Draft Water Resources Management Plan 2024

Statement of Response

August 2023

from Southern Water

Contents

Statement of response annexes

Annex 1	List of respondents
Annex 2	Draft WRMP online questionnaire
Annex 3	List of individuals and organisations consulted
Annex 4	Our detailed response to all questionnaire respondents' comments
Annex 5.1	Our detailed response to all non-questionnaire respondents' comments – general public
Annex 5.2	Our detailed response to all non-questionnaire respondents' comments – organisations
Annex 6	Water for Life Hampshire – joint Southern Water/Portsmouth Water document
Annex 7.1	Customer insights WRMP consultation 2024
Annex 7.2	Turquoise Southern Water WRMP24 consultation
Annex 8	Aquifer storage and recovery and managed aquifer recharge

Glossary

Acronym	Term	Definition
AMP	Asset Management Plan	Water company business plan over a five-year period.
AMR	Automatic meter reading	Type of water meter that can be read remotely using drive-by technology.
ASR	Aquifer storage and recovery	A way of increasing the amount of water available by increasing the recharge of groundwater storage during wet periods so the water can be used sustainably in drier periods.
BVP	Best Value Plan	A Water Resources Management Plan which as part of its development considers a range of factors (alongside economic cost) with the aim of increasing the overall benefit to customers, the wider environment and overall society.
	Catchment	The area from which precipitation (rainfall) and groundwater would naturally collect and contribute to the flow of a river.
	Central Area	Supply area made up of the Sussex North, Sussex Brighton and Sussex Worthing Water Resource Zones.
Defra	Department of Environment, Food and Rural Affairs	The government department responsible for setting both water and environmental policy.
DO	Deployable output	The output of a source or bulk supply as constrained by licence (if applicable); pumping plant and/or well/aquifer properties; raw water mains and/or aqueducts; transfer and/or output main; treatment; water quality.
	Drought permit	A statutory authorisation granted by the Environment Agency under drought conditions, which allows for abstraction/impoundment outside the normal conditions/schedule of existing licences on a temporary basis.
	Drought order	A statutory authorisation granted by the Secretary of State during drought to modify abstraction / discharge arrangements, augment, use or to set other requirements on a temporary basis.
DWI	Drinking Water Inspectorate	The government's drinking water quality regulator.
	Eastern Area	Supply area comprising the Kent Thanet, Kent Medway East, Kent Medway West and Sussex Hastings water resource zones.
dWRMP	Draft Water Resources Management Plan	
EA	Environment Agency	The government's environmental and water resources regulator.
	Environmental destination or Environmental ambition	A strategy developed at a regional level to help enhance the natural environment through reduction to water resources activities and by sustainable abstraction.
ERP	Emerging Regional Plan	The draft least cost regional plan prepared by Water Resources South East under the National Framework as was consulted upon in January 2022.
HRA	Habitat Regulations Assessment	Assessment to consider potential for significant effects (if any) of options and strategies on designated European sites.
HWTWRP	Hampshire Water Transfer and Water Recycling Project	A Strategic Resource Option with two component parts including a water recycling plant that transfers to Portsmouth Water's consented Havant Thicket Reservoir for storage and a transfer pipeline from the reservoir to Otterbourne Water Supply Works, being progressed as a collaboration between Southern Water and Portsmouth Water.
MAR	Managed aquifer recharge	A controlled way of increasing the amount of water in groundwater.

Glossary continued

Acronym	Term	Definition
Ml/d	Mega litres per day	Millions of litres per day. Unit of measurement for flow in a river or pipeline
	National framework	The Environment Agency's national framework for managing future water need for England by the means of regional planning introduced in March 2020.
NE	Natural England	The government's adviser for the natural environment in England
Ofwat	Office of Water Services	The economic regulator of the water sector in England and Wales
	Outage	Temporary loss of deployable output
PCC	Per capita consumption	Amount of water typically used by one person, per day
PWC	Portsmouth Water Company	Provides public water supplies to a domestic population exceeding 698,000, as well as many important industries, large defence establishments and varied commercial businesses through South East Hampshire and West Sussex from the River Meon in the West to the river Arun in the East
RAPID	Regulators' Alliance for Progressing Infrastructure Development	The collaborative regulatory group of Ofwat, the Environment Agency and Drinking Water Inspectorate formed to accelerate development of new water infrastructure and design future regulatory frameworks.
RBVP	Regional Best Value Plan	The Best Value Plan for the region prepared by Water Resources South East – as consulted on in Autumn 2022.
	Source	A named input to a water resource zone where water is abstracted from a well, spring or borehole, or from a river or reservoir.
	Section 20 agreement	The agreement signed by Southern Water and the Environment Agency during the Western Inquiry in March 2018 pursuant to Section 20 Water Resources Act 1991
rdWRMP	Revised draft water resources management plan	
SRO	Strategic Resource Option	The large schemes intending to provide resilience future water supply determined as Strategic Resource Options by RAPID and being investigated through RAPID's gated process.
SEA	Strategic Environmental Assessment	Assessment to identify and assess any significant environmental effects of the Water Resources Management Plan.
SES	SES Water	Supplies water to 745,000 people in parts of Surrey, Kent and south London.
SESRO	South East Strategic Reservoir Option	A reservoir proposed for development in South East of England that could benefit customers of Affinity Water, Southern Water and Thames Water
SEW	South East Water	Supplies water to 2.2 million customers in the south east of England, namely Kent and Sussex.
	Sustainability reduction	Reductions in Deployable Output required to meet statutory requirements and / or environmental expectation or to reach any regional Environmental Destination.
SWS	Southern Water Services	The registered name for Southern Water. Private company supplying around water services to 2.6 million customers and wastewater services to around 4.6 million customers across Kent, Sussex and Hampshire

Glossary continued

Acronym	Term	Definition
T2ST	Thames to Southern Transfer	An SRO enabling water from the South East Strategic Reservoir (a reservoir SRO) and/or the Severn to Thames Transfer (a transfer SRO) in Thames Water's Swindon and Oxfordshire water resource zone to be transferred to Southern Water's Western area, being progressed as a collaboration between Southern Water and Thames Water.
TUB	Temporary Use Ban	A drought restriction imposed by water companies on customers. Restrictions include not using water supply for leisure pursuits such as watering a 'garden' using a hosepipe, filling a pool, washing a car, among others.
TWUL	Thames Water Utilities Limited	The registered name for Thames Water. Water and wastewater services provider serving 15 million customers across London and the Thames Valley.
UKCP18	United Kingdom Climate projections 2018	
	Western Area Inquiry	A public inquiry into proposed changes to Lower Itchen, Test and Candover abstraction licences in Hampshire, held in March 2018.
WFD	Water Framework Directive	European Union Environmental Legislation (transposed and retained into English law) committing to achieving good quality and good quantitative status of all water bodies.
WINEP	Water Industry National Environment Programme	A list of environment improvement schemes that ensure water companies meet European and national targets related to water.
WRMP	Water Resource Management Plan	Statutory plan produced by water companies every five years to plan to meet supplies over a minimum 25 year period.
WRP	Water recycling plant	A plant using advanced treatment techniques to convert treated wastewater into highly purified source water. Special membranes are used to remove salts and a range of other impurities.
WRPG	Water Resources Planning Guideline	The Water Resources Planning Guideline prepared by the Environment Agency, Ofwat and Natural Resources Wales.
WRSE	Water Resources South East	Partnership of water companies and regulators in South East England working together to make best use of available water resources.
WRZ	Water Resource Zone	The largest possible zone in which all resources, including external transfers, can be shared and hence the zones in which all customers experience the same risk of supply failure from a resource shortfall.
WSW	Water Supply Works	
WTW	Wastewater Treatment Works	
	Western Area	Supply area comprising the Hampshire Andover, Hampshire Kingsclere, Hampshire Winchester, Hampshire Rural, Hampshire Southampton East, Hampshire Southampton West and Isle of Wight water resource zones

Executive summary

We need to plan for the future to ensure we have sustainable supplies of water for generations to come. This means responding to the growing challenges of climate change and population growth, ensuring we protect and improve the water environment, as well as providing wider benefits for society.

Our Water Resources Management Plan sets out in detail how we propose to do this. It is important we seek the views of our customers and stakeholders so that our long-term plans are understood and can adapt and develop.

We published our draft Water Resources Management Plan 2024, for the period 2025–75, on 14 November 2023 for a 14-week consultation. It highlighted the scale of the challenges we face due to population growth and climate change as well as the need to preserve and enhance the environment. We must meet these challenges in a way that balances any impact on customer bills with the need to provide the greatest amount of additional benefit. During the consultation period, we organised webinars and meetings to seek views on our plan from a range of stakeholders, including our regulators. We also publicised the consultation through the media to encourage our customers to share their views and held customer focus groups to gain further insight.

By the end of the consultation in February we had received almost 600 responses from members of the public and organisations. We have carefully considered all the feedback received[1].

[1] This statement also meets the legal and regulatory obligations we have.

We have set out in detail our consideration of all the feedback and the changes we are making to our draft Water Resources Management Plan 2024 to take account of this. Subject to approval from Defra's Secretary of State, our revised draft Water Resources Management Plan (rdWRMP24), will be published following publication of this Statement of Response.

In parallel to the consultation on our draft Water Resources Management Plan 2024, we also supported the consultation by Water Resources South East on its draft Regional Plan. It looks at the South-East of England as whole to address the challenges faced by the region, regardless of water company boundaries. Our plan is largely consistent but only covers our supply area. Only representations to our plan are covered in this document. Responses to feedback on the draft Regional Plan is separately addressed by Water Resources South East.

Some of the key themes that were raised during the consultation include:

- Strong support for demand management including leakage reduction and water efficiency
- Strong support for catchment solutions to protect and enhance our water environment
- Concern around delivery timelines and the impact on the environment of some of the larger new supply schemes proposed in the plan, in particular water recycling and desalination options
- Concerns around the environmental and water quality impact to the Havant Thicket Reservoir from the Havant Thicket Water Transfer and Water Recycling Project
- Support for new pipelines to move water to where it is most needed

- Support for new storage options including a possible new reservoir in West Sussex
- Support for continued reliance upon temporary water restrictions to help manage the effects of extended periods of dry weather.

As well as addressing the feedback from the consultation, we have also needed to update some of our long-term forecasts and assumptions to reflect latest evidence and delivery progress. We have also needed to incorporate regulatory requirements including an update to the Water Resources Planning Guideline, the introduction of the Government's Environmental Improvement Targets and the finalisation of Ofwat's Price Review 2024 methodology. The changes we are proposing to make to our plan are set out in detail in our revised draft Water Resources Management Plan which we plan to publish later this year. These include:

- Updating the demand forecast
- Updating the supply forecast
- Changes to environmental destination scenarios
- Extension of a bulk supply option, and increasing the volume, from SES Water to 2031
- Introduction of a new groundwater asset enhancement option in Sussex
- Removal of a bulk supply option from Portsmouth Water as the supply can no longer be guaranteed
- Removal of water recycling options in Hampshire involving discharges to the River Itchen following feedback from the regulators
- Changes to potential earliest delivery dates of some options including the Havant Thicket Reservoir, the Hampshire Water Transfer and Water Recycling Project and Littlehampton water recycling option
- Aligning our per capita consumption, non-household consumption and leakage reduction targets with the latest guidance
- Revisions to the costs of some water recycling and desalination options
- Updating the costs of all supply options to a 2020–21 cost base.

