

Draft Water Resources Management Plan 2024

Annex 2: Updated Plan for 2023-24 to 2024-25

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from
**Southern
Water** 

Contents

Contents	2
Executive summary	3
1 Introduction	3
2 2023-2025 plan	4
2.1 Western area	5
2.1.1 Hampshire Andover WRZ	5
2.1.2 Other WRZs	7
2.2 Central area	8
2.2.1 Sussex North WRZ	8
2.2.2 Sussex Brighton WRZ	11
2.2.3 Sussex Worthing WRZ	11
2.2.4 Overall impact of updated forecasts	12
2.3 Eastern area	12
3 Managing uncertainty	13
4 Short-Term Drought Schemes	14
5 RAPID programme	18
6 Regional planning	20

Executive summary

This annex sets out an updated supply-demand balance strategy from 2023-24 to 2024-25. It shows the transition plan from Water Resources Management Plan 2019 to Water Resource Management Plan 2024 and reflects Defra's Water Resources Management Plan Direction 2022 for the plan to run from 1 April 2023.

This document is accompanied by a set of water resource planning tables setting out the schemes and forecasts for the period in question. This document should also be read in conjunction with the Water Resource Management Plan Annual Review which gives detailed yearly progress on delivery.

The plan to maintain a supply-demand balance for 2023-25 to 2024-25 remains a combined programme of demand reduction and increasing resource availability. Demand reduction targets remain unchanged from Water Resources Management Plan 2019, however, there are changes to the resource schemes which are set out in this annex. The changes reflect updated estimates of reliable scheme and system yields as well as changes to water transfers. Details are also included in the WRMP Annual Review for 2021-22.

The period to 2025 is covered by WRMP19. This was not built on a best value plan basis. Further details of the decision making for WRMP19 is given in that plan.

Contingency options are provided should the options fail to deliver on time or with a lower yield. A separate annex on contingency options for the plan is provided (Annex 22).

For two WRZs (HSE and SBZ) there are short-term drought schemes in place. This report annex sets out what is included for those options. Further details are included as part of the commentary on Table 4.

Given the significance of leakage and demand management, these programmes have a separate annex setting out work already completed and planned, with a summary provided here.

The plan for 2023-2025 refers to the commitments and forecasts in WRMP19. That plan is the current approved plan to 2025. The retention of those WRMP19 forecasts allows consistency of reporting in relation to that plan and line of sight back to the commitments made. The impact of changes in demand forecasts and, in turn, levels of service is addressed in the plan post 2025

1 Introduction

This annex sets out the water resource schemes and actions planned for 2023-24 to 2024-25 to maintain security of supply. It provides an update from Water Resources Management Plan 2019 (WRMP19) and sets out the transition to Water Resources Management Plan 2024 (WRMP24). The period chosen aligns to Defra's WRMP Direction 2022 for the plan to run from 1 April 2023.

The schemes, actions and assumptions are set out by supply area and water resource zone (WRZ). Actions to mitigate risks of delivery are given.

The supply-demand forecast for the period is set out in accompanying Water Resource Plan (WRP) tables. The tables use the WRMP19 table format to allow comparison with and a transition into, WRMP24. The tables retain the WRMP19 demand forecasts as leakage and demand reduction targets remain unchanged. The tables use revised supply forecasts reflecting changes to a small number of deployable outputs (DOs)

following a review of source constraints. This approach follows the assumptions note sent to Defra and the Environment Agency (EA) in March 2022.

The WRMP sits within a wider water resource planning context. Progress on WRMP19 delivery is also reported in the WRMP Annual Review which is submitted to the Environment Agency each year. Progress on delivery is also included in regular liaison meetings with the Environment Agency. Content from these activities is included in this annex for completeness.

This annex also includes the main actions remaining over the 2023-24 to 2024-25 period in relation to regional planning and the Regulators' Alliance for Progressing Infrastructure Development (RAPID) programme for the development of Strategic Resource Options (SROs).

2 The 2023-2025 plan

This section sets out the water resource schemes and actions planned for 2023-24 to 2024-25 to maintain security of supply.

The strategy is a combination of demand reduction and increasing resource availability and reliability.

Across all WRZs, demand reduction targets for the 2023-2025 plan remain as per WRMP19. The key focus on demand reduction being:

- Leakage - 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 are increasing the level of field detection resources, in line with our action plan to reduce leakage and aim to achieve our target by 2025.
- Reduce customer side demand – we remain committed to achieving T100 and have refocused our efforts on a multi-channel communication campaign with our customers as well as developing the additional service of 'remote home audits'. During 2021–22 we delivered more than 64 million impressions and 1.6 million direct communications in the form of emails and door drops.
- Smart metering - We commenced a smart meter trial in 2021-22 which is testing the assumption that we can reduce water consumption by 3-5% over a year simply by giving people data on how much they use. Clip-on smart meters have been being installed in homes in Southampton, Andover, Midhurst and Brighton. Consumption data is given to customers so we can test their level of engagement and the outcomes against different behavioural nudges.

