zone	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
HAZ	2.6	2.9
HKZ	0.8	0.7
HWZ	5.1	5.4
HRZ	1.8	1.3
HSE	20.4	17.6
HSW	7.3	7.3
IOW	7.2	6.6
SNZ	10.9	10.1
SWZ	7.5	5.3
SBZ	21.2	14.0
KME	10.2	11.3
KMW	8.7	8.6

Water Resource Zone	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
KTZ	9.0	8.7
SHZ	4.9	4.2
Southern Water	**117.6**	103.9

2.3.3 Leakage

Leakage, like household demand, is impacted by weather. Periods of higher demand typically lead to higher leakage as more water flows through the supply network. Periods of freeze and thaw during severe winters can lead to ground movements that can lead increases pipe bursts and cracks. The winter months were generally milder than the long-term average; December was particularly warmer and drier than the long-term average (see Figure 3 and Figure 4). This helped us in significantly reducing leakage over the year.

Our annual average leakage level reduced by 9.8Ml/d, from 107.5Ml/d to 97.7Ml/d (9.1% reduction) and is lower than the last two years. Leakage in 2021-22 was 96.82Ml/d so the rolling 3-year average is slightly up from 104.3Ml/d to 104.5Ml/d. A comparison of 2024-25 outturn leakage with WRMP19 target is shown in Table 11. No adjustment is made to leakage for DYAA and DYCP scenarios.

Table 11: Outturn leakage its comparison with WRMP19 target.

Water Resource Zone	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
HAZ	3.7	3.4
HKZ	1.6	2.3
HWZ	1.8	4.5
HRZ	0.5	2.0
HSE	11.3	12.4
HSW	5.1	3.7
IOW	2.2	5.4
SNZ	11.2	12.5
SWZ	5.7	4.2
SBZ	9.9	8.2
KME	13.4	18.0
KMW	8.0	10.1
KTZ	6.6	8.0
SHZ	2.9	2.9
Southern Water	**83.8**	97.7

Although leakage in 2024-25 was higher than target, considerable improvement was achieved for the year. Weekly leakage reduced from a starting position of 112.1 Ml/d to an end position of 87.0 Ml/d, a reduction of 25.1 Ml/d or 23.4%. This is more water than supplied daily, on average, to HAZ.

Based on the leakage data on the Discover Water website, which uses 3-year average figures for leakage comparison), we had the 6th lowest level of leakage in terms of litres per property per day (l/p/d) at 89l/p/d despite the high leakage figures in 2022-23 (108.5Ml/d) and 2024-24 (107.5Ml/d) and were below the industry average of 111l/p/d (Figure 6). We were the 11th lowest in terms of leakage per unit length of main at 7.5m^3/km/day. We were however, below the industry average (7.5m^3/km/d vs 8.6m^3/km/d) (Figure 6).

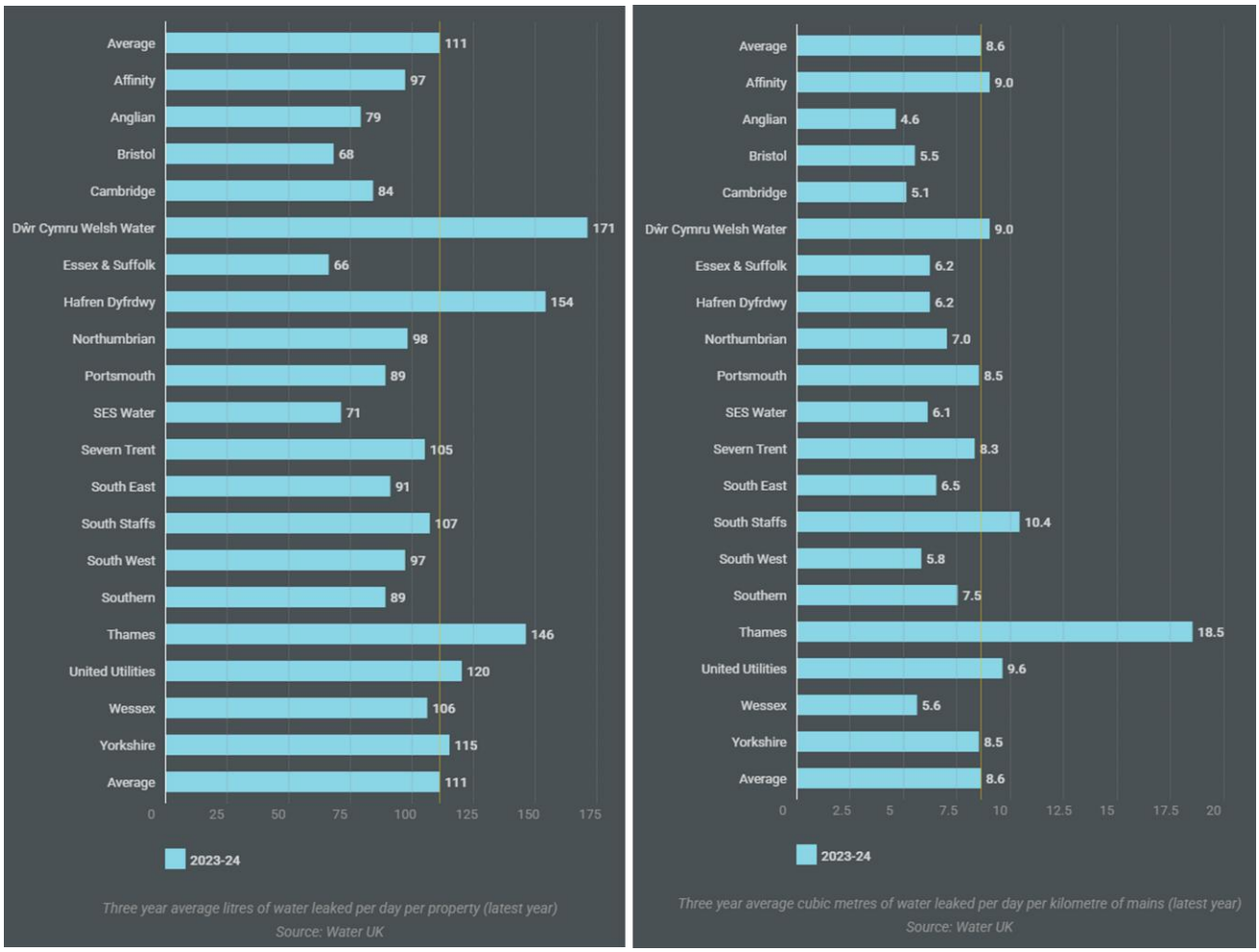

Figure 6: Comparison of 3-year average leakage figures in terms of litres/property/day (left) and m^3/km/day (right) in 2023-24 for water companies in England and Wales (DiscoverWater (en-GB)).

Proactive leak repairs offset the natural rise in leakage that occurs during the year as well as providing a reduction in overall leakage. Reactive repairs reflect the weather conditions and network resilience to external factors. This year, proactive activity (leaks and pressure management) saved a total of 138.7Ml/d. This compares to 107.7Ml/d delivered last year, an increase of 31Ml/d or 28.8%. This was achieved by improving performance across all activities.

We currently have around 160 Full-Time Employees (FTE) undertaking leak detection activities, 90 teams undertaking leak repair activities, 25 FTE looking at planning, reporting and performance improvement and around 25 contractual staff of which around 15 were delivering pressure management activities (design, modelling etc).

2.3.4 Distribution Input

Given higher household demand and higher leakage, it is not surprising that total Distribution Input (DI) during 2024-25 was higher than the WRMP19 position (Table 12). The outturn DI is lower than forecast on the IOW and in SWZ and SBZ. However, once the DI is adjusted for DYAA scenario, only SWZ is below the WRMP19 forecast position (Table 13).