Revisions to the possible earliest delivery dates to Havant Thicket Reservoir and Hampshire Water Transfer and Water Recycling Project has led to an extension to the potential use of drought permits and drought orders in Hampshire, beyond the dates in our draft Water Resources Management Plan. This will enable us to meet the anticipated demand in drought years. We recognise that many stakeholders may have concerns around this and so are developing a mitigation plan of shorter term actions or adjustments intended to supplement or accelerate our ability to secure supply. This is with the aim of trying to minimise the use and potential environmental harm of drought permits and drought orders in our Western and Central areas in the event that they are needed. ,. We give more details on the mitigation plan both within our revised draft Water Resources Management Plan and in annex 27 of our revised plan.

We acknowledge and appreciate the input we have received to date in the development of our Water Resources Management Plan 2024 and look forward to engaging further with our customers and stakeholders as we head towards finalising the plan.

To ensure our customers and stakeholders are given the opportunity to comment and help shape the final plan, we intend to carry out a further targeted consultation on the most impactful elements of these changes.

This Statement of Response will be submitted to the Secretary of State with the intention

of seeking permission to publish a revised draft Water Resources Management Plan (so we can carry out a further consultation in autumn 2023.

Board engagement

The Southern Water Board were engaged during the development of the draft Water Resources Management Plan 2024 and have reviewed the Statement of Response and revised plan.

Following closure of the public consultation on 27 February 2023, the Board were informed of the number of representations and a summary of emerging themes from the representations.

The Board were further updated on the preparation of this Statement of Response on 19 April 2023. This also included consideration of the potential materiality of changes in due of data updates, compliance with the revised Water Resource Planning Guideline, meeting Environmental Improvement Targets and other strategic decisions. We provide more detail on engagement with Board in our revised draft Water Resources Management Plan 2024.

1. Introduction

1.1 Our services and supply area

Southern Water provides water and wastewater services in the South East of England. We supply water to nearly 2.6 million customers across an area of 4,450 square kilometres, extending from Kent in the east, through parts of Sussex, to Hampshire and the Isle of Wight in the west. In addition to providing wastewater services over much of our water supply area, we also provide wastewater services in areas where water is supplied by other water companies.

Our water supplies are predominantly reliant on groundwater from the chalk aquifer that underlies much of the region. This extends throughout parts of Kent, Sussex, Hampshire and the Isle of Wight and makes up around 70% of our total water supply. Groundwater is also important in maintaining flows to the rivers Test and Itchen in Hampshire. River abstractions account for 23% of our water supplies. These include the Eastern Yar and Medina on the Isle of Wight, the Test and Itchen in Hampshire, the Western Rother and Arun in West Sussex, the Eastern Rother and Brede in East Sussex and the Teise and Medway in Kent. Four surface water impounding reservoirs provide the remaining 7% of our water supplies: Bewl Water, Darwell, Powdermill and Weir Wood.

Our supply area is divided into 14 Water Resource Zones (WRZs) and three supply areas as follows (Figure 1.1):

Western 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)

Central area:

8. Sussex North (SNZ)
9. Sussex Worthing (SWZ)
10. Sussex Brighton (SBZ)

Eastern area:

11. Kent Medway East (KME)
12. Kent Medway West (KMW)
13. Kent Thanet (KTZ)
14. Sussex Hastings (SHZ)

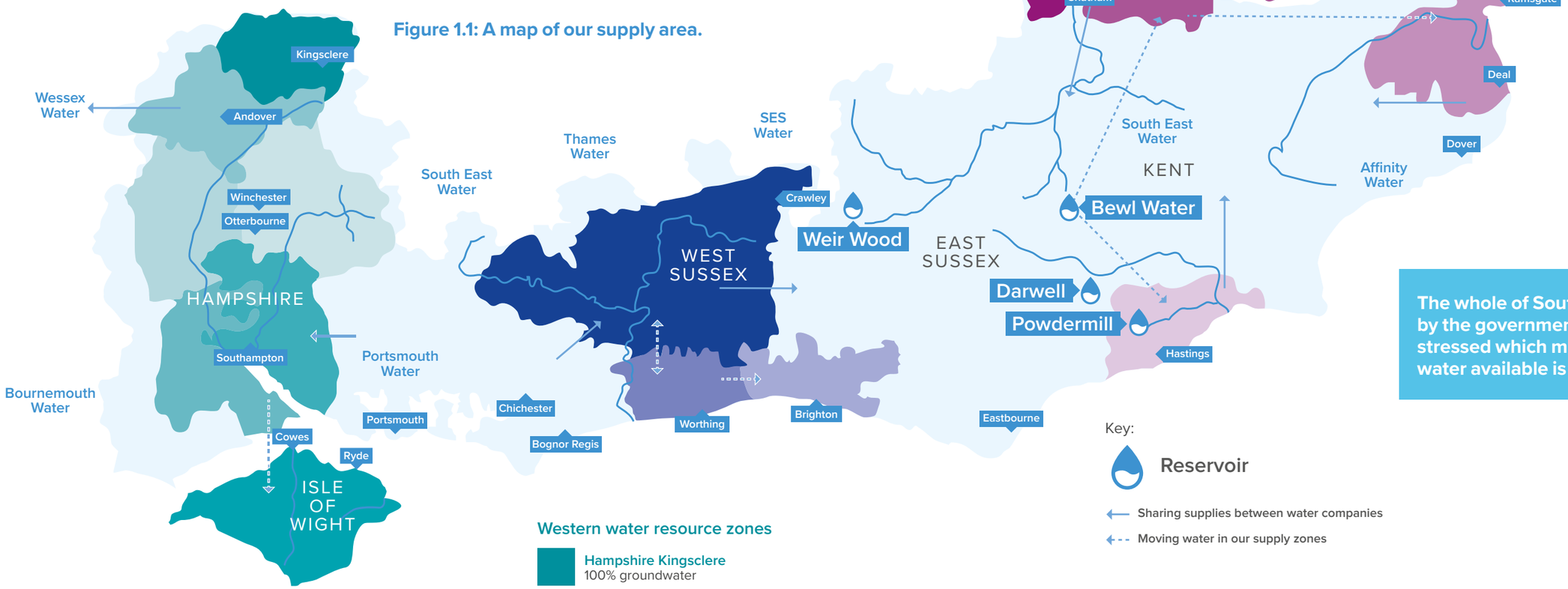
Where your water comes from today

We supply water to parts of Kent, Sussex, Hampshire and the Isle of Wight.

Where the water comes from, how it is supplied and how much is used varies across each county. We divide our supply area into 14 'water resource zones' which are shown on the map.

About 70% of the water we supply comes from groundwater. These water supplies are stored underground in rocks and soils called aquifers and we pump them up to the surface. The rest come from rivers and streams, some of which are supported by chalk-fed groundwater. In some areas, reservoirs store water that is typically pumped from nearby rivers when flows are high. Our natural water resources are split into catchment areas – we take water from eight catchments across the South East.

Figure 1.1: A map of our supply area.



Western Area

Much of the water supplied in the Western Area comes from underground sources. In South Hampshire, the River Test and River Itchen provide the majority of supplies while on the Isle of Wight around a quarter comes from the River Yar.

Water is transferred from South Hampshire to the Isle of Wight to supplement its water supplies. Water can also be transferred from Portsmouth Water's area to South Hampshire.

91% of homes are metered

Average water use:
125 litres per person per day

Western water resource zones

- **Hampshire Kingsclere** 100% groundwater
- **Hampshire Andover** 100% groundwater
- **Hampshire Rural** 100% groundwater
- **Hampshire Winchester** 100% groundwater
- **Hampshire Southampton East** 52% river, 48% groundwater
- **Hampshire Southampton West** 100% river
- **Isle of Wight** 47% groundwater, 23% river, 30% transfers

Central Area

Brighton, Worthing and surrounding areas rely predominately on the groundwater sources beneath the South Downs. Sussex North is supplied from a mix of water sources including the River Arun and the Western Rother, Weir Wood reservoir near East Grinstead and a transfer from Portsmouth Water. There are pipelines that allow water to be moved between our Sussex North and Worthing water resource zones in both directions, and from Worthing to Brighton.

85% of homes are metered

Average water use:
133 litres per person per day

Central water resource zones

- **Sussex North** 35% groundwater, 51% river, 8% reservoir, 6% transfers
- **Sussex Worthing** 98% groundwater, 2% transfers
- **Sussex Brighton** 100% groundwater

The whole of South East England is classed by the government as being seriously water stressed which means that the amount of water available is limited.

Eastern Area

Our Kent supply areas take most of their water from groundwater. The rest comes from the River Medway, some of which is stored in Bewl Water reservoir before it is released back into the River Medway where it is abstracted. Hastings in East Sussex takes most of its water from Darwell reservoir which stores water from the River Rother and Powdermill reservoir which stores water from the River Brede. We can transfer water from Medway to Thanet and from Medway to Hastings.

87% of homes are metered

Average water use:
128 litres per person per day

Eastern water resource zones

- **Kent Medway East** 100% groundwater
- **Kent Medway West** 56% river and reservoir 44% groundwater
- **Kent Thanet** 79% groundwater, 21% transfers
- **Sussex Hastings** 5% groundwater, 79% reservoir, 16% transfers

1.2 The Water Resources Management Plan

We prepare a WRMP and consult on It at least every five years. Generally, WRMPs cover a minimum of 25 years although we may plan for longer periods depending on the complexity of challenges faced. Our 2024 WRMP (WRMP24) covers the periods 2023–25 and 2025–75. Once finalised, we review WRMPs annually to keep them up to date with the latest data and information, policies and customer and stakeholder engagement.

The primary objective of the WRMP is to ensure that there is always enough water available to meet anticipated demands in our area of supply under various weather conditions, particularly in drought years when the average rainfall is much lower than the long-term average.

We published our draft WRMP24 (dWRMP24) for consultation on 14 November 2022, with the consultation ending on 20 February 2023. We developed our dWRMP24 following extensive customer and stakeholder engagement. During the consultation we sought feedback on how well the plan reflected customer views and met their expectations. Key features of our dWRMP24 included:

- Making our water supplies more resilient to severe droughts so we are less likely to introduce emergency restrictions that will limit water use, such as Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBs).
- Replacing up to a quarter of our existing supplies by 2050 by reducing the amount of water we take from rivers and groundwater to protect the environment.
- Reducing the average per capita consumption (PCC) to 109 litres per head per day (l/h/d) by 2040 under normal year[1] conditions.
- Reducing leakage by 50% by 2050.
- Developing water recycling schemes in several locations that will provide extra water to help supplement the flows in rivers and to refill reservoirs, particularly during dry weather.
- Building more pipelines that will transfer water from our neighbouring companies, following the development of new sources of water in other areas.
- Using desalination plants to turn seawater into drinking water in some areas.
- Working in partnership with land users and environmental groups to improve the water sources we rely upon, so they are resilient for the future.

1.3 This document

We received almost 600 comments on our dWRMP24 as part of the consultation. These included:

1. Regulators: Environment Agency, Ofwat and Natural England.
2. Key stakeholders: Consumer Council for Water, Waterwise, Local Authorities, River Trusts and other interest groups.
3. Other water companies and regional groups.
4. Members of the public.

We have carefully reviewed all the feedback we have received from the public consultation. This document is our Statement of Response (SoR) to the valuable feedback we've received. It outlines the revisions we have made to our dWRMP24 in response to the consultation feedback and other factors. The changes we have made to the dWRMP24 are incorporated in the revised dWRMP24 that we are publishing along with this SoR. The changes have mainly resulted from:

1. the updated Water Resources Planning Guideline (WRPG) issued in March 2023,
2. the Government's Environmental Improvement Targets (EIT),
3. the finalisation of Ofwat's Price Review 2024 (PR24) methodology, and
4. the revised timescales for delivery of the Portsmouth Water Havant Thicket Reservoir, and our Hampshire Water Transfer and Water Recycling Project (HWTWRP) and Littlehampton Wastewater Treatment Works (WTW) recycling option.