Increasing water resource availability for the 2023-25 period is focussed on two key areas:

- Increased connectivity - we have improved the resilience of our network by increasing connectivity, particularly in the Western Area.
- New resource availability – most of the schemes planned for delivery over AMP7 and AMP8 are on track, however, there have been some delays to a small number of schemes.

The delivery programme is overseen by a monthly WRMP19 delivery management driven by Executive sponsorship. The overall programme remains on track in most areas. Where solutions cannot be delivered, alternatives are being sought.

With a heavy focus on demand reduction, an additional (in AMP) £18m investment into leakage programmes is being progressed (mains renewal, smart networks, resourcing). Covid-19 has impacted both the level of

customer demand and changed demand patterns. The customer demand reduction programme is being reviewed to reflect the change.

The Sussex North WRZ (SNZ) remains a key area of focus in the 2023-24 to 2024-25 period. This is principally due to a loss in reliable Deployable Output (DO). Several additional schemes that were not in the WRMP19 plan are being progressed to improve yield reliability and offset the losses.

The following sections set out the updates by WRZ. The WRMP19 target and overall planned Levels of Service for the draft WRMP24 are set out below, with the link to the 2023-25 plan also set out in this Annex.

Area	WRMP19 target	2025–30	2030–40	Beyond 2040
Western Area	0.5% annual chance (1:200 return period) without drought permits and orders 0.2% chance (1:500 return period) with drought permits and orders	Less than 0.5% annual chance (1:200 return period) with drought permits and orders	Less than 0.5% annual chance (1:200 return period) with drought permits and orders	0.2% annual chance (1:500 return period) without drought permits and orders
Central Area		Less than 1% annual chance (1:100 return period) with drought permits and orders	Less than 0.5% annual chance (1:200 return period) with drought permits and orders	
Eastern Area		Less than 0.5% annual chance 1:200 return period with drought permits and orders	Less than 0.5% annual chance 1:200 return period with drought permits and orders	

Note: As can be seen in the table, the Central Area has a lower service level going forward into AMP8.

2.1 Western area

2.1.1 Hampshire Andover WRZ

The 2023-24 to 2024-25 programme contains two changes to baseline DO in the Hampshire Andover WRZ (HAZ) compared to WRMP19. All other parts of the programme remain unchanged from WRMP19 however a short update is given. The changes are as follows:

DO changes

- Andover – reduction in Peak Deployable Output (PDO) from 2023-24. This is to reflect a revised reliable yield due to a hydraulic constraint.
- Near Whitchurch – increase in Minimum Deployable Output (MDO) and PDO in a 1-in-200 year drought scenario from 2023-24 to reflect new infrastructure.

The updated DOs are set out below (Table 1).

Table 1: Updated DO values for HAZ.

Site	WRMP19 DO (MI/d)		DO Change (MI/d)		New DO (MI/d)		Description
	1-in-200 PDO	1-in-200 MDO	1-in-200 PDO	1-in-200 MDO	1-in-200 PDO	1-in-200 MDO	
Near Whitchurch WSW	2.96	2.24	0.79	1.51	3.75	3.75	Increase in DO following installation of new pumps
Andover WSW	19.88	16.02	-1.48	0	18.40	16.02	Reduction in DO to reflect hydraulic constraint on site pipe work. Rectification not included as an option to reflect concern over abstraction sustainability at higher flows.

WRMP19 options update:

The following table shows the status of the planned options from WRMP19 and subsequent updates for Hampshire Andover (and other zones).

- Resource options – options in period are progressing to their target date. Work is also underway on the preparatory work for options to be delivered in the post 2025 period.
- Target 100 water efficiency programme – smart meter installation has begun for some customers in Andover and the forward programme includes water efficiency activity from high water use audits, education programme, comms, water efficiency products and services and the continued innovation programme. The costs of these are included in Table 5a.
- Leakage reduction – planned activity continues towards the 2025 target. Technology improvements such as the use of automated pressure release valves has helped stabilise the network, reducing leakage. The Western Area has fared better than other areas given its extensive chalk base; other areas typically consist of a clay based sub-structure
- Catchment management – the catchment programme in the Western Area remains part of our programme.

Table 1b: Status of WRMP19 preferred options in the Western Area, excluding drought options

Schemes	WRZ	Delivery year	Progress
Demand management			
Target 100 water efficiency activity	All	From 2020	Progressing
Leakage reduction (15% reduction by 2025; 50% by 2050)	All	From 2020	Progressing
Extension of UMP to take household meter penetration from 88% to 92%	All	From 2020	Progressing
Resource development and bulk supplies			
Additional import from PWC (additional 9MI/d) to Eastleigh WSR	HSE	2024-25	Progressing
Import from SWW (20MI/d)	HSW	2027-28	Abandoned
Additional import from PWC to Otterbourne WSW linked to Havant Thicket Reservoir (21MI/d)	HSE	2029-30	Progressing