Table 12: Outturn Distribution Input its comparison with the WRMP19 forecast.

Water Resource Zone	WRMP19 DYAA (Ml/d)	2024-25 (Ml/d)
HAZ	15.4	16.8
HKZ	5.1	5.5
HWZ	17.2	20.1
HRZ	6.4	7.3
HSE	85.8	87.0
HSW	32.8	31.8
IOW	29.4	30.0
SNZ	59.4	60.6
SWZ	40.4	35.3
SBZ	78.2	75.8
KME	66.2	75.7
KMW	40.5	45.7
KTZ	42.1	44.8
SHZ	23.2	23.6
Southern Water	**541.9**	559.8

Table 13: Outturn Distribution Input adjusted for DYAA scenario its comparison with the WRMP19 forecast.

Water Resource Zone	WRMP19 DYAA (Ml/d)	2024-25 DYAA adjusted (Ml/d)
HAZ	15.4	18.1
HKZ	5.1	5.5
HWZ	17.2	21.0
HRZ	6.4	7.8
HSE	85.8	95.7
HSW	32.8	34.2
IOW	29.4	30.6
SNZ	59.4	65.3
SWZ	40.4	39.4
SBZ	78.2	83.3
KME	66.2	82.0
KMW	40.5	50.3
KTZ	42.1	47.3
SHZ	23.2	25.1
Southern Water	**541.9**	606.5

3 Links between our WRMP24 and Regional Plan

We have worked closely with the other five member water companies in WRSE in developing a Regional Plan aligned with government guidelines and best practice.

We have worked both independently and collaboratively as part of WRSE, contributing to the development of method statements on demand forecasts and approaches such as best value planning, as well as decision-making. We have independently developed our household demand forecast, supply forecast and carried out options appraisals.

There are other elements where we have adopted a common regional approach across the WRSE members, following an iterative process. This includes development of our adaptive planning pathways and best value metrics. This has meant that the Regional Plan as well as WRMP24s for WRSE member companies are developed through the same process using a common tool.

Our WRMP24, building on the work we did from WRMP19, includes a number of strategic schemes that are to be delivered over the next 10-15 years.

- We are jointly developing the Havant Thicket Reservoir with Portsmouth Water. This is due to be completed in 2031-32 and will enable a new 21Ml/d bulk transfer from Portsmouth Water to HSE.
- We are progressing work on the Hampshire Water Transfer and Water Recycling Project (HWTWRP) that will use recycled water from our Portsmouth Harbour wastewater treatment works (up to 60Ml/d) in conjunction with the Havant Thicket Reservoir to provide up to 90Ml/d in HSE from 2034-35.
- We also plan to import up to 120Ml/d from Thames Water as part of the Thames-to-Southern Transfer (T2ST). This is scheduled for 2039-40 and requires the development of a large scheme such as the South East Strategic Reservoir Option (SESRO) that is being progressed by Thames Water.
- In addition to these large strategic schemes, we are planning to deliver four water recycling plants by the end of AMP8. These include the water recycling plants at Sandown (8.5Ml/d) on the IOW, Littlehampton (15Ml/d) in SNZ, River Medway (14Ml/d) in KMW and Sittingbourne (7.5Ml/d) in KME.
- Taken together, these schemes will provide 135Ml/d of recycled water over the next 10 years and together with the Havant Thicket Reservoir, provide up to 156Ml/d of water. This is close to 30% of our total Distribution Input (DI) in 2024-25.

In addition, our WRMP24 includes an ambitious demand management programme. We are looking to achieve a PCC of 110l/h/d, under dry year conditions, by 2045; 5 years ahead of the 2050 target set by the Government. In setting their individual PCC targets, WRSE have companies have a uniform profile of savings expected from Government-led initiatives such as water labelling of goods.

As in the case of PCC, we are aiming to exceed the leakage reduction target set by the Government by reducing leakage by 53% by 2050, instead of 50%.

4 Treatment works under DWI notices

The list of water supply works under DWI notices is given in Appendix A. The vast majority of the improvements are to be completed by 2030.

5 Our levels of service

Levels of service set out the standard of service that customers can expect from their water company. The objective of our plan is to ensure that there is enough water available to meet anticipated demands in all WRZs up to our defined level of service and resilience.

Our levels of service are expressed in terms of the frequency of restrictions, Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBs), that our customers are willing to accept (Customer target levels of service) and the frequency of drought permits and orders allowing modified abstraction regimes at some of our sources (Environmental target level of service).

We have assessed our water supply system against a range of drought scenarios, including low probability droughts (1-in-500 year or 0.2% probability). The use of these low probability droughts is designed to ensure that there is no unacceptable risk to balancing supply and demand given the drought intervention measures and levels of service for each supply area.

Our target levels of service set out in Table 14. However, the targets cannot be met immediately in all cases. This is particularly the case in Hampshire (Western Area) where licence changes were introduced in 2018 as part of our agreement with the Environment Agency under Section 20 of the Water Industry Act 1991 (S20 Agreement).

Our assessment of flows during the lead into drought on the River Test suggests that the trigger at which we would need to apply for a drought permit or order is likely to be reached once every three to five years whilst we develop our long-term solutions to offset the impact of the 2018 abstraction licence changes. Current Environment Agency guidance on drought permits and orders requires that steps are taken to reduce demand before drought permits are applied for. Under our S20 Agreement TUBs are required before implementation of the River Test Drought Permit and partial implementation of NEUBs is required before the River Test or River Itchen Drought Orders are applied for. Recent work we have undertaken in this regard suggests that we may need to impose restrictions on water use at a similar frequency to drought permit and order applications, i.e. around once every five years

Table 14: Target levels of service.

Level of service	Annual probability	Target level of service	Annual probability in Hampshire	Reduced level of service in Hampshire
Advertising to restrict water use	20%	1-in-5 year	50%	1-in-2 year
Temporary Use Ban on different categories of water use	10%	1-in-10 year	20%	1-in-5 year
Drought Order (Non-Essential Use Ban)	5%	1-in-20 year	5%	1-in-20 year
Application for Drought Permits and Orders to increase supplies through relaxation of abstraction licence conditions, increase in licensed quantities or other measures	0.5%	1-in-200 year	5%	1-in-20 year

The new HoF condition being considered by the Environment Agency on the River Itchen will significantly impact our levels of service. This is currently being assessed.

6 Update on AR24 feedback

The feedback we received on our Annual Review 2024 (AR24) along with an update on AR25 is given in Table 15.

Table 15: Feedback from the Environment Agency on our Annual Review 2024 and our Annual Review 2025 update.

AR24 actions	AR25 update
Total WAFU We have assessed the value that you provided as Total Water Available For Use (WAFU) for the reporting year 2023/24 for alignment and consistency with your WRMP19 planned values and the Supply Demand Balance Index (SDBI) Submission We were unable to fully reconcile and understand the changes made to the Total WAFU value presented in your Annual Review data submission with the one that was presented in WRMP19. You appear to have included the benefits of drought permits in your Total WAFU calculation. We would only expect drought permits to be included in outturn Total WAFU if those drought permits were implemented in the reporting year. In addition, you appear to have submitted data to reflect optimised internal transfers in your Annual Review data submission. However, we note that if you had used outturn volumes for your internal transfers as part of your Total WAFU calculation, as directed by the Annual Review guidance, this would have likely resulted in a supply-demand balance deficit in some of your water resource zones. The inclusion of these factors in Total WAFU reduces our confidence in the supply-demand balance presented, and we are concerned that the figures presented may not be a fair and transparent representation of the supply resilience in the reporting year. We would like to work with you through regular liaison to better understand the adjustments made to Total WAFU. In your 2025 Annual Review submission: • please ensure you follow WRMP Annual Review guidance to present Total WAFU that is consistent with your assumptions in your published WRMP and includes/excludes the industry accepted definitions for the metric • fully explain any and all adjustments that have been made to Total WAFU or any of its components to ensure Regulators are able to understand values that have been presented and have confidence that Total WAFU accurately reflects supply resilience in the reporting year • we recommend discussing any changes to Deployable Output or Total WAFU from the value presented in your published WRMP with the Environment Agency before submission of the Annual Review.	The revised data submission template issued for AR25 no longer requires WAFU to be calculated. In our SDBI submission, we have made changes to the DO figure for 2024-25. The DO figures used in calculating SDBI along with a description of the changes, where relevant, are given in Table 2. We did not rely on drought permits and orders to maintain supply in 2024-25. We have therefore not included volume from drought permits and orders in AR25 outturn data. We submitted all proposed changes to SDBI inputs to the Environment Agency ahead of the formal SDBI submission.
Other performance process alignment	We have tried to use consistent values between SDBI and AR25 submissions. However, the values are not fully