Given the nature and scale of changes to our dWRMP24, we are proposing to undertake a further period of consultation on our revised dWRMP24.

2. The WRMP consultation process

2.1 Our approach to consultation

We have developed our plan in close cooperation with our neighbouring water companies as part of the Water Resources South East (WRSE) group. The group consists of Affinity Water, Portsmouth Water, SES Water, South East Water and Thames Water along with Southern Water.

WRSE published an Emerging Regional Plan (ERP) in early 2022 and a draft Regional Plan in October 2022. WRSE consulted on the draft Regional Plan in parallel to our dWRMP24 consultation. WRSE will publish a SoR for the draft Regional Plan along with a revised draft Regional Plan. We have aligned our revised dWRMP24 with the revised draft Regional Plan.

We have consulted with regulators, key stakeholders and customers at various stages of our WRMP24 development, both as a company and collectively as part of WRSE.

2.2 Pre-consultation

Prior to finalising our dWRMP24, we had detailed pre-consultation discussions with the Environment Agency, Natural England, Ofwat and neighbouring water companies. We held briefings on the methods and techniques we are using as part of the plan, and received detailed feedback from Ofwat, the Environment Agency and Portsmouth Water. We also received comments on the options, and the assessments of benefits and impacts, particularly from the Environment Agency and Natural England. Our dWRMP24 incorporated a number of these comments.

Through WRSE, we held discussions with regional groups on the potential to transfer water from other parts of the country to the South East. These discussions looked at technical methods, regional policies and the additional value that the Regional Plan, and thereby company WRMPs, deliver through the development of a 'best value' framework. We have actively supported these activities and contributed to a series of workshops and webinars with stakeholders where we invited their input on various aspects of our plan.

We held online workshops, organised and run by WRSE companies, to specifically discuss the Regional Plan proposals as a pre-consultation on the WRMPs.

In June 2022, we submitted an early version of dWRMP24 to Defra which enabled us to take on board some early feedback.

This helped us in the development of our dWRMP24 which we published for consultation. We included additional detail on both our demand management and supply-side delivery schemes and undertook a deliverability assessment of our supply-side schemes. We also included a contingency plan that outlined the steps we are taking to mitigate any supply-demand risks associated with the planned timing and benefit of schemes.

2.3 Draft WRMP24 plan consultation

We published our dWRMP24 for consultation in November 2022. The aim of public consultation was to reach as many of our customers as possible, and to engage with a representative audience across our supply area. To achieve this, we produced a comprehensive set of documents for public consultation on the dWRMP24 between November 2022 and February 2023. This included:

- A technical report and annexes that described different components of our plan in detail along with the methods and data used for each component.
- A consultation document that summarised our proposed strategy for ensuring that we can maintain a continuous, reliable supply of water to our customers in all but the most extreme drought conditions.
- An online questionnaire accompanying the consultation document with 21 key questions on different aspects of our proposed strategy.
- A four-page A5 information leaflet on our plan.
- Strategic Environmental Assessment (SEA) and Habitats Regulation Assessment (HRA) of our plan.
- Water Resources Planning tables including the data used to develop our plan.

A number of these documents were made available on our website. We placed hard copies of our dWRMP24 at our regional offices for people to come and view them; including information that could not be provided through the website. We also sent electronic copies of our dWRMP24 documents directly to some of the respondents who requested them.

During the consultation period there were 983 views and 340 visitors recorded on the WRMP landing page of the 'Have Your Say' website and a further 5,784 views and 1,721 visits to the WRMP section on the main Southern Water website.

The consultation was promoted to customers through news releases issued to the regional media, advertising in regional newspapers and local authority publications and interviews with regional television and radio, with a reach of more than one million customers combined across our region. This was supported by social media such as Facebook and Twitter.

To ensure that the feedback on the dWRMP24 represented a cross section of our customers, we commissioned research on specific areas of our plan. This included customer focus groups, attended by around 100 customers. We also hosted Business Panels and community engagement visits reaching over 1200 customers across our supply areas. The customers were selected from across Kent, Sussex, Hampshire and the Isle of Wight and represented all age and socio-economic groups, covering metered and unmetered customers.

We held meetings with the Environment Agency, Natural England, Ofwat, Defra, Consumer Council for Water and WildFish as well as numerous Local Authorities, catchment partnerships and other stakeholders.

The consultation included workshops, briefings and one-to-one meetings with interested parties including local councils, environmental bodies, elected members, economic forums and consumer groups. Nearly 3,000 stakeholders were sent direct emails enclosing links to the consultation document and questionnaire and more than 500 stakeholders attended the various briefing sessions. Several MPs also attended a reception at the House of Commons as part of the Regional Plan consultation. Annex 1 to this document contains a full list of the consultation respondents and a summarised list of meetings in provided in Table 2.1.

Consultation with our own employees formed a key part of the process and a series of workshops and team and company briefings were held, in addition to announcements on our intranet, articles in our We Southern Water People newsletter and internal posters.

Table 2.1: Summary of stakeholder meetings during the dWRMP24 consultation.

Date	Attendees	Meeting/Activity
11/10/2022	Kent Association of Local Councils	Update provided on Regional Plan and dWRMP24.
12/10/2022	Environment Agency and Natural England	High level presentation of dWRMP24 strategy.
18/10/2022	Kent MP Forum	Presented our dWRMP24 to Kent MPs, flagging upcoming consultation and WRSE parliamentary launch.
27/10/2022	Chief Executives of local councils affected by Water Neutrality issues	Presentation of draft WRMP24 to Chief Executives of councils affected by Water Neutrality in the Sussex North WRZ.
16/11/2022	Parliamentarians, WRSE stakeholders, WRSE companies	Supported WRSE's parliamentary launch of 'best value' Regional Plan; met with stakeholders and MPs about elements of both the Regional Plan and our dWRMP24.
22/11/2022	Over 200 attendees from organisations including regulators, local authorities, parish councils, environmental groups, canals trusts, multi-sector representatives, MPs' offices and water companies.	Presented Southern Water elements of WRSE's 'best value' Regional Plan and flagged Southern Water's open consultation and how stakeholders can respond.
29/11/2022	Over 130 attendees from organisations including regulators, local authorities, parish councils, environmental groups, MPs' offices, canal and rivers trusts.	Joint webinar with South East Water and SES Water on company plans and the Regional Plan.
30/11/2022	Kent County Council	Presented dWRMP24 strategy relevant to stakeholders in Kent.

Date	Attendees	Meeting/Activity
01/12/2022	Swale Borough Council	Briefing on dWRMP24.
02/12/2022	Arun and Western Streams Catchment Partnership	Summary of the dWRMP24 consultation.
07/12/2022	Over 60 attendees from organisations including regulators, local authorities, parish councils, MPs' offices, farmers and local interest groups.	Joint webinar with Portsmouth Water on our respective dWRMP24s.
13/12/2022	Consumer Council for Water quarterly meeting	Presented an outline of the dWRMP24, high level stakeholder engagement carried out and details of customer engagement and early feedback.
16/12/2022	Woodmancote Parish Council	Briefing meeting on dWRMP24 strategy with particular focus on the Central area.
11/01/2023	Local authority planning officers/Lead Officer Water Neutrality	Updated on dWRMP24 in view of Water Neutrality challenges.
	South East Rivers Trust/Cray and Darent Catchment Partnership	The meeting was led by Thames Water; we provided input on schemes and water resource impacts in the Darent Catchment.
20/01/2023	WildFish	Meeting to discuss dWRMP24 strategy and datasets.
24/01/2023	Isle of Wight Women's Institute	Presented our dWRMP24 for the Institute's 'Save Water – Every Drop Matters' shortlisted resolution.
25/01/2023	Retailer Forum	We directly presented our dWRMP24 strategy to 11 retailers representing almost 90% of the connections we serve. This included Waterscan, attending on behalf of 10 self-supply retailers operating in our area.
02/02/2023	Live public Q&A session alongside WRSE companies	We responded to questions about water recycling, the energy cost of desalination etc. as part of WRSE-led live Q&A session.
07/02/2023	31 registered from approximately 25 organisations representing 31 catchments plus Sussex Local Nature Partnership, Island Rivers Partnership, The Aquifer Partnership. Approximately 25 attendees from around 20 organisations, 10 catchment partnerships plus The Aquifer Partnership, South East Rivers Trust, Environment Agency, Natural England.	Presented dWRMP24 and took questions on role of nature-based solutions and regulatory changes.
09/02/2023	Andrew Griffith MP, Peter Bottomley MP, West Sussex County Councillors	Progressing
09/02/2023	Southern Waters Independent Climate & Environment Group	Representatives from regulators (Environment Agency, Natural England), environmental groups and catchment partnerships.
14/02/2023	Eastleigh Borough Council	Presentation on dWRMP24 strategy for Western area.
15/02/2023	Councillors from Adur and Worthing Councils	Teams meeting requested to discuss WRMP following proactive email. Discussed central area dWRMP strategy.
16/02/2023	Birchington Parish Council	Teams meeting requested to discuss WRMP following proactive email.

3. Overview of consultation responses

3.1 Process for handling responses

We made a wide range of options available for respondents to submit their feedback on our dWRMP24 to Defra during the public consultation. This included:

- Direct freeform feedback via email to either Southern Water or Defra
- Written responses sent through post
- Online survey at Southern Water website (southernwater.co.uk)
- Participation in Webinars
- Participation in face-to-face meetings or presentations
- Participation in joint live Q&A sessions alongside WRSE.

We recorded all the feedback we received and forwarded it to Defra directly. Defra also shared feedback it received directly from respondents. We then subsequently cross checked all correspondence with that directly sent to Defra to ensure that both ourselves and Defra had a full copy of all correspondence to consider for the SoR.

Overall, we received 591 responses.

3.2 Breakdown of consultation feedback

Table 3.1, Table 3.2 and Table 3.3 summarise the responses by the medium used to respond, type of respondent and geographical area of interest to the respondents respectively.

Table 3.1: Medium used to provide feedback

Means of feedback	Number of respondents
Website questionnaire	122
Written responses (email/letter)	469
Total	**591**

Table 3.2: Respondent type

Respondent type	Number of unique respondents
Member of public	515
Local Authorities	31
Private sector	15
Regulators	3
Environmental Non-Governmental Organisations	27
Total	**591**

Table 3.3: Estimated geographic area of interest for the respondents.

Supply area of interest	% of respondents
Western – Hampshire and Isle of Wight	4%
Central – Sussex excluding Hastings	2%
Eastern – Kent and Hastings	2%
No specific location/regional or national interest	93%

3.3 Structure of our Statement of Response

Owing to the large volume of feedback received, we have included a number of annexes to our SoR which set out the representations and our considerations of them, and any associated changes to our revised dWRMP24.

- Annex 1 lists the respondents to our consultation.
- Annex 2 shows the online questionnaire that was used to gather responses to dWRMP24.
- Annex 3 lists each of the individuals and organisations consulted.
- Annex 4 contains the representations and our responses to feedback received via our online questionnaire. For expediency, comments have been grouped and summarised where multiple respondents have made similar comments on common issues. However, there is repetition of responses in our SoR and annexes out of necessity.
- Annex 5.1 contains our detailed response to all non-questionnaire representations and responses we received from the general public.
- Annex 5.2 contains our detailed response to all non-questionnaire representations and responses we received from organisations.
- Annex 6 provides a synthesis of the large number of representations both we and Portsmouth Water received regarding the HWTWRP. It sets this in the context of the Water for Life Hampshire (WfLH) programme.
- Annex 7.1 describes the customer insights work we have carried out when preparing this WRMP.
- Annex 7.2 describes work we have done to allow us to better understand customer reactions to our WRMP.
- Annex 8 discusses Aquifer Storage and Recovery (ASR) and Managed Aquifer Recharge (MAR) options that some respondents alluded to in their feedback.