Schemes	WRZ	Delivery year	Progress
Southampton Coast desalination (modular to 75MI/d)	HSW	2027-28	Replaced by HWTWRP
Sandown WTW Indirect Potable Recycling (8.5MI/d)	IOW	2027-28	Progressing
Hampshire grid (reversible link HSE-HWZ)	HWZ & HSE	2027-28	Progressing
Hampshire grid (reversible link HWZ-HAZ)	HAZ & HWZ	2027-28	Progressing
Southampton link main (reversible link HSW-HSE)	HSW & HSE	2027-28	Progressing
Romsey Town and Broadlands valve (HSW-HRZ reversible)	HRZ & HSW	2024-25	Progressing
Newbury WSW asset enhancement (1.2MI/d)	HKZ	2027-28	Progressing
WSW near Cowes - reinstate & additional treatment	IOW	2065 1 branch	Not yet progressing
Catchment management			
In-stream river restoration works on the Itchen	HSE & HW	2027-28	Delayed pending outcome of WFD ¹ 'No Deterioration' investigations
In-stream river restoration works on the Test (upper reaches)	HA & HR	2027-28	Progressing
Pesticide catchment management / treatment – Sandown	IW	2024-25	Progressing
Pesticide catchment management / treatment – Test Surface Water	HSW	2024-25	Progressing
Nitrate catchment management / treatment – Winchester	HWZ	2027-28	Progressing
Nitrate catchment management / treatment – Romsey	HRZ	2022-23	Progressing
Nitrate catchment management / treatment – Twyford	HSE	2021-22	Progressing

Full details of all schemes, yields and timings are given in the WRP tables.

The proposed plan places the WRZ in surplus in 2023-24 and 2024-25.

2.1.2 Other WRZs

There are no planned changes for any other WRZs in the Western area for the period to 2024-25 compared to that set out in WRMP19.

¹ WFD = Water Framework Directive

Table 1b above sets out the current plan with full detail on timings and yields in the accompanying WRMP tables.

Catchment management and nitrate infrastructure schemes remain a central tenet of the 2023-25 plan to mitigate against the impact of higher nitrate levels in raw source water. We expect to see that benefit from 2027 onwards reflecting the lag between changes in land use practice and water quality changes. 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 a 19.6MI/d and 10.8MI/d benefit respectively by March 2023. Our current forecast of nitrate levels indicates that these schemes will be sufficient to maintain use of sources.

2.2 Central area

The water resource programme has been updated from WRMP19 to reflect changes in the reliable supply availability and resource scheme development.

2.2.1 Sussex North WRZ

The accompanying WRP tables set out the full suite of options for the Sussex North WRZ (SNZ). Compared to the WRMP19 there are two key updates to the programme – a change in Deployable Output at Weir Wood and the development of new resource schemes. Details of these and existing schemes are given below.

An update on WRMP19 scheme delivery is also given. Further detail on progress is given in the WRMP Annual Review.

DO changes

- Weir Wood – a reduction in DO to 0MI/d in 2023-24 for all scenarios. This is undertaken to reflect current reliable yield. An investment programme is in place, and this is planned to complete by February 2024. This will return the Average DO (ADO) and MDO to 6.69MI/d and 5.4MI/d respectively. PDO will return to 13MI/d constrained by the new treatment capacity. This is lower than the previous PDO of 17MI/d but there is an option under review to increase it to at least 17MI/d in AMP8 (Table 2).

Table 2: Changes to DO in SNZ.

Site	WRMP19 DO (MI/d)		DO Change (MI/d)		New DO (2023/24) (MI/d)		New DO (2024/25) (MI/d)		Description
	1-in-200 PDO	1-in-200 MDO / ADO	1-in-200 PDO	1-in-200 MDO / ADO	1-in-200 PDO	1-in-200 MDO / ADO	1-in-200 PDO	1-in-200 MDO / ADO	
Weir Wood WSW	17.00	5.4 / 6.69	-17.00	-5.4 / -6.69	0.00	0.00	13.00	5.4 / 6.69	Water quality constraint. Recovery scheme due for delivery Feb 24. Lower peak yield forecast

Additional schemes

- SES Water (SES) bulk supply (phase 1 and 2) – rezoning of customers to be supplied by SES. This is included as a bulk supply potable import. Phase 1 is complete, and construction is underway with

completion in 2022/23 reporting year. This will provide a total minimum benefit of 1.2MI/d in all planning scenarios

- Private abstractors – analysis has shown that a non-public water supply abstractor is not able to abstract during low flow (drought) conditions whereas previous analysis had assumed the take was all year. This additional water is available for abstraction downstream under existing licences. The benefit is 0.4MI/d in the MDO planning scenario from 2023-24.
- Pulborough surface water Drought Permit/Order – continuation of the Pulborough Drought Permit/Order in 2023-24 to Phase 3. This gives an additional 10MI/d. The yield from the Pulborough groundwater source has been reduced with the Drought Permit/Order operational to reflect the conditions of the licence.
- Inter-zonal transfer from Sussex Worthing WRZ (SWZ) – maximising the current internal potable supply import from SWZ to maximise the use of water transfers. The network has a capacity of 15MI/d and forecast needs are within this limit and the available supply-demand surplus within SWZ. The transfer is driven by the MDO supply-demand balance (Table 3).

Table 3: Transfers from SWZ to SNZ.