AR24 actions	AR25 update
We have assessed the value that you have provided as Total WAFU for the reporting year 2023/24 and compared that to the values presented as part of the SDBI calculation this year. We expect data to be fully board assured or a high confidence submission and consistent between the SDBI and Annual Review processes and are disappointed that the values provided are not consistent. In your 2025 Annual Review submission, please ensure there is consistency between the values presented and the narrative between the SDBI submission and Annual Review.	aligned across the board as SDBI submission deadline was before our 2024-25 water balance was finalised. The DI, household consumption, non-household consumption, leakage, water taken unbilled and operational use figures used to populate the tables are based on our final 2024-25 water balance figures that have been externally assured. The values for these metrics in the two submissions are therefore not identical but are comparable. The figures for DO, outage and process losses used in reporting outturn 2024-25 position have been retained from SDBI submission.
Dry Year Annual Average Uplift As requested in the WRMP Annual Review guidance for 2024, we note that you have submitted dry year uplifted data alongside your outturn data. Your Annual Review narrative contains no information that describes the approach taken to uplift outturn data and this has limited our ability to analyse in-year performance and conditions experienced. You do not appear to have uplifted household consumption metrics to approximate the demand you may have experienced if you were to experience a dry year. However, we note that you have made further adjustments to supply-side components that has revised Total WAFU in the uplifted data tab. This results in supply-demand balance in five of your zones than is represented in the outturn data tab, but there is no explanation in the Annual Review narrative to set out why values have been revised. This approach does not align with the weather conditions you reported for 2023-24 and also raises concerns over your security of supplies if a dry year were to occur. We cannot assess whether consider that the approach taken to uplift outturn data described in the Annual Review narrative aligns with WRMP19 demand forecasting methods or accurately reflects the supply-demand balance in a dry year, and we would like to work with you through regular liaison to better understand the adjustments made to uplift outturn data to the dry year annual average scenario.	We have applied DYAA adjustment to 2024-25 household consumption using the same uplift factors as were used in WRMP19. These are given in Table 8. DYAA adjusted PCC and total DI figures are given in Table 9 and Table 13 respectively. No other components of supply or demand have been adjusted for DYAA. We have adjusted interzonal transfers to achieve supply-demand balance in some WRZs. This reflects the operational flexibility that we have in some WRZs. However, this has only been done where the WRZs connected and there is enough surplus in the donor WRZ to meet the deficit in the recipient WRZs. Adjusted transfers between any WRZs are within the capacities of the pipelines connecting the WRZs.

7 WRMP19 delivery

7.1 Demand management

7.1.1 Reducing household demand

In view of the pressures we face, we consider demand management to be of vital importance. In our WRMP19, we planned to reduce average PCC to 100l/h/d by 2040, under 'normal year' conditions, as part of our 'Target 100' initiative. We also committed to reducing leakage by 50% from 2017-18 levels by 2050.

COVID-19 led to an increase in household demand during 2020-21 and 2021-22 as customers worked from home and made changes to their hand washing and personal hygiene routines. Our high meter penetration levels and continued water efficiency activities meant that the increase in demand was among the lowest in the industry (7.4% compared to an industry average of 10.4%). We have nevertheless had to revise our AMP7 forecast and our 2024-25 outturn forecast for PCC, which is now higher than our original target.

Despite the higher starting position for AMP8, we remain committed to reducing household demand and have refocused our efforts on a multi-channel communication campaign with our customers as well as developing the additional service of 'water saving kits'. During 2021-22, we delivered more than 64 million impressions and 1.6 million direct communications in the form of emails and door drops. This resulted in a high level of awareness of the need to save water, with an estimated 56% of customers in the Western Area, 39% in the Central Area, and 47% in the Eastern Area being made aware. We estimate this amounts to more than 858,000 customers and around 338,000 households who have taken active steps to reduce consumption as a result. We continued this programme in 2022-23 with over 3 million impressions and 1.4 million direct communications. We are also continuing to increase our water efficiency education programme through our 'City to Sea' partnership and are working with stakeholders to promote water neutrality in SNZ. We also promote home visits and water saving through our projects with local councils, including Kent County Council and Southampton City Council.

Our ongoing water efficiency initiatives have continued. We completed 8,787 home visits in 2021-22, 8,130 in 2022-23, 11,512 in 2023-24 and nearly 5,000 in 2024-25, giving advice on how to use less water. As part of home visits, we inspect for leaks and fit water-saving devices and outdoor water butts and tap jackets. The most up-to-date figures are showing an average saving of 27.5 litres per property per day since we began the visits in 2015. We have started using behavioural science insights to improve uptake of home visits.

We undertook a smart data enabler trial in 2021-22 to better understand smart meters' impact on water consumption and provide more insights on smart data quality and management. Clip-on AMI smart data enabling devices were installed on external meters in Southampton, Andover, Midhurst and Brighton. The insights from the trial have now been reviewed internally and the lessons learnt have helped support both our smart metering and leakage programmes.

We stopped installing AMR only meters towards the end of AMP7, moving toward meters that are capable of being smart meters in the future with the relevant infrastructure in place. We embarked upon readiness to start our Smart Metering programme (due to start in October 2025), including commencing our procurement for a new Alternative Metering Services Partner, to enable devices installed in AMP7 and all new devices installed in AMP8 to start communicating granular data via new Communications and IT Infrastructure, in support of our WRMP.

The number of meters installed per year in AMP7 by type and the number of smarts meters to be installed per year in AMP8, both as a replacement of non-smart meters and for new connections, is given in the accompanying AR25 tables.

7.1.2 Reducing leakage

As mentioned above, our leakage in 2024-25 was 97.7Ml/d against a target of 83.8Ml/d (Table 11). We have maintained our leakage activities in line with our WRMP19 programme. However, increased demand due to COVID-19 led to higher network pressures resulting in higher than forecast leakage at the start of this five-year period.

We committed to an extra £18m of funding during 2021-22 in order to meet the required levels of leakage reduction versus performance. Our reported leakage of 94.9Ml/d in 2021-22 was marginally above the target of 93.9Ml/d. However, during the COVID-19 pandemic we did not feel it would be responsible to increase our leakage activities. Since restrictions were relaxed, we have been able to increase our leakage activity once again. Utilising remote and flexible working patterns we were able to maintain a stable workforce to detect, promote and repair leaks to target. We repaired in the region of 23,800 leaks in 2021-22 and deployed approximately 7,000 new acoustic loggers designed to find leaks.

In 2022-23, leakage levels were above target with an outturn of 108.5Ml/d against a WRMP19 forecast of 91.3Ml/d. Extreme weather patterns including drought conditions over the summer period and two harsh/severe winter weather events in December 2022 and February 2023, contributed to increased levels of leakage. The demand pattern for household and non-household customers remains more variable than it did pre-COVID19 and therefore the water network is being stressed in areas that were not stressed previously.