3.4 Main themes from the consultation feedback

Annexes 4, 5.1 and 5.2 describe the feedback on the dWRMP24 obtained through different channels. The feedback covers a range of topics, however a few key themes have emerged. These, and our responses to them, are given below.

- **Strong support for demand management:** Demand management is a key component of our strategy to ensure that we are able maintain uninterrupted supplies of water to our customers in all but the most extreme drought events. The strategy set out in our dWRMP24 included reducing leakage by 50% by 2050 and reducing PCC to 109l/h/d by 2040 under normal year annual average5 conditions. The vast majority of respondents have expressed strong support for reducing leakage and PCC. While others want us to aim for more ambitious targets and/or achieve the targets earlier.

  The Government's EIT recommend reducing PCC to 110l/h/d under 'dry year annual average'[6] conditions by 2050 (2049–50), reducing non-household demand by 9% by 2037–38 and reducing leakage by 50% by 2050. We plan to meet the targets for reducing non-household consumption and leakage as set out in the EIT as a minimum. We are aiming to achieve a dry year annual average PCC of 110l/h/d earlier than the Government's targets (by 2045 instead of 2050). In our case, a dry year annual average PCC of 110l/h/d roughly equates to a normal year annual average PCC of 100l/h/d. We acknowledge that there was strong support for 110 l/h/d by 2040 but we have to balance that with practical delivery considerations and the risks associated with relying on Government legislation that has not yet been enacted.
- **Perception of bias towards large infrastructure schemes:** Our dWRMP24 includes a number of desalination, water recycling and bulk import schemes. Respondents have pointed to this and suggested that we may have overlooked smaller, local solutions in favour of large infrastructure schemes. A few respondents have mentioned the absence of ASR schemes in this regard.

  The size of the supply-demand deficit we face and limited opportunities for getting any more water from rivers and groundwater means that we are reliant on 'non-traditional' sources of water such as desalination and water recycling together with bulk imports from our neighbouring companies.

Our dWRMP24 included six groundwater options and all of them were selected in the plan. Most of them involved enhancements to existing groundwater sources to derive the maximum benefit under current absraction licences; but they also include a MAR scheme in the River Test catchment. However, these are typically small schemes and cannot provide the volume needed to achieve supply-demand balance. More details about the ASR and MAR options we are considering are provided in Annex 8.

We are currently investigating the environmental impacts of several our existing sources under the Water Industry National Environment Programme (WINEP). The investigations are due to be completed in 2027. We will be fully able to assess the further availability of water from groundwater and surface water sources once the investigations are complete.

- **Concerns around the Havant Thicket Water Transfer and Water Recycling Project:** Some respondents have opposed our use of HWTWRP to fill Havant Thicket Reservoir. The areas of concern include uncertainty around delivery dates, benefits and environmental impacts. There were also concerns that alternative options have not been adequately explored. We have considered more than 300 feasible options during our WRMP options appraisal. In addition we are considering mitigation options.

  The selection of the innovative HWTWRP in our plan is primarily driven by the changes to our abstraction licences for the rivers Test and Itchen which significantly reduce the amount of water we can take from these rivers. We are making these reductions to support environmental Improvements In these catchments. We are no longer planning to build a desalination plant In the Solent because of Its environmental impacts so this water recycling scheme is the only option large enough to maintain customer supplies whilst making such significant reductions in abstraction.

  It will also help to protect natural Chalk Streams by allowing us and Portsmouth Water to reduce our groundwater abstraction impacts on these unique habitats across Hampshire and West Sussex beyond the changes already made to our abstraction licences in Hampshire.

  We will use global best practice for HWTWRP with a multi-barrier approach and monitoring to ensure high water quality when transferred to the Havant Thicket Reservoir. We will monitor the quality of treated effluent from the Budds Farm WTW at the water recycling plant and will shut it down if water cannot be treated to required standards. The recycled water will also have a lower nitrate level than the spring waters, due to the treatment at Budds Farm WTW.

  We also have a range of studies and investigations ongoing as part of the consenting process for the HWTWRP. We will prepare a preliminary Environmental Information Report (EIR) which will form part of our next stage of public consultation in 2024. We will report the preliminary findings on any likely significant environmental impacts of the project based on the information available at the time. We have designed this work to inform consultees' responses to the next HWTWRP consultation which we plan to run in 2024

  We are currently carrying out a full EIA for the HWTWRP as part of the Development Consent Order (DCO) process. We will share this as part of the public consultation for that consent. We are working with Portsmouth Water to support the identified mitigations and compensation, together with other environmental benefits, brought via the proposed scheme.

  We have revised the delivery date for the HWTWRP to provide water supplies for customers. This is further discussed in Section 4.

4. Changes to the dWRMP24

As a result of the representations received on the dWRMP during the statutory consultation period and revised WRMP guidance issued by the Environment Agency post consultation, we have made several changes to our plan. These are summarised in Table 4.1 and described below.

Table 4.1: Key changes to our dWRMP24

Area	Key changes
Demand forecast	• Updated growth forecast • Revised household demand forecast • Revised non-household demand forecast
Supply forecast	• Updated climate change forecast to align with revised assessment of 'high' and 'low' impacts at a WRZ level • Adjusted Environmental Destination profiles including reprofiled reductions for Sussex Worthing, Hampshire Andover and Hampshire Southampton East WRZs to resolve supply-demand deficits • Removed double counted transfer to South East Water from Kent Medway West WRZ
Options appraisal	• Updated cost base for all options to 2020–21 • Revised costs for 13 options and their capacity variants following further work on engineering scope/design • Revised Deployable Output benefit for two options based on further work since dWRMP24 submission • Revised earliest delivery dates for 12 options based on further work since dWRMP24 submission including the Littlehampton WTW recycling option and HWTWRP • Removed two options from consideration in the revised dWRMP24 due to high environmental risk or volume not being available • Added one option for consideration in the revised dWRMP24
Demand management	• Revised household demand management strategy to achieve a dry year annual average PCC of 110l/h/d by 2045 • Revised non-household demand management strategy to achieve at least 9% reduction compared to 2020 by 2038. • Incorporated savings from government led interventions into demand management strategy • Revised options and associated costs for reducing household demand, non-household demand and leakage
Sensitivity analysis	• Included numerous sensitivity runs to test the sensitivity of the preferred plan to a range of input variables

4.1 Changes as a result of changes in guidance

This section sets out the technical changes we have made to our dWRMP24 in response to the updated WRPG issued after consultation on our dWRMP24 had closed.

Growth and demand forecasts

We have updated our demand forecast by incorporating:

1. An updated growth forecast
2. A change in PCC forecast for 2024–25
3. A revised non-household demand forecast
4. The use of 2020–21 outturn leakage as the basis for our leakage forecast.

These are described in detail in our revised dWRMP24.

Our demand management scenarios

The updated guidance requires water companies to achieve:

1. An average PCC of 110l/h/d under dry year annual conditions by 2050
2. A 9% reduction in non-household demand by 2037–38
3. A 50% reduction in leakage by 2050.

We have consequently reviewed our demand management targets and plan to meet non-household and leakage consumption targets set out in the EIT as a minimum. We are aiming to achieve the PCC target of 110l/h/d under dry year annual average conditions by 2045.

Lessons learned from the 2022 Drought

We have undertaken a 'lessons learned' review of the 2022 drought. This is included as a separate annex (Annex 25) in our revised dWRMP24. The review focuses on the following areas:

- The imposition of restrictions in our Western Area
- The additional work undertaken for the River Test Drought Permit application, including updated environmental assessments
- The effectiveness of the other water efficiency and operational measures we took to maximise available water resources.

This requirement was introduced in the updated WRPG and formed part of the Environment Agency's representation.

Starting year position against final 2019 WRMP

Our revised dWRMP24 will include a clear comparison of our WRMP24 supply and demand assumptions 2023–24) against the figures included in our final 2019 WRMP (WRMP19) as required by WRPG and in response to Ofwat's representation. The key changes in this regard are:

- Exclusion of drought permits and drought orders from baseline position for WRMP24 as the WPRG does not allow the benefits of drought measures to be included in our supply forecast. Drought permits and drought order benefits equated to over 100Ml/d of Deployable Output (DO) in the early part of our planning period in WRMP19.
- Changes to delivery dates and DO benefits of schemes.
- Differences between our forecast and actual demand and leakage data, in part due to changes in behaviour associated with COVID-19.
- Updated climate change assessments based on a larger dataset derived from the most recent UK Climate Projections 2018 (UKCP18) output.
- Updated regionally coherent climate data used to derive water resource availability
- Adoption of system (WRZ) level estimates of DO.

We do not consider these changes to be material and therefore we are not proposing to include them in a further consultation and instead will further consult on targeted issues.

4.2 Changes as a result of consultation feedback

We have made several adjustments to our dWRMP24 in response to the feedback we have received. These changes are summarised below and will be reflected in our revised dWRMP24. Annexes 4, 5.1, and 5.2 contain our responses to individual comments, including any changes to the plan we have made as a result.

Demand forecast

In response to the feedback we received, we have revised our demand management strategy as shown in Table 4.2. We discuss the changes to our demand forecast in detail in our revised dWRMP24.

Table 4.2: Changes to demand forecast as a result of consultation feedback

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency R5.1, Ofwat 1, Arun District Council, Arquiva, Havant and Isle of Wight Wildlife Trust, Havant Green Party	Demand forecast	We have revised our demand management options to develop a profile that will achieve a PCC of 110l/h/d by 2045 under dry year annual average conditions. In our case, a dry year annual average PCC of 110l/h/d roughly equates to a normal year annual average PCC of 100l/h/d.
Ofwat 1, 4, 6, Havant and Isle of Wight Wildlife Trust, Havant Green Party, Otterbourne Parish Council	Leakage	We are aiming to reduce leakage by at least 50% by 2050. Further details on our leakage options and leakage reduction strategy are included in our revised dWRMP24. We will ensure that our leakage reduction strategy is accurately captured in the water resources planning tables that accompany the revised dWRMP24 technical document.
Environment Agency R5.2	Demand forecast	We have made changes to our household and non-household demand forecast. This is described in detail in our revised dWRMP24.
Environment Agency R5.3	Demand forecast	We have removed water efficiency savings that had been built into the baseline non-household demand forecasts.
Environment Agency R5.4, Ofwat 4, Business Stream	Demand forecast	Our demand management strategy now includes reduction in non-household demand by 9% by 2037–38. We have also carried out an optioneering exercise to identify options that will allow us to reduce non-household consumption.
Ofwat 8	Demand forecast	We have updated PCC forecast for 2024–25.
	Demand forecast	We have updated PCC forecast for 2024–25.
	Demand forecast	We have used outturn 2021–22 leakage as the basis for leakage forecast.

Supply forecast

In response to the feedback on our dWRMP24, we have revised our supply forecast as follows (Table 4.3).