Scheme	Scenario	WRMP19 (MI/d)		WRMP24 (MI/d)	
		2023-24	2024-25	2023-24	2024-25
Inter-zonal transfer from SWZ	DYAA*	0.00	3.82	9.00	5.00
	PDO	0.00	0.00	9.00	5.00
	MDO	0.00	3.82	13.00	5.00

*DYAA = Dry Year Annual Average conditions.

- The option for up to 1MI/d of tankering has been included as a contingency measure in the MDO scenario.

Table 4 provides a summary of all the activity in the Central area.

Table 4: Status of WRMP19 preferred options in the Central Area, excluding drought options

Schemes	WRZ	Delivery year	Progress
Demand management			
Target 100 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	Progressing
Resource development and bulk supplies			
Littlehampton WTW Indirect Potable Water Recycling	SNZ	2027-28	Progressing
Coastal Desalination - Sussex Coast	SBZ	2027-28	Progressing
Pulborough groundwater licence variation	SNZ	2021-22	Delayed
Aquifer Storage & Recovery (Sussex Coast - Lower Greensand)	SWZ	2027-28	Abandoned
Transfer to Midhurst WSW & Petersfield borehole rehabilitation	SNZ	2025-26	Progressing
Scheme to bring West Chiltington back into service	SNZ	2024-25	Progressing

Schemes	WRZ	Delivery year	Progress
Pulborough Winter Transfer Stage 2: New main between SWZ and SBZ	SBZ	2027-28	Progressing
Catchment management			
Arun/W Rother - instream catchment management options	SNZ & SWZ	2027-28	Delayed pending outcome of WFD 'No Deterioration' investigations
Pesticide catchment management / treatment – River Arun	SNZ	2024-25	Progressing
Pesticide catchment management / treatment – Pulborough Surface	SNZ	2024-25	Progressing
Pesticide catchment management / treatment – Weir Wood Reservoir	SNZ	2024-25	Progressing
Nitrate catchment management / treatment – North Falmer A	SBZ	2026-27	Progressing
Nitrate catchment management / treatment – North Arundel	SWZ	2027-28	Progressing
Nitrate catchment management / treatment – North Falmer B	SBZ	2025-26	Progressing
Nitrate catchment management / treatment – Long Furlong B	SWZ	2022-23	Progressing
Nitrate catchment management / treatment – Brighton A	SBZ	2027-28	Progressing

Full details of all other schemes are given in the WRP tables with a summary on the impact on the supply-demand balance given at the end of this section.

Levels of Service

The proposed plan places the WRZ in surplus in 2023-24 and 2024-25, however this is against our forecast supply-demand position from WRMP19 which assumed the need to utilise drought permits and orders in droughts less severe than 1 in 200-year severity, which is less than our target level of service for implementing supply-side drought permits and orders.

We have undertaken analysis to understand the impact of needing drought permits and orders more frequently in Sussex North on how often we may need to impose restrictions on customers' water use (i.e. customer level of service). We forecast that the frequency of needing a Temporary Use Ban (TUB) or Non-Essential Use Ban (NEUB) will be higher than our current target level of service of 1 in 10 years and 1 in 20 year for these two forms of restrictions respectively, and could be as frequent as 1 in 4 years. This is based upon a worst case sensitivity scenario where we assume no inter-zonal transfers are available to support Sussex North WRZ from Sussex Worthing WRZ, and if we were unable to abstract from the Pulborough groundwater source. The increased frequency of needing to implement a NEUB compared to that of a TUB is due to the potential need to apply immediately for a Drought Order rather than Drought Permit at Pulborough to increase supplies and the expectation that a NEUB would need to be in place beforehand.

A lower service level is retained in the 2025-2030 period due to the changes in the demand and supply forecasts which commence in 2025, not due to the planned activity in 2023-25. However, work done on contingency options set out later in this annex may mitigate some of this lower service level in the medium term

2.2.2 Sussex Brighton WRZ

The accompanying WRP tables set out the full suite of options for the Sussex Brighton WRZ (SBZ). The 2023-25 programme is unchanged from WRMP19 with one exception to the baseline DO. An update on WRMP19 scheme delivery is given below.

DO changes

- Hove B - A reduction in in the PDO to reflect the most recent reliable system yield assessment (Table).

Table 5: Changes to DO in SBZ.

Site	WRMP19 DO (MI/d)		DO Change (MI/d)		New DO (MI/d)		Description
	1-in-200 PDO	1-in-200 MDO/ADO	1-in-200 PDO	1-in-200 MDO/ADO	1-in-200 PDO	1-in-200 MDO/ADO	
Hove B WSW	10.28	9.50	-0.78	0.00	9.50	9.50	MDO and PDO to 9.50MI/d based on sustained peak outputs in summer 2020.