We set up an action plan to reduce leakage, including increased the level of field detection resources. Leakage reduction in 2023-24 (107.5Ml/d) was marginal but we have seen a step change in 2024-25 with leakage reducing to 97. 7Ml/d.

As part of our leakage reduction plan, we completed 20,820 repairs on our network equating to 170Ml/d of leakage. Of this, 12,862 repairs (102.7Ml/d) were due to proactive leak repairs (i.e. leaks that are hidden to the eye and have to be actively detected) and 7,958 repairs (67.2Ml/d) were due to reactive leak repairs (which result from a customer contact and in many cases are visible to the eye). We then deployed c.3,000 new acoustic loggers designed to find leaks.

There were also 3,448 repairs to Customer Pipes (Customer Side Leaks) saving a further 41.4Ml/d. This was split between1,863 (22.4Ml/d) proactive repairs and 1,577 (18.9Ml/d) reactive repairs. Most of these repairs are undertaken by customers. We supported by repairing 435 leaks (5.2Ml/d).

We also installed 70 advanced pressure management schemes and, combined with optimising existing schemes saved a total of 13.2Ml/d of leakage. Pressure management does not fix leaks but reduces the volume of water lost through existing leaks as well as providing resilience to the network by reducing the volume of bursts by stabilising pressures within the network.

Other initiatives we have implemented to continue driving down leakage include the following:

- **Skewb Novus**: This platform provides greater insight and reporting capability to allow performance to be tracked and improved as well as implementing a trial of the Leakage Operations tool in Kent (Eastern Area) to increase the efficiency of the leakage detection resource by reducing the time taken to detect leaks.
- **Origin Leak Repair**: Using a no-dig technology to fix leaks on small diameter pipes (mostly those from distribution mains to the customer stop tap) thereby reducing leak repair times as well as the number of customer interruptions. This technology is being trialled and the longevity of the repair is to be determined. However, in a worst case scenario, it prevents wastage of water whilst a longer-term solution is being implemented.
- **Transient Mitigations**: Transients are short duration but high level pressure spikes that can be caused by network and customer equipment (such as ball valves on large tanks, booster pumps and poor network valve operation). We have been proactively searching for transients within the network and implementing solutions to eliminate the sources which has meant liaising with internal departments and customers. This has resulted in significantly reducing the number of bursts

occurring in the parts of the network impacted by transients and, in some cases, has resulted in no leaks for the whole year.

- **Performance Incentivisation:** We have reviewed our leakage contracts and revised the outputs to drive an increase in performance, largely by increasing the linkage of reward to delivery. We have seen a significant increase in performance over the year with 10% more leakage activity being completed in the 2nd half of the year compared to the first half.

7.2 Supply-side schemes in the Western Area

Our supply-demand balance position in the Western Area is particularly challenging. In order to provide environmental protection for the rivers Test and Itchen, particularly in periods of low flow, the Environment Agency amended four abstraction licences held by Southern Water for public water supply. These licences were the subject of a Public Inquiry in March 2018.

At the Inquiry we entered into the S20 agreement with the Environment Agency. The agreement committed us to a sequence of drought measures and set out the process by which we will apply for drought permits and orders for drought supply deficit in Hampshire. This agreement is due to expire on 31 March 2030. As part of the agreement, we agreed to use all best endeavours to implement the long-term scheme for alternative water resources set out in our WRMP19, as may be revised by future WRMPs.

Our WRMP19 was prepared to meet supplies in a drought with a 1-in-200 year return period (1:200 drought), which forecast an overall water resource deficit in the Western Area of around 192Ml/d during peak periods up to 2029-30. We planned to meet this deficit through leakage and demand reduction and the development of long-term and large-scale solutions across the Western Area.

7.2.1 Strategic Resource Options (SROs)

Hampshire Water Transfer and Water Recycling Project (HWTWRP)

The long-term solution identified in the WRMP19 preferred strategy was a 75Ml/d desalination plant on the West Southampton Coast. As WRMP19 was an adaptive plan, we progressed alternative options in parallel with our preferred option. Our principal alternative to the West Southampton Coast desalination scheme was an indirect water recycling scheme using the lower River Itchen as an environmental buffer.

Following the Price Review 2019 (PR19) Final Determination and the creation of the gated process by Regulators' Alliance for Progressing Infrastructure Development (RAPID), we were required to consider further alternative schemes not included in WRMP19, such as recycling options involving the use of an environmental buffer (new lakes and wetlands to store treated water) near our Itchen Water Supply Works (WSW).

The consideration of alternatives is also required to support the consenting of the solution, as part of Strategic Environmental Assessment (SEA), Habitats Regulation Assessments (HRA), Water Framework Directive Assessment (WFDA), and Environmental Impact Assessment (EIA) processes.

Accordingly, we carried out an options appraisal process to identify Strategic Resource Options (SROs) in the Western Area. This included a review of environmental, planning, social and value-based criteria, legal and policy obligations and strategic objectives. We tested the options (the West Southampton Coast desalination scheme and the alternative schemes, which included additional desalination options) against the selected criteria and considered their performance and delivery feasibility against one another.

This showed that desalination options on the West Southampton Coast ranked the lowest among the options and the preferred location presented difficulties. Alternative locations considered for desalination were also assessed as being unlikely to receive consent.

As a result, in agreement with regulators (Ofwat, Environment Agency and Drinking Water Inspectorate) and with the support of Natural England, the desalination options were not taken forward beyond RAPID Gate 2.

The highest- ranking option from the options appraisal exercise, and our selected option, was the Hampshire Water Transfer and Water Recycling Project (HWTWRP) with the following main components:

- Abstraction from Portsmouth Harbour Wastewater Treatment Works (WTW);
- Treatment at a new water recycling plant to produce recycled water (at least 15Ml/d);
- Transfer of recycled water from the water recycling plant to Havant Thicket Reservoir (ca. 5km);
- Abstraction (75Ml/d) at Havant Thicket Reservoir and transfer (ca. 40km) to Itchen WSW; and
- Treatment at Itchen WSW and potable water sent into supply.

In addition to our selected option, we presented RAPID with a Back-Up Option, which was the next highest-ranking option which could be progressed in the event that the selected option was no longer feasible or deliverable.

The Back-Up Option involves water recycling and transfer via a new Environmental Buffer Lake and its main component parts are as follows:

- Abstraction from Portsmouth Harbour and Fareham WTWs;
- Treatment at a new water recycling plant to produce recycled water (75Ml/d);
- Transfer (ca. 40km) to an Environmental Buffer Lake at Itchen WSW; and
- Abstraction from the Environmental Buffer Lake (75Ml/d) and treatment at Itchen WSW and potable water sent into supply.

Both options are capable of being scaled-up to deliver up to approximately 90Ml/d into Itchen WSW in drought conditions, in order to deliver against known risks to supply and to meet future needs. However, key differentiators between the two options were that the HWTWRP represents better value for customers and is better able to meet long-term regional supply requirements.

The HWTWRP is now being progressed into the consenting and delivery phases and we are currently in the pre-application process for a Development Consent Order (DCO), including consultation and engagement, Environmental Impact Assessment (EIA), preparing our consenting documentation and progressing scheme development. We have been engaging throughout the development of the HWTWRP with regulators, communities, local stakeholders and customers to understand and incorporate their views

Our dWRMP24 was published in October 2022 and included the HWTWRP to provide benefit from 2030-31 i.e. delivery by 2029-30.

A Quantitative Schedule Risk Analysis (QSRA) was undertaken to test the reliability of the delivery date for the HWTWRP included in our dWRMP24. The analysis has indicated greater confidence in delivering the HWTWRP by March 2034 with benefit from the option first achieved in 2034-35 (i.e. from 01/04/2034). This is incorporated into our fdWRMP24.