Table 4.3: Changes to our supply forecast as a result of consultation feedback

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency I5.1, Ofwat 8	Deployable output	Our revised dWRMP24 provides source by source estimates of DO as determined through water resource modelling and the key constraints at each source and an explanation of the differences to our WRMP19 estimates.
Ofwat 8	Supply demand balance	Our revised dWRMP24 provides a clear comparison of our WRMP24 assumptions for 2024–25 against the numbers forecast in WRMP19 final plan.
Environment Agency R5.3, Ofwat 10	Target headroom	Our revised dWRMP24 includes the full dataset of Target Headroom figures and more detail on the methodology.
Environment Agency I6.1, I6.2, Ofwat 8	Outage	We have reviewed and updated our outage forecast. Further details on our outage forecast are included in the revised dWRMP24.
Environment Agency I9.1	Climate change	We have followed a Tier 3 Climate Change Assessment approach. This is further discussed in our revised dWRMP24.
Environment Agency I9.2, I9.3	Climate change	We used 2070 as our climate change scaling base year. We have updated our climate change assessments for the adaptive plan to better reflect the range of uncertainty. We have expanded our climate change narrative in the revised dWRMP24 to illustrate the approach more clearly.
Environment Agency I10.1	Level of service	Our revised dWRMP24 shows a baseline position against 1-in-500-year drought from the start of the planning period and the glidepath of how we will vary our level of service through the planning period to achieve 1-in-500-year drought resilience.

Environmental assessments and environmental destination

Table 4.4 shows the changes to our environmental assessments and environmental destination following public consultation on our dWRMP24.

Table 4.4: Changes to our environmental assessments and environmental destination as a result of consultation feedback

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency R1.4, R2.1, Natural England NE3	Pulborough sustainability study	Our environmental ambition scenarios have further considered the potential outcomes of sustainability investigations relating to our Pulborough groundwater source and the possibility of earlier abstraction licence reductions at this source to deliver environmental improvements.
Environment Agency R6.2, HIWWT	River Itchen abstraction licences	Our environmental ambition scenarios have further considered the risk of earlier sustainability reductions being introduced as part of abstraction licence renewal for our Lower Itchen surface and groundwater sources.
Environment Agency R3.1	Test drought permit	We have updated the HRA, SEA and WFD assessments to reflect the latest environmental assessments undertaken to support the Test drought permit submission in summer 2022. These assessments will accompany the updated drought plan we plan to finalise later in 2023. To reduce our reliance on the Test drought permit (and other drought permits and drought orders) we have reviewed a number mitigation options in our western and central areas.
Environment Agency R6.1, R6.2, R6.3, Natural England NE1, NE3, NE4, NE5, Ne6, NE7, NE11, NE13, NE14, Forestry Commission, Isle of Wight Council, Little Stour and Nailbourne River Management Group	Environmental ambition	We have expanded our environmental ambition and Catchment First narrative to better illustrate our proposed glidepaths of licence reduction and provide specific examples of the range of catchment management measures and investigations we are already undertaking.
Natural England NE1, NE2, Environment Agency R6.3, HIWWT	Environmental ambition	The links between our ongoing WINEP studies and investigations into the potential adverse effects of existing sources and our environmental assessments have been made clearer in the revised dWRMP24.
Natural England NE2	Environmental ambition	As above, and consistent with the emerging outcome of the WINEP, we are assuming that our Totford source will cease to operate and its licence be revoked from 2030 under all our Environmental Destination Scenarios.
Environment Agency R6.4	Licence capping	Our revised dWRMP24 further clarifies our assumptions around baseline abstraction rates for assessing No Deterioration Risks and licence capping.
Environment Agency R3.2	Environmental assessments	Our revised dWRMP24 includes updated monitoring proposals regarding the Test and Itchen drought interventions in the environmental assessment annexes.
Environment Agency R4.4	Environmental assessments	The Environmental Report sets out the approach to assessing any reasonable alternatives to the plan. This has been revised to reflect further consideration of the reasonable alternatives (taking into account the Least Cost Plan, scenarios and adaptive plan pathways).

Table 4.4: Changes to our environmental assessments and environmental destination as a result of consultation feedback continued

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency R4.4, Natural England NE8, NE9, NE10	Environmental assessments	We cover this in the options appraisal annex to our revised dWRMP (annex 12) by summarising the outcome of the option appraisal process which provides evidence of how environmental effects identified by either the SEA, HRA or WFD have been taken into account.
Environment Agency R4.5	Environmental assessments	Annex 19 of the Environmental Report details the consultation responses and their consideration in the finalisation of the SEA and the presentation of its findings in the Environmental Report. We have revised Annex 19, along with the information in the revised dWRMP Annex 9 (Protecting and Enhancing the Environment) to reflect the provision of additional detail as appropriate.
Environment Agency I2.2	Environmental assessments	We have revised the Environmental Report for the revised dWRMP24 to reflect any additional suitable mitigation measures included within our individual option assessments.
Environment Agency I2.3	Environmental assessments	We have revised the Environmental Report to take into account the need to summarise the inter-plan effects by SEA topics. We note that this remains a strategic level assessment and provides the commensurate level of detail and justification.
Forestry Commission	Environmental assessments	We have amended the Environmental Report of the revised dWRMP24 to ensure designated conservation and landscape sites and features within the SEA of the revised preferred options are treated consistently.

Options appraisal

Table 4.5 lists the changes to options considered in the revised dWRMP24.

Table 4.5: Changes to options availability as a result of consultation feedback

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency, Natural England NE10	Woolston Water Recycling Scheme	We have removed the Woolston recycling scheme from the feasible options list because it involved discharges to the River Itchen, which are not supported by RAPID. It is no longer considered for the revised dWRMP24.
Environment Agency R1.4	Littlehampton Water Recycling	As our WRMP has developed, the complexity of this major infrastructure scheme has become clearer. Environmental studies, surveys and investigations are currently being planned and procured but if it proves unfeasible to address planning, consenting and other challenges identified, we may not be able to deliver the project before 2030-31 (rather than 2027). We have accordingly amended the earlier potential delivery date for this option in the revised dWRMP24.
Environment Agency I7.1	Tunbridge Wells Water Recycling	The DO benefit from the Tunbridge Wells WTW recycling scheme is 3.6Ml/d. We will ensure this is consistently reported in our revised dWRMP24.
Environment Agency, Natural England	Horsham Water Recycling	The Horsham WTW recycling option is mutually exclusive with the variant of the Littlehampton WTW recycling project that uses the same storage option. The variant of Littlehampton WTW recycling option being progressed for delivery does not include a storage option and can therefore be developed together with the Horsham WTW recycling option. We have clarified this in our revised dWRMP24. We have noted the comments on this option and will take them into consideration when we carry out the options appraisal process for WRMP29.
Environment Agency R1.3, Arun DC	Sussex Coast Desalination	We have removed the Sussex Coast desalination option from our revised dWRMP24. We have identified Lewes Road groundwater option as an alternative to partially cover the loss of DO and it has been selected in our revised dWRMP24. We have also agreed an extension of a bulk supply from SES Water to 2031 for up to 4Ml/d in our Sussex North WRZ. We will carry out environmental assessments of these options and, if needed, provide details of any mitigation measures that may be needed.
Online Questionnaire	Water Recycling, Rivers	Aside from our existing WRMP19 water recycling schemes at Littlehampton WTW and the River Medway WTW, all water recycling options that included direct discharge of recycled water into a river for re-abstraction further downstream have been excluded from our revised dWRMP.

Table 4.5: Changes to options availability as a result of consultation feedback continued

Relevant Representations	Theme	Change for our revised dWRMP24
Numerous representations from Members of the Public, Hampshire and Isle of Wight Wildlife Trust, Havant Climate Alliance,	Hampshire Water Transfer and Water Recycling Project	Annex 6 of this document addresses the wide range of representations and concerns regarding the HWTWRP, including the evaluation of alternative options.
Ofwat 9, Ofwat 10	Hampshire Water Transfer and Water Recycling Project	The DO of HWTWRP has changed because of further work undertaken since the submission of our dWRMP24. We have updated the DO of this option in line with the latest estimates. This is covered in Annex 6 and our revised dWRMP24.
Environment Agency R1.5	River Adur Offline Reservoir	We acknowledge the broad support for new reservoir and storage options. However, we recognise that considerable work needs to be done to assess the feasibility of this option. We have consequently pushed back the earliest delivery date of this option to 2039–40 to allow us sufficient time to investigate and develop this option.
Environment Agency R3.3, Tracey Viney, Havant Climate Alliance, Havant Green Party	Aquifer Storage and Recovery (ASR)/ Managed Aquifer Recharge (MAR)	A considerable amount of work needs to be done to assess the feasibility of the MAR option and any potential environmental impacts. We have allowed a lead-in time of at least 10 years for investigations to be completed. Annex 8 to this document specifically addresses representations around wider use of ASR and MAR schemes. We will continue to review the potential for these schemes as part our WRMP process but have not included any additional schemes of this type in our revised dWRMP24.
Online Questionnaire, Environment Agency I4.1, I4.5, Natural England	Desalination options	We have undertaken a review of desalination schemes in our dWRMP24. The review has concluded that a realistic earliest date for these options is likely to be 2037–38 in view of the considerable time required to investigate, plan and deliver such schemes.
Online Questionnaire	Demand management options	Several respondents favoured higher water efficiency targets than the ones in our dWRMP24. We have revised our demand management strategy and are aiming to reduce leakage by 50% by 2050 and non-household demand by 9% by 2038 as required by WRPG. We are planning to reduce dry year PCC to 110l/h/d by 2045, five years earlier than required by WRPG. We have considered greater reductions in PCC and leakage. However, given the considerable additional deliverability risk associated with higher demand reduction targets, we have selected the targets mentioned above. We discuss this further in our revised dWRMP24.

Table 4.5: Changes to options availability as a result of consultation feedback continued

Relevant Representations	Theme	Change for our revised dWRMP24
Online Questionnaire	Government interventions	Our revised options for reducing PCC now include water savings from government-led interventions. We have adopted the scenarios developed by WRSE for the savings associated with these interventions and their profile.
Environment Agency R1.1, R1.3	Bulk import from SES Water	We have agreed to extend an existing bulk import from SES Water. The bulk supply was set up as a temporary measure up to the end of 2024–25. The current supply is around 1.3Ml/d. This has now been extended up to 2031 to provide up to 4Ml/d.
Environment Agency R1.2	15Ml/d bulk import from Portsmouth Water to Pulborough WSW	We have discussed with Portsmouth Water and agreed that the bulk supply to Pulborough will remain at 15Ml/d for WRMP24.
Environment Agency R7.2	9Ml/d bulk import from Portsmouth Water to Otterbourne WSW	Portsmouth Water can no longer provide the additional 9Ml/d in the Western Area. We have therefore removed this option from our revised dWRMP24.
Environment Agency (R1.1)	Water neutrality	We have updated the programme of delivery of supply-demand schemes in Sussex North WRZ which includes schemes that were in WRMP19, the return to service of Weir Wood WSW and additional mitigation options.
Natural England NE10	Thames to Southern Transfer	We have included more detail around the Thames to Southern Transfer in our revised WRMP24. HRA and other environmental assessments were carried out for the preferred Thames to Southern Transfer options at Gate 2 of the RAPID7 process.
Natural England NE10	Option naming	We will ensure that all sources and options are consistently referred to by their anonymised names under the Security and Emergency Measures Directive in our revised dWRMP24.
Environment Agency R3.6, Natural England NE10	Groundwater options	We have updated our Environmental Assessments to reflect the risks around these groundwater options and we will undertake further sensitivity testing of our strategy with these options excluded to understand the implications if any environmental impacts cannot be mitigated.
Ofwat 11	Option costs and benefit	We have made changes to those options where designs have matured since dWRMP development. These include the Strategic Resource Options as well as the Littlehampton WTW recycling option. We have also revised and updated costs and the scope for some options accordingly.