WRMP19 scheme update:

- Coastal Desalination – Sussex Coast: The scheme has proved to be undeliverable at the proposed location of Shoreham Harbour. The scheme has been renamed Sussex Brighton WRZ drought and resilience scheme as other options outside of Shoreham are now being considered. We are actively looking at alternative locations and solutions including upsizing of the Littlehampton WTW Indirect Potable Recycling and relocating the desalination plant to the River Adur. Despite these challenges we are planning to deliver the original required benefit in March 2027.
- Nitrate reduction schemes – remain on track for delivery with beneficial use from 2023-24
- DWI notices - we currently have a company-wide DWI notice that covers all our groundwater sites, relating to the mitigation of water quality risks. Two sites in the SBZ are due for delivery by March 2023 (was March 2022)

Full details of all other schemes are given in the WRP tables with a summary of the impact on the supply-demand balance given at the end of this section.

The proposed plan places the WRZ in surplus in 2023-24 and 2024-25.

2.2.3 Sussex Worthing WRZ

The accompanying WRP tables set out the full suite of options for the Sussex Worthing WRZ (SWZ). The 2023-25 programme is unchanged from WRMP19 with two exceptions as set out below. A short update on existing WRMP19 schemes is given.

DO changes

- North Worthing – a revised DO to reflect the reliable historic yield. A site investigation is planned to ascertain if investment can increase the reliable yield (Table 4).

Table 4: Changes to DO in SWZ.

Site	WRMP19 DO (Ml/d)		DO Change (Ml/d)		New DO (Ml/d)		Description
	1-in-200 PDO	1-in-200 MDO/ADO	1-in-200 PDO	1-in-200 MDO/ADO	1-in-200 PDO	1-in-200 MDO/ADO	
North Worthing	8.68	6.18	-2.78	-0.28	5.90	5.90	Reduction in DO to reflect reliable historic yield.

Additional schemes

- Inter-zonal transfer to SNZ – increase of the existing inter-zonal transfer from SWZ to SNZ. The network has a total capability of 15Ml/d.

Full details of all other schemes are given in the WRP tables with a summary of the supply-demand balance given at the end of this section. The proposed plan places the WRZ in surplus in 2023-24 and 2024-25.

2.2.4 Overall impact of updated forecasts

The impact of the updated forecasts on the supply-demand balance are given in the accompanying WRP tables.

The principal change from the actions is for Sussex North which places it in surplus compared to the WRMP19 supply-demand balance under the MDO scenario. This is driven by the transfer from SWZ (13Ml/d) and the Pulborough Drought scheme offsetting other losses. The recovery of Weir Wood yield in 2024 will further improve the supply demand balance compared to 2023-24.

Table 75: Effect of changes in DO on the supply-demand balance in the Central area.

WRZ	Scenario	Units	Supply-Demand Balance*				Change from WRMP19 to WRMP24
			WRMP19 (Ml/d)		WRMP24 (Ml/d)		
			2023-24	2024-25	2023-24	2024-25	
SNZ	MDO	Ml/d	-2.84	-0.91	0.96	3.77	Loss of Weir Wood yield and Pulborough groundwater offset by increased transfer from SWZ and Pulborough Drought Order

*WRMP Table 9 (Real Options), row 18FP.

2.3 Eastern area

The programme for the Eastern area remains unchanged from WRMP19. Key updates are given below and in the WRMP Annual review.

Table 8: Status of WRMP19 preferred options in the Eastern Area, excluding drought options

Schemes	WRZ	Delivery year	Branches
Demand management			
Target 100 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 Recycling	KMW	2027-28	Progressing
SEW bulk supply near Canterbury	KTZ	2025-26	Progressing
Utilise full existing transfer capacity between KME and KTZ	KTZ	2027-28	Progressing
West Sandwich & Sandwich WSW licence variation	KTZ	2021-22	Delayed
Catchment management			
Pesticide catchment management / treatment – Darwell Reservoir	SHZ	2024-25	Progressing
Pesticide catchment management / treatment – River Medway Scheme	KMW	2024-25	Progressing
Pesticide catchment management / treatment – Powdermill Reservoir	SHZ	2024-25	Progressing
Nitrate catchment management / treatment – Deal	KTZ	2022-23	Progressing
Nitrate catchment management / treatment – West Sandwich	KTZ	2025-26	Progressing
Nitrate catchment management / treatment – Manston	KTZ	2022-23	Progressing
Nitrate catchment management / treatment – Ramsgate B	KTZ	2022-23	Progressing
Nitrate catchment management / treatment – Birchington	KTZ	2022-23	Progressing
Nitrate catchment management / treatment – North Deal	KTZ	2022-23	Progressing
Nitrate catchment management / treatment – near Canterbury	KTZ	2025-26	Progressing
Nitrate catchment management / treatment – Sandwich	KTZ	2027-28	Progressing

3 Managing uncertainty

A secure supply of water is essential and relies on a healthy and resilient environment. Central to achieving this outcome is to ensure the WRMP is deliverable and can manage future risks and uncertainties.

The Government’s expectations for water resource planning, which accompanied the WRMP Direction 2022, recognise this challenge and state that the WRMP “*should include appropriate costed mitigation for delivery risks and adaptive pathways with identified decision-points, should be used to show how risks are managed and sustainable water supplies are secured*”.

Whilst the overall plan sets out our approach to mitigating delivery risk through the use of scenarios and best value planning, we have also undertaken additional work on contingency planning.