The HWTWRP is progressing through the RAPID gated process and Gate 3 final assessment in February 2025 concluded that all Gate expenditure as 'efficient' and was allowed in full, with an overall 'satisfactory' score.

Significant collaboration with Portsmouth Water has been undertaken to integrate HWTWRP with Havant Thicket Reservoir. The alignment work aims to release a significant opportunity for customers, whereby benefits include net financial reduction to the SRO final estimate, less disruption to residents during construction, as well as carbon benefits. In May 2025, planning permission was granted for a joint tunnel that would enable the transfer of water for both the Havant Thicket Reservoir and HWTWRP (if consented), minimising disturbance to residents and delivery costs.

Discussions on operating the joint Havant Thicket Reservoir and HWTWRP 'system' from an operational control, water supply and commercial perspective are ongoing between Southern Water and Portsmouth

Water. An agreed set of draft Bulk Supply Agreement Heads of Terms is due to be agreed by the end of June 2025.

As well as associated infrastructure, HWTWRP involves construction of a water recycling plant (WRP) requiring a suitably sized and located land parcel. Following an extensive site selection process a site close to Southern Waters' Portsmouth Harbour WTW was identified as the preferred location. The land purchase was completed in April 2024, significantly derisking the project.

Thames to Southern Transfer (T2ST)

Through early AMP7 we worked with Thames Water to jointly investigate and develop T2ST. When constructed and commissioned, this would see a supply of up to 120Ml/d via a new ca. 85km pipeline transferring potable water from Thames Water to HWZ. Two spur connections from the main pipeline would also enable a supply of up to 10Ml/d each to Thames Water and to South East Water. T2ST is dependent on Thames Water developing a new resource to provide supply to the pipeline. The WRSE selected option is a new reservoir, SESRO in the Oxford area, with Southern Water becoming a funded co-sponsor at the start of AMP8, joining Affinity Water who have been a funded co-sponsor through AMP7. RAPID Gate 3 submission for SESRO is scheduled for summer 2025. Once in operation, raw water originating from SESRO would be treated to potable standard at a new water treatment works to be located at the SESRO site but constructed and operated via a Direct Procurement for Customers (DPC) contract progressed via the T2ST project.

T2ST is not anticipated to deliver water resources into the supply network until 2040. The scheme is not an alternative to HWTWRP but is required in addition to HWTWRP from 2040, to meet demand in the Western Area as well as the Central Area.

Non-SRO schemes

- **Additional import from Portsmouth Water linked to Havant Thicket Reservoir (21M/d)**: This scheme involves transfer of 21Ml/d of potable water from Portsmouth Water's new Havant Thicket Reservoir to HSE, using new pumping stations and pipelines. Work through 2024 has considered various technical options with an aim of minimising pipe length and avoiding SSSI sites and connecting into an alternative location on the Southern Water network, removing the need to cross the M27 motorway. The delivery date is dependent on the commissioning of Havant Thicket Reservoir which is scheduled for March 2032.
- **Sandown WTW recycling (8.5Ml/d)**: This scheme is also referred to as the Isle of Wight Water Recycling project (IWWRP), this scheme aims to provide a new water recycling plant to provide 8.5Ml/d on the IOW. The location for the water recycling plant has been identified and a contractor is engaged to support detailed design, development and delivery. Price Review 2024 (PR24) Final Determination designated this project to follow Ofwat's Large Scheme Gated process, requiring two assured submissions to Ofwat to release funding beyond project development. We are assessing the impact of new regulatory requirements on the contract award dates.
- **Newbury WSW groundwater asset enhancement (1.2Ml/d)**: This will provide HKZ with a further 1.2Ml/d supply. Ecology and geotechnical site surveys have progressed in parallel with successful borehole testing on an existing pumping station to confirm the viability to increase the flow capacity from 3.8Ml/d to 5.0Ml/d. A pipeline route has been identified and agreed with landowners. Overall, this has facilitated maturing of the scheme to outline design and contractor engagement. An EIA screening opinion was submitted to the local Borough council in March 2024 at the outcome is awaited. We plan to start on-site construction in early 2026.
- **Additional import from Portsmouth Water (9Ml/d)**: – This project was to provide 9Ml/d from Portsmouth Water using an existing pipeline transfer. However, Portsmouth Water formally notified us in March 2023 that this scheme cannot progress as borehole testing did not provide the required yield. We have accommodated this shortfall within the sizing of the HWTWRP.
- **Import from South West Water (20Ml/d)**: This project involved new transfer from South West Water to HSW for up to 20Ml/d. This scheme is not being progressed as South West Water have informed us that there is insufficient available water due to environmental obligations. We have accommodated this shortfall within the sizing of the HWTWRP.

- **Romsey Town and Broadlands valve (HSW-HRZ reversible)** – This is a scheme to redirect existing water to Hampshire Southampton East WRZ. Ecology and environmental site surveys have facilitated an environmental impact assessment and identification of a route for connection pipework. This current scope is being studied (Spring 2025) as part of PODDS (Prediction Of Discolouration in Distribution Systems) initiative by Sheffield University to identify a suitable discolouration mitigation plan to ensure water quality is maintained. As part of this study, turbidity monitors are being installed on the existing network and the result of the study (due later in 2025) will be used to create a valve operation plan. Construction is projected to commence in early 2026.
- **Hampshire grid - Andover Link Main (reversible HSE-HWZ and HWZ-HAZ links)**: Andover Link Main (ALM) aims to connect Winchester and Andover via a new ca. 25km pipeline providing up to 15Ml/d capability for both drought and operational resilience. This scheme has progressed with system architecture having been determined, together with the Southampton Link Main below, supported by hydraulic optioneering modelling to define system requirements. Route corridors have been developed and a contractor engaged to support development and delivery to outline design. Additionally, ecology and environmental activities have commenced. Due to development in the wider grid design and change of the SRO, the design flow for HSE-HWZ has increased from 38Ml/d to 74Ml/d, and for HWZ-HAZ it has been reduced from 25Ml/d to 15Ml/d.
- **Hampshire grid - Southampton Link Main (reversible link HSW- HSE)**: This option has been redesigned such that the link is now between HSW and HWZ and connects to the ALM above. The design flow remains at 60Ml/d. SLM) aims to provide improved resilience between the River Test WSW in HSW (near Southampton) and Itchen WSW in HSE (near Winchester).

  Through AMP7, land access agreements have been agreed allowing significant ecology, archaeological environmental surveys and ground investigations along the identified transfer pipeline corridors for the ALM and SLM. Various third-party approvals have also progressed relating to road, rail and river crossings along the route corridors. This work has supported the submission of two environmental screening opinions. The response received from Local Planning Authority and Secretary of State is that ALM is subject to a full EIA submission and SLM has been confirmed as not requiring full EIA submission. Therefore, elements of the SLM project will be delivered under permitted development rights.
- **WSW near Cowes - reinstate and additional treatment** - This scheme was only selected in one future branch in our WRMP19 and not until 2065. As such, we have not needed to progress its development. This scheme was removed as a feasible option following options appraisal for WRMP24.

7.2.2 Catchment management

Our catchment management and nitrate infrastructure plans were established to mitigate against the impact of higher nitrate levels in raw source water from 2027 onwards. We have continued to monitor and forecast source nitrate levels and plan work accordingly. We are planning to deliver our capital works schemes at Twyford and Romsey providing 19.6Ml/d and 10.8Ml/d benefit respectively by March 2025. Our current forecast of nitrate levels indicates that these schemes will be sufficient to maintain use of sources. We are able to bring further investments into our plans should monitoring indicate that they are required. This includes WRMP19 referenced works at Winchester which would deliver an 18.2Ml/d benefit. We have reforecast the benefit of our ongoing catchment management to a longer-term profile, beyond 2027.