Drought measures

Changes to drought measures following public consultation on the dWRMP24 are given in Table 4.6.

Table 4.6: Changes to supply-side drought permits and drought orders in response to consultation feedback

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency R2.2, Natural England NE15 Chalk Stream Ltd, Broadlands Estate Salmon and Trout Fishery, River Test Salmon Group and Test and Itchen Association	Drought permits and drought orders	Our revised dWRMP24 includes a clearer and more detailed narrative around our use of drought permits and drought orders to maintain supply and, in the longer term, reduce our reliance on these drought measures.
Environment Agency R2.3	Drought permits and drought orders	The change to delivery date of the HWTWRP requires an extension of potential use of drought permits and drought orders in Hampshire to be extended from 2030 to 2035. We ran the WRSE investment model without extending the use of these drought permits and drought orders (when needed) but could not achieve supply-demand balance. Our revised dWRMP24 includes a mitigation plan to reduce reliance on drought permits and drought orders while protecting the environment.
Environment Agency I11.1	2022 Drought	Our revised dWRMP24 includes a section on lessons learned from the 2022 drought.

Decision-making process

We have included additional text in our revised dWRMP24 to explain our decision-making process for the Best Value plan. The changes are summarised in Table 4.7.

Table 4.7: Changes to text around our decision-making process following consultation feedback.

Relevant Representations	Theme	Change for our revised dWRMP24
Environment Agency R4.1, Havant Green Party	Best Value Plan	We have provided additional explanation on the use of Best Value metrics in development of our preferred plan in the revised dWRMP24. We have worked with WRSE to put together the additional information.
Environment Agency R4.7, Ofwat 8, Havant Green Party	1-in-500 year drought resilience	We have undertaken further sensitivity assessments to understand the impact of achieving 1-in-500 year drought resilience at different times and the impact on our Best Value plan. We discuss this in our revised dWRMP24.
Environment Agency R4.7, Ofwat 8	Level of Service	We have updated text on our Level of Service in our revised dWRMP24 to explain our target and current levels of service more clearly for customers and the environment, and the timings of any changes to these.
Environment Agency R4.8	Problem Characterisation	We have updated our problem characterisation summary table in the revised dWRMP24 so that it fully aligns with the full assessment in our Problem Characterisation Annex (Annex 3 of the revised dWRMP24).
Ofwat 9	Option Utilisation	We have provided additional narrative around the utilisation of supply-side options in our revised dWRMP24 and to reflect the utilisation of options appropriately in the accompanying tables.

Sensitivity testing

The sensitivity test we have carried out for the revised dWRMP24 are listed in Table 4.8.

Table 4.8: Sensitivity tests carried out for the revised dWRMP24 following consultation feedback.

Relevant Representations	Theme	Change for our revised dWRMP24
Ofwat 8, Customer Surveys	Drought Measures	There is no change to the main target date of 2041 for terminating the use of supply-side drought measures to increase the amount of water we take from the environment. However, we have repeated and expanded the sensitivity testing around different timelines for achieving this level of resilience to see their impact on our plan. We discuss this in our revised dWRMP24.
Environment Agency R2.1, R6.1, R6.2	Risk of earlier licence changes (Pulborough and River Itchen)	We will undertake additional Environmental Destination sensitivity scenarios on our preferred 'best value' strategy to explore the potential risk of earlier licence changes to our Pulborough and River Itchen sources. However, the potential delay to both HWTWRP and Littlehampton WTW recycling scheme could impact the extent to which we can accommodate earlier licence reductions.
Ofwat 11, Environment Agency R4.2	15Ml/d bulk import from Portsmouth Water to Pulborough WSW	We have carried out a number of sensitivity runs to test the impact of exclusion and/or delay in delivery of large infrastructure projects on our plan. We discuss the results in our revised dWRMP24.

Adaptive planning

In response to the comments by the Environment Agency on contingency planning (ref. R1.1 and R1.2), we have developed an extended and enhanced contingency plan to address delivery risks. The expanded plan provides greater detail on specific contingency options, taking account of the consultation feedback and extends the contingency plan to cover our entire supply area.

4.3 Other changes

Addition of new options

We have included two new options in our constrained options list for the revised dWRMP24:

- **Asset enhancement (SBZ):** Lewes Road (3.5Ml/d) – This option has been included from 2027–28 as an alternative to partially offset the loss of supply from the Sussex Coast desalination option.
- **Bulk import (SNZ):** SES rezoning (4Ml/d) – We currently have 1.3Ml/d supply from SES Water to our customers in Sussex North WRZ. Following agreement with SES Water, we have increased the volume to 4Ml/d from 2025–26 to 2030–31.

Removal of options

We have removed the following options from consideration in our revised dWRMP24:

- **Bulk import (HSE):** PWC source A to Otterbourne WSW – additional volume (9Ml/d) – The option has been removed as Portsmouth Water is no longer able to provide this additional volume.
- **Catchment management (HSE):** Test and Itchen catchment options – This has been removed as the benefit is now built into the Environmental Destination profile.
- **Desalination (SBZ):** Sussex Coast (up to 40Ml/d) – This option has been removed as a suitable alternative site could not be identified when the site originally identified for this option became unavailable.
- **Recycling (HSE):** Woolston WTW (4.8Ml/d and 7.1Ml/d) – These options have been removed as they involve discharges to the River Itchen which are not supported by RAPID.

Changes to Deployable Output benefits

The changes to DO benefits are as follows:

- **Recycling (IOW):** Sandown WTW (8Ml/d) – The DO benefit for this option has been revised to 8.5Ml/d from 8.1Ml/d following a design update.
- **Recycling (KMW):** Medway WTW (12.8Ml/d) – The DO benefit of this option has been increased to 14Ml/d from 12.8Ml/d following an internal review.

Changes to delivery dates

We've developed detailed delivery plans for very large and complex supply-side infrastructure projects which form part of our WRMP24. This includes developing detailed understanding of the potential risks and challenges associated with individual construction projects. We now have new information and deeper understanding about potential challenges to important water recycling schemes in Littlehampton, Sussex and Havant, Hampshire. As a result, we've decided to make some changes to our delivery plans.

WRMP19 deliverables (Littlehampton WTW recycling option and the HWTWRP)

In the WRSE draft Regional Plan and our dWRMP24, we initially projected the Littlehampton WTW recycling scheme and HWTWRP would deliver supplies to customers from 01/04/2027 (2027–28) and 01/04/2030 (2030–31) respectively.

Littlehampton WTW recycling option

In response to regulatory feedback to our WRMP19 Annual Review 2022, we submitted a 'delivery roadmap' to regulators in February 2023. The roadmap provided an update on delivery dates and water resource benefits of WRMP19 supply-side schemes and identified potential risks to the delivery of schemes and the mitigation we are putting in place. The roadmap highlighted a likely extension to the timing of the Littlehampton WTW recycling scheme to allow sufficient contingency time to adjust to planning, consenting and other challenges that may emerge during construction. If it's unfeasible to resolve the challenges, this could mean we deliver the Littlehampton scheme in 2030/31 rather than 2027/28.

The Environment Agency requires longer monitoring to allow discharge consents for this scheme and may not be able to fast track the scheme, as it was not identified as a Strategic Resource Option (SRO) at Price Review 2019 (PR19). It is also likely that delays will also be caused by third party approvals covering planning, EIA and the HRA for the pipeline route which crosses a National Park. The roadmap included a more mature programme of delivery for the scheme, which accounted for these delivery risks, with a completion date of September 2029 (2029–30). For water resources planning purposes, we are planning on the basis of the scheme supplying water from 01/04/2030 (i.e. 2030–31). This revised date has been incorporated in our revised dWRMP24.

We're continuing to work closely with regulators and other partners to deliver the projects as quickly and efficiently as possible. Our consultation in the autumn will seek views on our plans to ensure any potential impacts to customers or the environment are minimised.

Hampshire Water Transfer and Water Recycling Project

As the scope of the HWTWRP has matured, we have conducted testing of the delivery schedule, including a Quantitative Risk Analysis (QSRA) which has enabled a greater understanding of the project. As a result of this analysis, we've decided to extend the overall timeline for this project to allow sufficient contingency time to adjust to potential planning, consenting and other challenges which may emerge during construction. If it's unfeasible to resolve the challenges, this could mean we deliver the HWTWRP by the end of 2034-35 rather than 2030.

Our assessment is based on some key assumptions (i.e. that the preferred water recycling plant location can be secured and customers have greater acceptance of recycled water challenges). For water resources planning purposes, we are planning on the basis of this scheme providing water to customers from 01/04/2035 (2035–36) and this has been incorporated in our revised dWRMP24.

There are a number of significant factors influencing this assessment, which in combination result in the extension of forecast delivery timescales. These are:

- Water Recycling Plant sizing requirement; because of the impact of further supply-demand investment modelling and an updated forecast of future environmental destination needs.
- Development Consent Order (DCO); the risks relating to submission, decision, or legal challenge.
- Direct Procurement for Customers (DPC) process; the risks to complete an agreement.
- Interface and consenting risks due to combination of the Havant Thicket Reservoir project and the WRP.

Havant Thicket Reservoir

Havant Thicket Reservoir is being delivered through an innovative partnership between Portsmouth Water and Southern Water. The current scheme received planning permission in late 2021, with the main construction phase of the project due to get underway in Spring 2024. When completed, Portsmouth Water will take water from the reservoir during a drought, allowing it to supply Southern Water with 21Ml/d from its supplies further to the west. Supplementing the reservoir with recycled water (under a separate planning application) will secure up to 90Ml/d extra water.

As part of work to plan for the future, Portsmouth Water and Southern Water have been exploring additional ways of supplying the region with sustainable sources of water and taking further steps to protect and improve our environment. This has involved looking at different options, including adding highly treated recycled water to Havant Thicket Reservoir as part of HWTWRP to supplement water levels and enable it to provide more water during drought.

The two companies have been looking at how the already approved Havant Thicket Reservoir scheme can be future proofed by working together to share infrastructure, with an updated planning application for a single pipeline tunnel to the reservoir that can be used by both Portsmouth Water and Southern Water.

A key priority is to minimise disruption to residents and the environment, while delivering the infrastructure needed efficiently and with value for money for customers. A shared tunnel approach means that, if proposals for water recycling are agreed in the future, residents will not need to experience additional disruption. It will also reduce environmental impact and it is estimated that taking this future proofing approach could save over £100 million, compared to installing separate new infrastructure at a later stage.

Ofwat has been involved in discussions on this approach, and is supportive of it, as it agrees that it is in the best interests of Southern Water customers, the environment and society more broadly.

A new planning application for the Havant Thicket Reservoir pipeline will be submitted to the local planning authorities, with determination of the application expected to be completed in early 2024. Ofwat will then need to approve the planned costs.

This 'one tunnel' approach will mean that the reservoir will be finished later than originally planned but will provide the benefits described above.

While it is prudent for the Regional Plan and our revised dWRMP to be based on these revised dates, we will continue to drive for earlier delivery and additional mitigations.