The approach of this contingency plan was to list all known risks and uncertainties to the supply-demand balance with the exclusion of T100 and provide high-level options to supply to mitigate these risks and what trigger points should be used.

T100 is excluded as the plan to 2030 has been scaled to manage, but not eliminate, risk.

This acts as a second line of defence in terms of managing the supply-demand risks in the programme. It also acts as a structured process to identify any small-scale operational improvements that could help improve service levels or mitigate the use of drought permits.

For this Draft WRMP, the contingency Plan has been developed for the Central Area. This has been done as it is the area with the lowest levels of service and therefore is the most important area to ensure there are contingencies in place should options fail to deliver to time or the yield required.

This contingency plan covers the Central area up to the end of the financial year 2029/30 and is set out in Annex 22.

4 Short-Term Drought Schemes

The initial version of the regional plan developed with WRSE identified deficits in several zones that could not be closed in the first few years of the planning period. To address this, we agreed with WRSE to include Short-Term Drought Schemes (STDS) and to allow the regional plan to select these, where required.

The profile of the water resource needs was:

Western area

Component (renamed)	WRZ	Area	Planning scenario	2026	2027	2028	2029
Emergency deficit (HSE): Recover DO	HSE	Western	2_DYAA (1:100)	0.00	0.00	4.50	2.75
Emergency deficit (HSE): Recover DO	HSE	Western	3_DYAA (1:500)	0.00	0.00	5.25	3.75
Emergency deficit (HSE): Recover DO	HSE	Western	4_DYCP (1:500)	1.52	0.00	1.21	0.00
Emergency deficit (HSE): Recover DO	HSE	Western	1_NYAA	5.23	0.12	0.00	0.00

Central area

Component (renamed)	WRZ	Area	Planning scenario	2026	2027
Emergency deficit (SBZ): Recover DO	SBZ	Central	2_DYAA (1:100)	9.64	5.88
Emergency deficit (SBZ): Recover DO	SBZ	Central	3_DYAA (1:500)	10.18	7.37

We have identified actions for each of these zones. This has drawn on the work from the contingency plan for the Central Area, the developing contingency plan for the Western Area and work on the leakage and demand management programmes.

Whilst these STDS sit outside the 2023-25 plan we have included them in this section as they require preparation in the 2023-25 period to ensure they are ready to be implemented.

Western Area

The plan was included as follows:

			Unit	2025/26	2026/27	2027/28	2028/29	2029/30
Water Resource Need		DYCP (1 in 500)	MI/d	-	1.52	0.00	1.21	0.00
		DYAA (1 in 500)	MI/d	-	0.00	0.00	5.25	3.75
		Max need	MI/d	-	1.52	0.00	5.25	3.75

Resources	STDS-Resources (HSE)	WAFU	MI/d		2.50	2.50	2.50	2.50
		Capex	£m					
		Opex	£m		0.20	0.20	-	-
Leakage	STDS-Leakage (HSE)	Saving	MI/d	-	-	-	0.25	0.25
		Capex	£m	-	-	-	-	-
		Opex	£m	-	-	-	-	-
Demand	STDS-Demand (HSE)	Products and services	MI/d	-	-	-	1.20	1.20
		Capex	£m	-	-	-	-	-
		Opex	£m	-	-	-	0.54	-
	SDS-Demand-Allowance (HSE)	Risk Allowance	MI/d				1.50	1.50
		Capex	£m					
		Opex	£m					
	Totals	WAFU/Saving	MI/d	-	2.50	2.50	5.45	5.45

1) STDS-Resource (HSE)

Optimisation of disused Greensand Borehole on loW at Knighton (2.5MI/d). Reduce need for transfer from HSE. Estimate cost of £0.2m BH operation (testing and environmental monitoring)

2) STDS-Leakage (HSE)

Acceleration of the 2030 reductions to 2027.

Leakage in 2030 = 8MI/d (Table 3)

Leakage in 2028 = 8.38MI/d

Acceleration = 0.38MI/d. Rounded to 0.25MI/d to reflect impact of year end vs. year average performance.

As the activity is within the AMP, no additional costs are included.

3) STDS- Demand (HSE)

HSE Products and services cumulative savings in 2035 brought forward to 2028 as follows.

The activities in this catalyst being accelerated are:

- Leaky Loo campaign
- Goal setting templates (using smart metering)
- Innovation programme

Table 5a	2028	2035	Delta
Cumulative savings in T100 plan	0.80MI/d	2.00MI/d	1.20MI/d
Capex	-	-	-
Opex (annual)	£0.08m	£0.07m	-
Opex (cumulative)	-	£0.54m (28/29-34/35)	£0.54m

4) STDS-Demand-Allowance (HSE)

Planning based on meeting the mid-estimate of the demand savings in T100 with no allowance for risk. This is equal to 1.5MI/d.