7.2.3 Environmental protection measures

While not directly contributing to supply-demand balance, we proposed to invest in a range of environmental protections. This includes enhancing and maintaining habitats supporting biodiversity. We continue to work with a range of stakeholders and our plans remain on track.

Table 16 summarises progress on options selected as part of the WRMP19 in the Western Area, excluding drought options.

Table 16: Status of WRMP19 preferred options in the Western Area.

Scheme	WRZ	Delivery year as per WRMP19	Progress
Demand management			
Water efficiency activity	All	From 2020	Progressing but with revised target
Leakage reduction (15% reduction by 2025; 50% by 2050)	All	From 2020	Progressing
Increase in household meter penetration from 88% to 92%	All	From 2020	Delayed until AMP8
Resource development and bulk supplies			
Additional import from Portsmouth Water (additional 9Ml/d)	HSE	2024-25	Abandoned, as Portsmouth Water can no longer provide the supply
Import from South West Water (20Ml/d)	HSW	2027-28	Abandoned, as South West Water can no longer provide the supply
Additional import from Portsmouth Water linked to Havant Thicket reservoir (21Ml/d)	HSE	2029-30	Progressing to revised delivery deadline in line with Havant Thicket Reservoir delivery
Southampton coast desalination (modular to 75Ml/d)	HSW	2027-28	Replaced by Hampshire Water Transfer and Water Recycling Project to provide up to 90Ml/d benefit from 2034-35
Sandown WwTW Indirect Potable Reuse (8.5Ml/d)	IOW	2027-28	Progressing with delivery date revised to 2029-30
Hampshire grid - Andover Link Main (1) (reversible link HSE-HWZ)	HWZ & HSE	2027-28	Progressing with delivery date revised to 2029-30
Hampshire grid - Andover Link Main (2) (reversible link HWZ-HAZ)	HAZ & HWZ	2027-28	Progressing with delivery date revised to 2029-30
Hampshire grid - Southampton link main (reversible link HSW-HSE)	HSW & HSE	2027-28	Progressing with delivery date revised to 2029-30
Romsey Town and Broadlands valve (HSW-HRZ reversible)	HRZ & HSW	2024-25	Progressing with delivery date revised to March 2025
Newbury WSW asset enhancement (1.2Ml/d)	HKZ	2027-28	Progressing with delivery date planned for March 2027
WSW near Cowes - reinstate and additional treatment	IOW	2065 in 1 adaptive planning branch	Not yet progressing
Catchment management			
In-stream river restoration works on the Itchen	HSE & HWZ	2029-2030	Delayed pending outcome of Water Framework Directive 'No Deterioration' investigations - AMP8 WINEP scheme proposed, completing 2030
In-stream river restoration works on the Test (upper reaches)	HAZ & HRZ	Phase 1 2024-2025 Phase 2 2029-2030	Progressing, will continue into AMP8 completing 2030
Pesticide catchment management / treatment - Sandown	IOW	2024-25	Catchment management progressing - linked to DWI[1] undertaking
Pesticide catchment management / treatment - Test Surface Water	HSW	2024-25	Catchment management progressing - linked to DWI undertaking

[1] DWI = Drinking Water Inspectorate

Scheme	WRZ	Delivery year as per WRMP19	Progress
Nitrate catchment management / treatment - Winchester	HWZ	2027	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Romsey	HRZ	2025	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Twyford	HSE	2025	Catchment management progressing, and continuing in AMP8

7.3 Supply-side schemes in the Central Area

7.3.1 Water neutrality

In September 2021 Natural England issued a Position Statement for planning applications for new development within SNZ, commonly referred to as the Natural England Position Statement or the Water Neutrality Position Statement. This sets out that the existing water abstraction in the SNZ may be contributing to habitat deterioration within internationally protected sites in the Arun Valley.

Until the risk has been eliminated either by demonstrating no impact by further investigations or through development of alternative supplies, the Natural England Position Statement establishes that development proposals within the SNZ that would lead to an increase in water demand must demonstrate that their proposals are water neutral and that the relevant Local Planning Authority (LPA) is the competent authority to carry out this assessment.

These requirements apply to any developments that require planning permission and those developments that take place under permitted development rights.

For those developments that will create demand (regardless of any existing use of the site) for mains water from our Pulborough water supply source, the applicant must submit a Water Neutrality Statement to the relevant LPA setting out the existing and proposed water consumption figures, and a scheme for achieving water neutrality. The LPA will assess the Water Neutrality Statement and impose any relevant planning conditions.

We have investigated the potential impacts of groundwater abstractions at Pulborough on the protected sites in the Arun Valley. The Environment Agency and Natural England have been involved in the study. The study has now been concluded and the report is currently being reviewed by the Environment Agency and Natural England.

7.3.2 Resource development and bulk supplies

The update on key WRMP19 schemes and DWI notices in the Central Area are outlined below

- **Littlehampton WTW Indirect Potable Water Recycling**: The DO benefit of this scheme has been revised from WRMP19 to provide 15Ml/d along with a change in delivery date from 2027-28 to 2029-30. This scheme has progressed through to detailed options analysis. The scheme was moved under RAPID lite and allocated for Ofwat DPC as part of PR24. We are currently assessing the impact of this on scheme delivery.
- **Pulborough groundwater licence variation**: This scheme has been put on hold pending the outcome of the WFD No Deterioration investigations. The investigation is now complete, and the report has been passed on to the Environment Agency and Natural England for review.
- **Coastal Desalination - Sussex Coast**: The scheme has proved to be undeliverable at the proposed location of Shoreham Harbour. We have actively looked at alternative locations and solutions including upsizing of the Littlehampton WTW Indirect Potable Recycling and relocating the desalination plant to the River Adur. However, no alternative suitable site has been identified. We are therefore no longer progressing this option.
- **Aquifer Storage and Recovery (ASR) in SWZ**: This scheme is no longer being delivered as access to the site identified for pilot testing could not be secured.
- **Transfer to Midhurst WSW and Petersfield borehole rehabilitation**: This scheme to investigate the release of additional DO from Petersfield WSW was originally scheduled to be developed by 2025-26. This scheme is now due to be delivered by 2027-28, with benefit from 2028-29.
- **Scheme to bring West Chiltington back into service**: This scheme was originally scheduled to be delivered by 2024-25. It is now due for delivery in 2027-28. A separate WFDA no-deterioration study is enabling the existing borehole, which is long-term out of service, for test pumping. It covers the Water Features Survey to inform the no-deterioration study. Water quality data from test pumping is

needed to commence optioneering, design and delivery. The scheme is awaiting release of AMP8 funds and an AMP8 Programme Initiation Brief.

- **Pulborough Winter transfer Stage 2**: This scheme involves a new main between SWZ and SBZ to facilitate additional transfer of water from Pulborough WSW during the winter to allow resting of groundwater sources near Brighton. We are currently reviewing the potential impact of Water Neutrality on the viability of this scheme, as it utilises water from Pulborough WSW during the winter to allow groundwater sources near Brighton to be rested.
- **Bulk import from SES Water through rezoning**: This scheme was not included in WRMP19 but was introduced in AMP7 address the challenges in SNZ. The scheme currently delivers 1.3Ml/d with plans to increase it to 4Ml/d. The option is being discussed with SES Water.
- **Weir Wood WSW:** Weir Wood Reservoir is not a WRMP19 deliverable but has been out of service. Our dWRMP24 had assumed it to be available from 2024-25 at full 21Ml/d treatment capacity. Our fdWRMP24 includes a rebuild of this scheme in three phases; from 5.5Ml/d capacity in 2025-26 to 13Ml/d in 2027-28 and 21Ml/d in 2029-30. Phase 1 capacity has now been increased to 7Ml/d and is due to be delivered in 2026.