Other options

Other options that have had their likely delivery dates revised include the following:

- **Bulk import (SNZ):** SES to SNZ (10Ml/d) – Following discussions with SES Water, the earliest availability of this bulk import has been moved from 2030–31 to 2033–34 to allow sufficient time for infrastructure development.
- **Bulk import (SNZ):** SEW RZ5 to Pulborough WSW (10Ml/d) – Earliest delivery delayed from 2030–31 to 2035–36 to allow South East Water sufficient time to develop the resource required to support the supply.
- **Desalination (KME):** Isle of Sheppey (up to 40Ml/d) – Earliest delivery delayed from 2034–35 to 2037–38 to allow sufficient time for investigation and mitigation options.
- **Desalination (KTZ):** East Thanet (20Ml/d) – Earliest delivery delayed from 2034–35 to 2037–38 to allow sufficient time for investigation and mitigation options.
- **Desalination (SWZ):** Tidal River Arun (20Ml/d) – Earliest delivery delayed from 2033–34 to 2037–38 to allow additional time for investigation and mitigation options.
- **Recycling (HSE):** Budds Farm and Peel Common WTWs to Otterbourne WSW via environmental buffer (75Ml/d) – Earliest delivery delayed from 2030–31 to 2037–38 to allow additional time in case the preferred option cannot be progressed.
- **Recycling (HSE):** Budds Farm WTW to Otterbourne WSW via environmental buffer (61Ml/d) – Earliest delivery delayed from 2030–31 to 2037–38 in case the preferred option cannot be progressed.
- **Recycling (KMW):** Tunbridge Wells WTW (3.6Ml/d) – Earliest delivery delayed to 2032–33 from 2031–32 to allow sufficient time for investigation and mitigation options.
- **Storage (SNZ):** River Adur Offline Reservoir (19.5Ml/d) – Earliest delivery delayed from 2036–37 to 2039–40 to allow sufficient time for further investigations.

Changes to scheme costs

In addition to adjusting the cost base of all supply-side options, we have revised the costs for a number of our schemes. These are listed below.

- **Bulk import (HSE):** PWC source A to Otterbourne WSW (21Ml/d) – We have revised this cost downward following a review of line items included in the original cost estimate.
- **Bulk import (HSE):** Havant Thicket Reservoir to Otterbourne WSW pipeline – first and second section (90Ml/d) – We have revised this cost upwards following further work on pipeline route and engineering scope.
- **Bulk import (SNZ):** Havant Thicket Reservoir to Pulborough WSW (capacities ranging from 20 to 100Ml/d) – We have revised these costs downwards following further work on pipeline route and engineering scope.
- **Bulk import (SNZ):** SEW RZ5 to Pulborough (10Ml/d) – We have revised this cost upwards following further work on pipeline route and engineering scope.
- **Desalination (KTZ):** East Thanet (20Ml/d) – We have revised this cost downwards following a review of engineering scope.
- **Desalination (SWZ):** Tidal River Arun (20Ml/d) – We have revised this cost upwards following a review of engineering scope.
- **Recycling (HSE):** Budds Farm and Peel Common WTWs to Otterbourne WSW via environmental buffer (75Ml/d) – We have revised this cost upwards following review of engineering scope.
- **Recycling (HSE):** Budds Farm WTW to Otterbourne WSW via environmental buffer (61Ml/d) – We have revised this cost upwards following review of engineering scope.
- **Recycling (HSE):** Hampshire Water Transfer and Water Recycling Project (up to 60Ml/d) – We have revised this cost upwards following updated design and engineering scope.

Changes to scheme phasing

The phasing of the WRP associated with the HWTWRP has been changed to 20Ml/d, 40Ml/d and 60Ml/d from 15Ml/d, 30Ml/d, 45Ml/d and 69Ml/d as a result of a revised estimate of the amount of water this will provide for customers use benefit from the HWTWRP.

4.4 Changes to our strategy

Some of the changes we have outlined in the preceding sections result in changes to our baseline supply-demand position, option availability and, consequently, our preferred strategy. The changes are described in detail in our revised dWRMP24. The three key changes are summarised below.

Greater reduction in PCC and non-household demand

Our dWRMP24 achieved a dry year annual average PCC of 115l/h/d by 2050. We now aim to achieve a more ambitious dry year annual average PCC target of 110l/h/d by 2045. This is five years earlier than required by the WRPG. We also plan to reduce non-household demand by 9% by 2038.

Our PCC reductions include savings from Government interventions. We will keep our strategy under review and will look to accelerate the delivery of PCC reductions once our smart metering programme is delivered and our assumptions around savings from smart metering are verified.

Extension in the use of drought permits and drought orders in the Western area

The revised potential delivery dates for Havant Thicket Reservoir and the HWTWRP necessitate an extension in the availability of drought permits and drought orders in the Western area. In the dWRMP24:

- The Candover Drought Order was available up to 2028–29 under a 1-in-500 year drought scenario. For less severe droughts (1-in-100 year and 1-in-200 year severity), it was available up to 2026–27.
- The Lower Itchen Drought Order was available up to 2026–27 under all drought conditions.
- The River Test drought option (which for supply demand balance modelling purposes includes the River Test drought permit and River Test drought order) was available up to 2029–30 under 1-in-100 year and 1-in-200 year drought conditions. It had no time limit under the 1-in-500 year drought scenario but was not utilised after 2041 in line with our strategy to achieve 1-in-500 year drought resilience by 2041.

We retained these assumptions following the change in the overall timeline for the HWTWRP. However, the results showed that we cannot maintain supply-demand balance in the Western area in the event of a drought before 2035–36. This is in part due to the loss of a 9Ml/d supply from Portsmouth Water that was available for the dWRMP24.

As a result, we have had to extend the potential use of drought options in the Western area. The revised availability and sequencing of the drought options is as follows:

- The Candover Drought Order available until 2034–35 under 1-in-100 year, 1-in-200 year and 1-in-500 year drought conditions.
- The Lower Itchen Drought Order available until 2029–30 under 1-in-100 year, 1-in-200 year and 1-in-500 year drought conditions.
- The River Test Drought Permit available under 1-in-100 year and 1-in-200 year drought conditions until 2034–35.
- The River Test Drought Order available until 2040–41 under 1-in-500 year drought conditions.

The existing Section 20 Agreement will remain until 2030 but there is now extended potential use of drought permits and drought orders in the Western area. We are working closely with the EA to secure these obligations in the most appropriate way. In addition, we are in discussion with the regulators and other stakeholders and continue to work on strategies intended to minimise the reliance on abstraction from the protected sites during drought, details of these strategies are set out in the Mitigation Plan which will be published alongside our rdWRMP in the timescales set out in section 9.2.

Delay in the implementation of licence capping and Environmental Destination

The revision in the likely delivery dates of Havant Thicket Reservoir, the HWTWRP and Littlehampton WTW recycling option also means that we have needed to delay the introduction of some abstraction reductions to meet our Environmental Destinations in some of the WRZs in our Western and Central areas.

Table 4.9 sets out a summary of the potential uncertain abstraction licence reductions we have deferred through our Environmental Ambition for our revised draft plan compared to our original draft plan. In our Western area we have not yet deferred implementation of licence revocation to our Alresford source in the Candover Catchment. However, this outcome may follow our ongoing environmental investigations within the catchment. There is a delicate balance between the environmental impacts of delaying changes

Table 4.9: Summary of deferred implementation of uncertain licence changes

Water Resource Zone	Source	Type of Licence Change	Original year	Deferred year
HKZ	Newbury	Licence cap and reduction to meet flow targets	2031	2036
HKZ	Near Basingstoke	Potential licence cap	2031	2036
HAZ	Andover	Licence reduction to meet flow targets	2031	2040
HAZ	Near Whitchurch	Potential licence cap	2031	2036
HAZ	Overton	Licence cap and reduction to meet flow targets	2031	2036
HAZ	Whitchurch	Licence cap and reduction to meet flow targets	2031	2036
HRZ	Romsey	Potential licence cap	2031	2036
HRZ	Kings Sombourne	Potential licence cap	2031	2036
HWZ	Winchester	Licence cap and reduction to protect designated sites targets	2031	2031
HWZ	Alresford	Licence revocation	2031	2031
HWZ	Barton Stacey	Potential licence cap	2031	2036
HSE	Itchen Surface Water	Licence cap and reduction to meet flow targets and protect designated sites targets	2031	2036
HSE	Itchen Ground Water	Licence cap and reduction to meet flow targets and protect designated sites targets	2031	2036
HSE	Twyford	Licence cap and reduction to meet flow targets and protect designated sites targets	2031	2036
HSW	Test Surface Water	Licence cap and reduction to meet flow targets	2031	2036
SWZ	Littlehampton	Potential licence cap	2031	2034
SWZ	Arundel	Potential licence cap	2031	2034
SWZ	South Arundel	Licence cap and reduction to meet flow targets	2031	2034
SWZ	Long Furlong A	Licence cap and reduction to meet flow targets	2031	2034
SWZ	Long Furlong B	Licence cap and reduction to meet flow targets	2031	2034
SWZ	Durrington	Licence cap and reduction to meet flow targets	2031	2034
SWZ	South Arundel A	Licence cap and reduction to meet flow targets	2031	2034
SWZ	Worthing	Licence cap and reduction to meet flow targets	2031	2034
SWZ	North Worthing	Licence cap and reduction to meet flow targets	2031	2034
SWZ	North Arundel	Licence cap and reduction to meet flow targets	2031	2034
SWZ	East Worthing	Licence cap and reduction to meet flow targets	2031	2034

to abstraction licences and the environmental impacts of the schemes needed to prevent these delays.

As with the drought options, we tested a scenario whereby the introduction of licence capping and Environmental Destination remained unchanged from the dWRMP24. However, this resulted in unresolved supply-demand deficits in some WRZs, because there are no options that are large enough and can be delivered within these timescales, without placing additional reliance on drought permits and drought orders.

The offsetting of any supply-demand deficits introduced by future, but as yet uncertain, licence changes through increased utilisation of drought permits and drought orders, particularly in sensitive catchments does not necessarily achieve environmental improvement or meet environmental targets. Drought permits and drought orders themselves have environmental impacts and their use effectively overrides the licences the licence changes and protections achieving the environmental destination is seeking to resolve. We therefore do not consider it appropriate to introduce licence reductions in such situations that would result in more frequent or extended use of some drought permits and options, and therefore have delayed the implementation of uncertain sustainability reductions until alternative supplies are available.

5. Analysis of representations received through our online questionnaire

We received a total of 122 responses to our online consultation questionnaire. Of these, 28 were on behalf of organisations, whilst 91 of the responses were submitted by individuals.

Three respondents did not confirm either way. A list of respondents to the questionnaire is part of the full list of respondents in Annex 1 of this document.

Out of the 122 responses, 62 respondents confirmed that they received water supply from Southern Water, with 51 stating that they did not. The remaining nine did not provide a response.

In Annex 4 to this document, we have provided a breakdown of the results for each question, the key issues raised, and our consideration of each question. We have also noted any relevant changes we are making to our revised dWRMP24 as a result.