Central Area

The plan was included as follows

		Unit	2025/26	2026/27	2027/28	2028/29	2029/30
Water Resource Need	DYAA (1 in 100)	MI/d	-	9.64	5.88	-	-
	DYAA (1 in 500)	MI/d	-	10.18	7.37	-	-
	Max need	MI/d	-	10.18	7.37	-	-

Resources	STDS-Resources (SB)	WAFU	MI/d		10.00	10.00	-	-
		Capex	£m					
		Opex	£m		1.20	-	-	-
Demand	STDS-Demand (HSE)	Risk Allowance	MI/d		1.50	-	-	-
		Capex	£m					
		Opex	£m					
	Totals	WAFU/Saving	MI/d	-	11.50	10.00	-	-

1) STDS-Resource (SB)

Short-term implementation of the following sources (see Annex 22):

Site	Yield [MI/d]	Activity
Surrenden UGS	2	Recommissioning <ul style="list-style-type: none"> following NoDet investigation to provide additional water for Patcham WSW in summer months removal of treatment concerns
Sompting	2	Recommissioning <ul style="list-style-type: none"> to reduce required import from North Sussex WRZ via Tenants Hill. Winter abstraction may need to be reduced to maintain annual average abstraction Will require NoDet investigations if not covered under current programme
Lewes Road	2	Return to service to provide additional resource and relieve pressure on currently operational abstractions. Lewes Road is constrained by license limit, could extract >19MI/d but limited to 7MI/d.
Balsdean	4 (estimated)	Maximum yield 16.07MI/d in 2019 but recent actual 12.3MI/d. Test yield and environmental monitoring and studies.
Total	10MI/d	

4) STDS-Demand-Allowance (SB)

Planning based on meeting the-mid estimate of the demand savings in T100 with no allowance for risk. This is equal to 1.5MI/d.

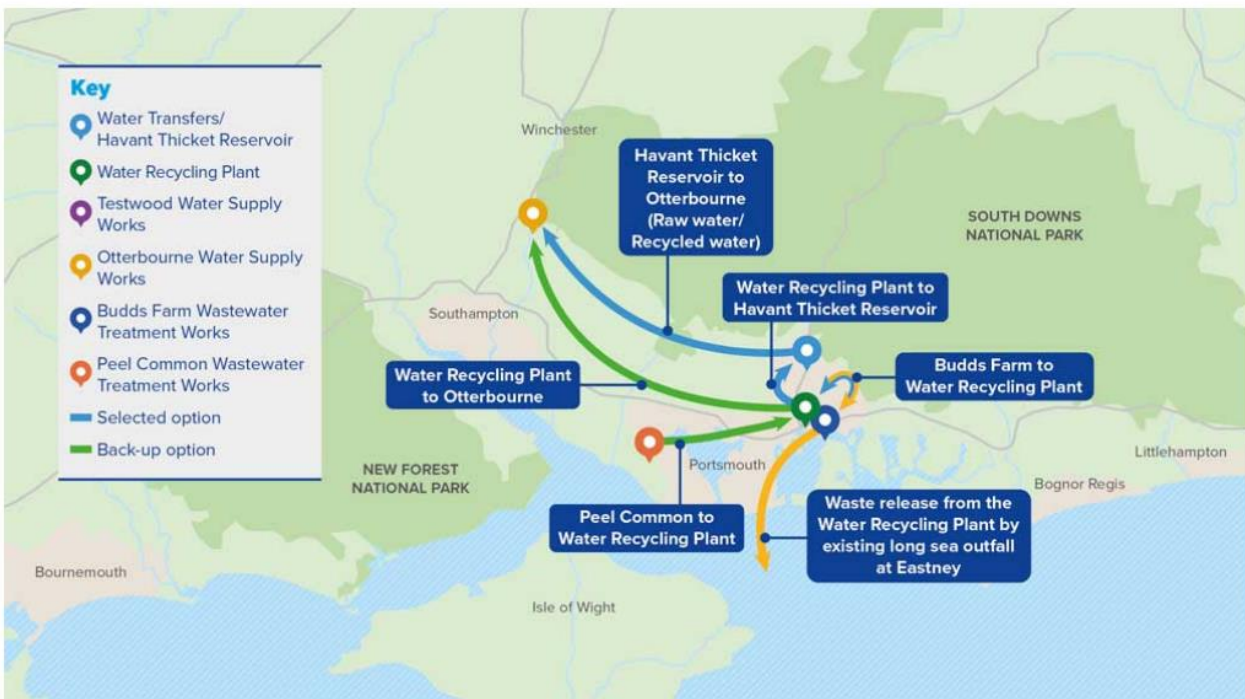
5 RAPID programme

RAPID was set up to facilitate cross-regulatory collaboration on the development of strategic water supply infrastructure projects and to address issues relating to their development with a view to establishing an enduring regulatory framework for such projects. RAPID is overseen by a Board chaired by the Ofwat CEO, with members from the senior leadership teams of each of the partner regulators i.e., Ofwat, EA and Drinking Water Inspectorate (DWI).