7.3.3 Catchment management

Our catchment management and nitrate infrastructure plans were established to mitigate against the impact of higher nitrate levels in raw source water from 2027 onwards. We have continued to monitor and forecast source nitrate levels and planned work accordingly. Our aim is to prevent the loss of 20Ml/d of supply at North Falmer A, North Falmer B, Brighton A, North Arundel and Long Furlong B, via catchment management and installation of nitrate treatment where appropriate. We have delivered a nitrate blending solution to protect our Long Furlong B source and will deliver a nitrate treatment plant in AMP8 to ensure the nitrate challenge is mitigated. The first phase of the Brighton A nitrate treatment scheme will be delivered in AMP7, with a second phase delivered during AMP8. A nitrate plant treating flows from North Falmer A and North Falmer B will be delivered by December 2027.

Current forecast of nitrate levels indicate that these schemes will be sufficient to maintain use of sources. We are able to bring further investments into our plans should continued nitrate monitoring indicate that they are required. We have reforecast the benefit of our ongoing catchment management to a longer terms profile, beyond 2027.

7.3.4 Environmental protection measures

While not directly contributing to supply-demand balance, we proposed to invest in a range of environmental protections. This includes enhancing and maintaining habitats supporting biodiversity and comply with BNG requirements. We continue to work with a range of stakeholders and our plans remain on track.

Table 17 summarises the progress on options selected as part of the WRMP19 in the Central Area, excluding drought options.

Table 17: Status of WRMP19 preferred options in the Central Area, excluding drought options.

Scheme	WRZ	Delivery year as per WRMP19	Progress
Demand management			
Water efficiency activity	All	From 2020-21	Progressing, but with revised target
Leakage reduction (15% reduction by 2025; 50% by 2050)	All	From 2020-21	Progressing
Extension of UMP to take household meter penetration from 88% to 92%	All	From 2020-21	Delayed to AMP8
Resource development and bulk supplies			
Littlehampton WTW Indirect Potable Water Reuse	SNZ	2027-28	Delayed to 2029-30 This will give a benefit from 2030-31.

Scheme	WRZ	Delivery year as per WRMP19	Progress
Coastal Desalination - Shoreham Harbour	SBZ	2027-28	Abandoned
Pulborough groundwater licence variation	SNZ	2021-22	Scheme on hold due to sustainability investigations
Aquifer Storage & Recovery (Sussex Coast - Lower Greensand)	SWZ	2027-28	Abandoned
Transfer to Midhurst WSW & Petersfield borehole rehabilitation	SNZ	2025-26	Delayed to 2027-28
Scheme to bring West Chiltington back into service	SNZ	2024-25	Delayed to 2027-28
Winter transfer Stage 2: New main Shoreham/North Shoreham and Brighton A	SBZ	2027-28	Progressing pending completion of feasibility investigations
Catchment management			
Arun/W Rother - instream catchment management options	SNZ & SWZ	2029-2030	Delayed pending outcome of Water Framework Directive 'No Deterioration' investigations - AMP8 WINEP[2] Scheme proposed completing 2030
Pesticide catchment management / treatment - River Arun	SNZ	2024-25	Catchment management progressing - linked to DWI undertaking
Pesticide catchment management / treatment - Pulborough Surface	SNZ	2024-25	Catchment management progressing - linked to DWI undertaking
Pesticide catchment management / treatment - Weir Wood Reservoir	SNZ	2024-25	Catchment management progressing - linked to DWI undertaking
Nitrate catchment management / treatment - North Falmer A	SBZ	2027-28	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - North Arundel	SWZ	2027-28	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - North Falmer B	SBZ	2027-28	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Long Furlong B	SWZ	2022-23	Catchment management progressing and continuing in AMP8. Nitrate blending solution delivered.
Nitrate catchment management / treatment - Brighton A	SBZ	2027-28	Catchment management progressing, and continuing in AMP8

7.4 Eastern Area

7.4.1 Resource development and bulk supplies

- **Medway WTW Indirect Potable Water Recycling**: Optioneering for this scheme took place in July 2022. A sampling programme has been established to inform the process requirements and sampling is underway. Following analysis of future flow regimes at Medway WTW, the DO benefit of this scheme has been revised to 14Ml/d from 18Ml/d. In the fdWRMP24, this scheme is not needed

[2] WINEP = Water Industry National Environment Programme

before 2030-31. The delivery of this scheme has consequently been revised to 2029-30. PR24 Final Determination included this scheme within the RAPID light touch approach. We are currently assessing any impact of this on the scheme delivery profile.

- **South East Water bulk supply near Canterbury**: We are working with South East Water to progress this import.
- **Utilise full existing transfer capacity (from Faversham4)**: This involves modifying two separate underground sources to allow more water to transfer to KTZ. Review of achievable output is currently underway.
- **West Sandwich and Sandwich WSW licence variation** - The license review has been completed and the benefit from this option has been included in the baseline supply forecast for WRMP24.

7.4.2 Catchment management

Our catchment management and nitrate infrastructure plans were established to mitigate against the impact of higher nitrate levels in raw source water from 2027 onwards. We have continued to monitor and forecast source nitrate levels and planned work accordingly. We are planning to prevent the loss of 33Ml/d of supply by December 2025 at Deal, West Sandwich, Ramsgate B, Birchington, North Deal, Near Canterbury and Sandwich. Our current forecast of nitrate levels indicate that these schemes will be sufficient to maintain use of sources. We are able to bring further investments into our plans should continued nitrate monitoring indicate that they are required. We have reforecast the benefit of our ongoing catchment management to a longer terms profile, beyond 2027.

7.4.3 Environmental protection measures

While not directly contributing to supply-demand balance, we proposed to invest in a range of environmental protections. This includes enhancing and maintaining habitats supporting biodiversity. We continue to work with a range of stakeholders and our plans remain on track.

Table 18 summarises the progress on options selected as part of the WRMP19 in the Eastern Area, excluding drought options.

Table 18: Status of WRMP19 preferred options in the Eastern Area.

Scheme	WRZ	Delivery year as per WRMP19	Progress
Demand management			
Water efficiency activity	All	From 2020-21	Progressing but with revised target
Leakage reduction (15% reduction by 2025; 50% by 2050)	All	From 2020-21	Progressing
Resource development and bulk supplies			
Medway WTW Indirect Potable Water Reuse	KMW	2027-28	To be delivered by 2029-30 - see Section **Error! Reference source not found.**
South East Water bulk supply near Canterbury	KTZ	2025-26	To be delivered by 2027-28
Utilise full existing transfer capacity (from Faversham4)	KTZ	2027-28	Progressing
West Sandwich and Sandwich WSW licence variation	KTZ	2021-22	Complete - Benefit included in baseline supply forecast
Catchment management			
Pesticide catchment management / treatment - Darwell Reservoir	SHZ	2024-25	Catchment management progressing - linked to DWI undertaking
Pesticide catchment management / treatment - River Medway Scheme	KMW	2024-25	Catchment management progressing - linked to DWI undertaking
Pesticide catchment management / treatment - Powdermill Reservoir	SHZ	2024-25	Catchment management progressing - linked to DWI undertaking

Scheme	WRZ	Delivery year as per WRMP19	Progress
Nitrate catchment management / treatment - Deal	KTZ	2022-23	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - West Sandwich	KTZ	2025-26	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Manston	KTZ	2022-23	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Ramsgate B	KTZ	2022-23	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Birchington	KTZ	2022-23	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - North Deal	KTZ	2022-23	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - near Canterbury	KTZ	2025-26	Catchment management progressing, and continuing in AMP8
Nitrate catchment management / treatment - Sandwich	KTZ	2027-28	Catchment management progressing, and continuing in AMP8

7.5 Catchment First

Catchment First is our commitment to put the well-being of the environment at the centre of the decisions we make and the services we deliver. It represents a shift in focus from relying on traditional engineering solutions, to working collaboratively with partners to create long-term sustainable improvements to the environment on which our business and customers depend.

Our key strategic Catchment First projects aligned with WRMP to protect water resources include:

- **Sustainable abstraction and mitigation programme** - understanding the baseline condition of the environment and the potential impacts of our abstractions, and enhancing the waterbodies in which we operate, with a water resource and hydroecology focus. Instream Catchment Resilience Schemes (ICRS) are WRMP24 and WINEP schemes, which are multi-AMP with the AMP7 element being monitoring to establish an ecological baseline within a waterbody where we may be having an impact due to our abstractions. The AMP8 element is to implement targeted instream measures to reduce the write-down in abstraction licence quantity in agreement with the Environment Agency.
- **Groundwater nitrate reduction programme** - understanding the risk of nutrient concentrations (specifically nitrate) in groundwater sources and the resulting risk to drinking water compliance and source sustainability in the future. Implementing catchment schemes, working with agriculture and other land users, to ensure the resilience of the sources and assets in six key project areas: Hampshire, Worthing, Brighton, North Kent, Thanet North and Thanet South, collectively covering approximately 36 groundwater sources in AMP7, increasing to 42 in AMP8.
- **Surface water catchment resilience programme** - understanding the nature of the river catchments and the risks to raw water quality at key abstractions, working with farmers, agronomists and catchment stakeholders to mitigate upstream water quality pressures whilst providing wider environmental outcomes for example for natural capital, carbon, flooding, soil health and sediment erosion. Key focus areas in AMP7 and into AMP8 are the Western Rother and River Arun catchments in Sussex, the River Beult sub-catchment to the River Medway in Kent, and the Eastern Yar catchment on the Isle of Wight.

7.5.1 Regulatory schemes and investigations

We have successfully submitted all of the AMP7 water WINEP programme and the AMP7 DWI Undertakings and Notices.

- In AMP7 we focused our nitrate reduction schemes in 36 groundwater catchments, including a number of nitrate catchment schemes in WRMP19 (Romsey, Twyford, Winchester, Near Andover (2), North Falmer B, North Falmer A, Steyning, Brighton A, Long Furlong B, North Arundel, Deal, Manston2, Ramsgate, Birchington, North Deal, West Sandwich, near Canterbury, Sandwich, Strood, Gravesend and North Dover). The schemes include liaising with farmers, farmer clusters and stakeholders locally to undertake engagement on nitrate risk and fund a series of farm trials and nitrate reduction measures in specific catchments where nitrate risk is understood to be high. In many groundwater catchments across the supply region, we are continuing to roll out incentive schemes for nitrate reduction measures to protect drinking water sources, this is part of a multi-AMP approach. As well as incentive schemes, we run a programme of farm visits, trials and engagement events.
- The focus of our AMP7 pesticide schemes was to prevent further deterioration in raw water quality by reducing the levels of two key pesticides at raw water abstraction points and within the catchment. This focussed on the River Beult and the Western River Rother. In the River catchments for the Western Rother and Arun, we have been monitoring water quality, we've undertaken pesticide risk mapping and modelling, and have been engaging farmers on key pesticides featuring in the risk assessments. We have established and continued to monitor closely the pesticide risk in both the River Medway and the Weir Wood catchment, with these data being used to target our communications and awareness raising activities around pesticide risk. We have also been working more intensively in the River Beult (sub-catchment to the River Medway) to engage farmers on pesticide use, monitor water quality and protect water sources from elevated pesticides. This has included monitoring, risk modelling and mapping, and engaging with farmers directly via our in-house Catchment Officers. We have also established key partnerships with local stakeholders, including working collaboratively with the Catchment Partnerships in 4 strategic river basin areas to codevelop catchment scale management plans.
- We have undertaken natural capital mapping exercise and are working with local stakeholders including the Arun and Rother Rivers Trust to engage farmers and identify target areas for environmental enhancements to protect water quality whilst delivering wider benefits.
- The AMP7 implementation scheme on the Upper Anton is progressing well, and Lukely Brook and Lewes Winterbourne are both complete.
- We have extended our Upper Anton WINEP scheme to become our Catchment Based Approach (CaBA) Chalk Stream flagship project, delivering ecological resilience improvements to both the Upper and Lower Anton, in collaboration with catchment partners Wessex Rivers Trust, Test Valley Borough Council and the Piscatorial Society.

8 Forward look

Our fdWRMP24, like WRMP19, continues to be based on the twin-track of both reducing demand and increasing supply in order to meet supply-demand balance well into the future accounting for growth in population, climate change impacts on both supply and demand and the need for environmental protection.

Our PCC during AMP7 was higher than planned owing to COVID-19 impact. However, we continue to aim for ambitious reductions in PCC. As part of its Environmental Improvement Plan, the Government has set water companies in England and Wales a PCC target of 110l/h/d by 2050 under dry year conditions. For us, a PCC of 110l/h/d under dry year conditions equates to 100l/h/d under normal year conditions. This is the same level of PCC that we had set ourselves as part of our WRMP19 'Target 100' initiative. We aim to achieve this target by 2045, i.e. 5 years ahead of the date set by the Government. Replacing our existing household and non-household meters with smart meters over AMP8 is a key part of our demand management strategy. It will allow us to better identify customers that stand to benefit more from our other water efficiency initiatives such as home visits and water audits. This will be complimented by educational and awareness campaigns in addition to community-based initiatives. We plan to introduce innovative tariffs in AMP9 once smart meter installation is complete.

While we have developed a set of initiatives to promote water efficiency, which will be continually assessed and refined as we progress, the PCC target set by the Government cannot be met by water companies alone. Changing behaviours around water consumption requires collaboration between water companies, the Government as well as other stakeholders. Our water efficiency plan includes Government led initiatives such as water efficiency labelling of goods (e.g. washing machines and dishwashers) as well as implementation of building codes to promote water efficient homes. These initiatives are needed to deliver lasting reductions in water consumption in homes and businesses.

We plan to reduce leakage by 53% by 2050, using a mix of existing and emerging technologies. This exceeds the 50% leakage reduction target set by the Government. As with PCC, we will continually evaluate our options and look to adopt technologies that will deliver greater reductions and/or deliver them earlier.

Delivering long-term solutions in the Western Area to end our reliance on rivers Test and Itchen during drought remains a key area for us. We are planning to end our reliance on supply-side drought permits and orders across our supply area after 2041. The need to protect and, where possible, enhance the natural environment means that we not only cannot take any more water from the environment but are also required to reduce the amount of water we currently take from rivers and groundwater. This has necessitated the inclusion of options like water recycling and desalination in fdWRMP24. These options are more complex and cost more to build and operate compared to more traditional sources of water such as boreholes and river abstractions. The potential increase in HoF on the River Itchen as part of the licence renewal will exacerbate the challenge in Hampshire.

Our fdWRMP24 includes delivering five water recycling plants across our supply region over the next 10 years capable of delivering up to 135Ml/d; nearly a quarter of our 2024-25 DI. These are HWTWRP and Sandown in the Western Area, Littlehampton in the Central Area and River Medway and Sittingbourne in the Eastern Area. Water recycling has been used for public supplies in parts of the world for decades but it is new to the UK. This, together with evolving regulatory framework around funding mechanisms for large schemes, makes the delivery of such schemes particularly challenging.

In summary, this year has seen a significant reduction in leakage, outturn PCC in line with our forecast and further progress on a number of key supply-side schemes. Progression on our WRMP19 schemes has provided us with a better understanding of the risks and challenges we face in delivering these schemes. We have used this knowledge to inform our fdWRMP24.

Appendix A: List of water supply works with DWI notices and the required improvements

Appendix B: Annual Review data return

See separate spreadsheet.