Our accelerated programme

As part of this process, we have two strategic options in what is termed an ‘accelerated’ RAPID programme. These are water recycling and water transfers (see diagram below). As part of this programme in the 2022-23 to 2024-25 period our plan is as follows:

- 2022-23 – deliver the gate 3 accelerated programme for the Hampshire Water Transfer and Water Recycling Project
- 2023-24 – deliver the gate 4 accelerated programme for those options successfully clearing gate 3
- 2024-25 – deliver the gate 5 accelerated programme for those options clearing gate 4



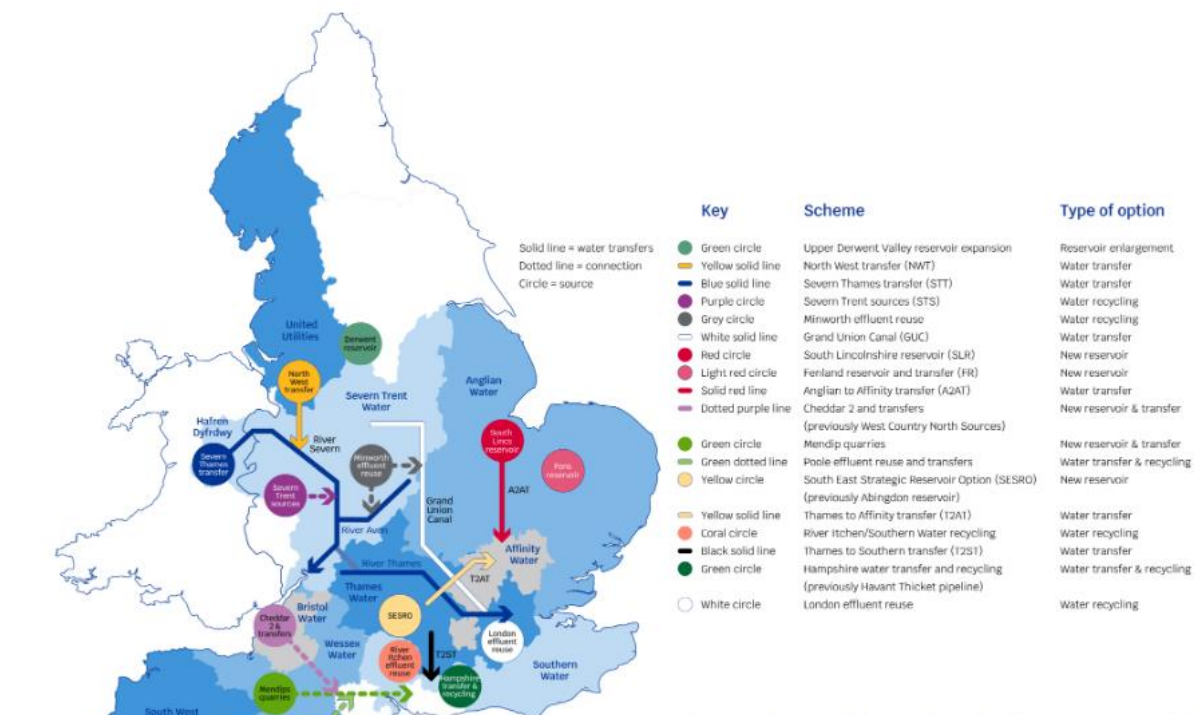
Further details can be found here: [Our strategic solutions \(southernwater.co.uk\)](https://www.southernwater.co.uk)

Overall programme

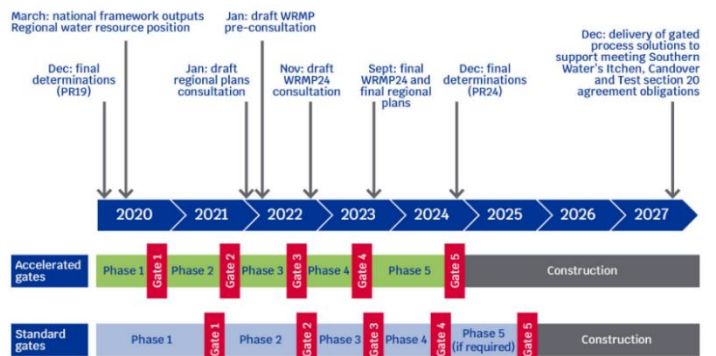
In addition to our accelerated programme, we are also supporting those strategic options on the normal timetable. The graphic below shows the strategic options in the overall national programme, within which we are supporting or involved in the following schemes:

- Thames to Southern Transfer (direct financial support funded through PR19)
- Poole Effluent re-use and transfers
- Severn to Thames Transfer
- South East Strategic Resource Option
- Mendip Quarry

These directly, or indirectly, affect the strategic choices in the Southern Water Area and we work closely with other regional groups to understand if other options in those areas water supply needs in our operating area.



Gated process for potential strategic regional water resource solutions



6 Regional planning

WRMP24 uses information developed by, and consistent with, the Water Resources South East (WRSE) Draft Regional Plan scheduled for publication in Autumn 2022. Supporting, collaborating, and aligning to the regional plan is central to WRMP24.

Key deliverables to achieve this are planned for the 2022-23 to 2024-25 period. These are:

- October 2022 - WRSE to submit Draft Regional Plan with consultation timeline
- September 2023 - WRSE to publish the Final Regional Plan
- September 2023 - The final regional plan will form the basis of the Final WRMP24

Any additional requirements for the next version of the Water Resources National Framework or further requirements from regional plans will be included in the Final WRMP24.