A summary of the questionnaire responses is provided in Table 5.1 below:

Table 5.1: Summary of responses to consultation questionnaire

Question	Results	Our response
Question 1: Do you agree that our WRMP should reflect the 'best value' Regional Plan, so we are aligned with our neighbouring water companies?	**Yes** 51.7% **No** 39.3% **Don't know or other comment** 1.6% **Blank or no comment** 7.4%	There is no change to our revised dWRMP24 based on this feedback as there has been no change to our 'best value' planning and regional collaborative approach with WRSE.
Question 2: To protect the environment, we currently have a lower level of service in our Central area, covering West Sussex and Brighton and Hove, compared to our target. This means up to 2027 there is an increased likelihood of needing to impose restrictions on water use. We have set out our plan to address this gap. Do you have any comments or concerns about this level of service in our Central area and our plan to address it?	**Yes** 50% **No** 36.1% **Don't know or other comment** 0% **Blank or no comment** 13.9%	We will continue to assume that TUBs, NEUBs and drought permits, and drought orders are available as part of our strategy. Our revised dWRMP24 will include an additional mitigation plan to try and reduce our reliance on drought measures due to the potential delays in delivery of Havant Thicket Reservoir, the HWTWRP and Littlehampton water recycling option to 2030. We may have to extend the lower level of service up until this date. As part of the measures we are undertaking to improve resilience in the Central area, we have agreed to extend an existing bulk import from SES Water. The bulk supply was set up as a temporary measure up to the end of AMP7 (the 2020–25 period). The current supply is around 1.3Ml/d. We have now extended this up to 2031 to provide up to 4Ml/d. This option is part of our revised dWRMP24.
Question 3: We propose to stop using drought orders and permits that allow us to continue abstracting from the environment after 2040, unless we experience a severe drought. This means we will need to develop new water supplies to replace them. Do you agree with this approach and the timescale we are proposing to deliver it?	**Yes** 41.8% **No** 46.7% **Don't know or other comment** 4.1% **Blank or no comment** 7.4%	We still aim to build a resilient supply system by 2040 which will mean that we are able to maintain uninterrupted supply to our customers without relying on drought measures to increase supply unless we are faced with a drought of 1-in-500 year severity. There is no change to the target date for terminating the use of drought measures to increase the amount of water we take from the environment except in a severe drought. As part of our dWRMP24 development, we tested different timelines for achieving this level of resilience to see their impact on our preferred strategy. We will repeat this testing for our revised dWRMP24 to ensure that it continues to represent best value for our customers.

Table 5.1: Summary of responses to consultation questionnaire continued

Question	Results	Our response
Question 4: We have considered a range of future scenarios in our adaptive planning approach. Are there any other future scenarios that you think we should consider?	**Yes** 54.1% **No** 24.6% **Don't know or other comment** 4.9% **Blank or no comment** 16.4%	The scale of future challenges we are facing, and the adaptive planning approach we are adopting with the other companies in the South East, are considered to be an appropriate basis for our WRMP. Our WRMP24 will continue to be an adaptive plan, looking to maintain supplies across multiple supply-demand scenarios. Most respondents were supportive of our methodology and therefore there has been no fundamental change to our adaptive planning approach.
Question 5: Do you support our plan to at least halve leakage by 2050?	**Yes** 57.4% **No** 35.2% **Don't know or other comment** 4.1% **Blank or no comment** 3.3%	We have tested scenarios involving greater reduction in PCC and leakage than that required by guidance. We will finalise our demand reduction targets after careful consideration of the deliverability risk.
Question 6: Do you support us achieving our WRMP target of reducing average personal daily use from 131 litres per person per day to a) 109 litres by 2040 or b) should we retain our more ambitious target of 100 litres per person per day by 2040?	**109 l/h/d** 29.5% **100 l/h/d** 48.4% **No/neither** 6.6% **Comment** 9.8% **No Comment** 5.7%	A revised WRPG was issued after consultation on our Draft WRMP had closed. The revised WRPG requires water companies to aim for a dry year annual average PCC of 110l/h/d by 2050. In our case, this roughly equates to a PCC of 100l/h/d under normal year conditions. For the revised dWRMP24, we have revised our PCC reduction scenarios. We aim to achieve an ambtious dry year annual average PCC of 110l/h/d under dry year conditions by 2045. This means a normal year annual average PCC of 100l/h/d by 2045.
Question 7: Do you support additional proposed government interventions and the timing of their introduction?	**Yes** 41.8% **No** 34.4% **Don't know or other comment** 6.6% **Blank or no comment** 17.2	Our revised options for reducing PCC now include Government led interventions. We have adopted the scenarios developed by WRSE for the savings associated with these interventions.
Question 8: Our plan continues to rely upon temporary restrictions on water use to help lower demand during droughts to avoid further investment in new supplies. Do you agree with our approach to continue using temporary water restrictions during droughts?	**Yes** 68.8 **No** 21.3% **Don't know or other comment** 3.3% **Blank or no comment** 6.6%	We plan to continue to ask our customers to be extra careful with their water use during periods of drought and will introduce restrictions, but only where necessary. Given the majority of responses supported drought restrictions on water use, we have made no change to our strategy in response to feedback on this question.
Question 9: A new strategic reservoir is an integral part of the regional 'best value' plan for the South East. Do you have any comments on the size of the new reservoir?	**Yes** 41.8% **No** 44.3 **Don't know or other comment** 9.0% **Blank or no comment** 4.9%	We have not pre-determined the size of the reservoir for the revised dWRMP24. The selection of the reservoir, and its capacity, is based on the same objective criteria that are used for other options.

Table 5.1: Summary of responses to consultation questionnaire continued

Question	Results	Our response
Question 10: Does your position change if the size of that reservoir (which will supply the transfer into Hampshire) impacts on the size of water recycling plant needed at Havant Thicket? (See section seven in our technical document for more information.)	**Yes** 19.7% **No** 60.7% **Don't know or other comment** 4.9% **Blank or no comment** 14.7%	We have tested scenarios involving greater reduction in PCC and leakage than that required by guidance. We will finalise our demand reduction targets after careful consideration of the deliverability risk.
Question 11: Do you support our strategy to develop new pipelines that will transfer water into our supply area, that is made available through the development of new strategic water sources in other water companies' supply areas?	**Yes** 56.5% **No** 24.6% **Don't know or other comment** 6.6% **Blank or no comment** 12.3%	Given the generally supportive responses to the use of water transfers, we have not made any changes to option availability for the updated investment modelling to derive our revised dWRMP24 strategy.
Question 12: Do you agree that water recycling has a role to play in securing water supplies for the future?	**Yes** 54.9% **No** 32% **Don't know or other comment** 3.3% **Blank or no comment** 9.8%	We consider water recycling to play a key role in meeting our future supply challenges together with reducing leakage and consumption, improving the transfer of water between companies, and constructing new reservoirs. We also recognise the need to continue engaging with our customers and stakeholders as we develop water recycling schemes, so that all parties can have confidence that the water produced will be of the highest standard. Annex 6 to this SoR addresses many of the concerns around water recycling and in particular the HWTWRP.
Question 13: Our plan has shown we could need a desalination plant in Sussex by 2040 and that more could be needed in the future if we experience high population growth, and we need to reduce how much water we take from sensitive sources. Do you think we should use desalination to provide additional water supplies?	**Yes** 50.0% **No** 29.5% **Don't know or other comment** 7.4% **Blank or no comment** 13.1%	We are no longer planning to build a desalination plant on the Sussex Coast. We have not been able to secure a suitable location and this scheme has been removed from our revised dWRMP. We will need to continue considering desalination options alongside alternatives, especially under more challenging future supply-demand balance scenarios. Few other options other than water recycling and reservoirs can deliver comparable volumes of water. We recognise that there are significant cost and environmental challenges around desalination schemes, and we need to continue work to mitigate potential environmental impacts. Most of the desalination schemes selected in our dWRMP24 were selected in the mid-2040s and there is still opportunity to further refine these options and to consider modular or combined plants with neighbouring companies. Following publication of our dWRMP24, we have reassessed the costs and delivery timelines for desalination and recycling options to ensure that they represent our best current estimates.

Table 5.1: Summary of responses to consultation questionnaire continued

Question	Results	Our response
Question 14: Our plan has identified the need for a new reservoir to store water in West Sussex. Do you think we should investigate this further to establish whether it could provide a new source for the area?	**Yes** 71.3% **No** 9.8% **Don't know or other comment** 3.3% **Blank or no comment** 15.6%	We acknowledge the broad level of support for the River Adur Offline Reservoir option and have retained this option for the revised dWRMP24. Building a reservoir in Sussex remains part of our plans for securing resilient supplies for our customers. We will be carrying out further work to assess its feasibility.
Question 15: Do you think we should look at water recycling options where water is stored in reservoirs, lakes or other waterbodies as well as those where it is released back into nearby rivers and abstracted again?	**Yes** 54.9% **No** 30.3% **Don't know or other comment** 2.5% **Blank or no comment** 12.3%	Two of our WRMP19 recycling options, Littlehampton WTW in Sussex (via the Western Rother) and Sandown WTW on the Isle of Wight (via the Eastern Yar) use rivers as environmental buffers for the recycled water. All other water recycling options that included direct discharge of recycled water into a river for re-abstraction further downstream have been excluded from our revised dWRMP24. We made this decision primarily on environmental grounds. All the other the water recycling options in our revised dWRMP24 involve storing water in a lake or reservoir before it is re-treated and put into supply.
Question 16: Do you have any additional comments on any of the schemes we have proposed in our draft plan?	**Yes** 36.0% **No** 41.8% **Don't know or other comment** 6.6% **Blank or no comment** 15.6%	There are a wide range of comments made in response to this question, but they generally raise issues already covered under other questions, as opposed to raising comments on other options. We have not made any changes specifically in response to the feedback on Question 16.
Question 17: Do you agree that we should develop our pipeline network so we can move more water between our supply areas and share supplies with our neighbouring water companies?	**Yes** 64.7% **No** 19.7% **Don't know or other comment** 3.3% **Blank or no comment** 12.3%	We acknowledge the broad support for bulk transfers and the increased resilience these bring to our strategy. We will continue to consider them as a key part of our strategy. However, we have had to make a number of adjustments to our bulk transfer options for our revised dWRMP24. The reasons for these changes relate to ongoing discussions with donor companies (e.g. South East Water and SES water) and the need to develop additional resources that will enable the transfers.
Question 18: Do you support our ambition to proactively use catchment and nature-based solutions where we can, to help improve the quality of the water sources we rely upon so we can abstract water sustainably and deliver wider environmental benefits?	**Yes** 83.6% **No** 4.1% **Don't know or other comment** 2.5% **Blank or no comment** 9.8%	Catchment management schemes remain an integral part of our plan. The benefits from these activities are now included in our baseline supply forecast and our Environmental Destination. We have provided an enhanced narrative in our revised dWRMP which highlights the work we are doing through our Catchment First programme. This includes more details on the land and catchment management schemes we are already undertaking to protect raw water quality, and environmental investigations and mitigations to understand and reduce the impacts of our abstraction on rivers, wetlands and groundwater.

Table 5.1: Summary of responses to consultation questionnaire continued

Question	Results	Our response
Question 19: Do you think that others who benefit from a healthy water environment should contribute to the cost of delivering these solutions?	**Yes** 46.7% **No** 30.3% **Don't know or other comment** 14.8% **Blank or no comment** 8.2%	The majority of respondents commented on water company finance and other issues generally. Those who responded to the specific question supported exploration of this issue through catchment and other partnerships but have some reservations and comments. We have not made any changes to our strategy in response to this question. However, we have provided additional and improved narrative around our Catchment First programme in our revised dWRMP24.
Question 20: Do you or your organisation have similar work planned in our catchments? Do you have any views on how best we can co-ordinate this work so we achieve the most benefits?	**Yes** 11.5% **No** 60.7% **Don't know or other comment** 5.7% **Blank or no comment** 22.1%	We have made no changes to our plan as a result of direct feedback on this question because we are either already working with responders through our Catchment First programme or no specific additional schemes were presented. Where respondents have expressed an interest in working more closely with us, we have passed this feedback to our Catchment First team. As part of our integrated catchment strategy (ICS) we proactively engage with partners in catchments across our region and we welcome approaches to work collaboratively.
Question 21: Our dWRMP24 includes options that will reduce demand and a mix of different schemes to produce extra water supplies. Do you think our plan strikes the right balance between demand and supply solutions?	**Yes** 24.6% **No** 45.9% **Don't know or other comment** 9.8% **Blank or no comment** 19.7%	We are aiming to meet the PCC, non-household consumption and leakage reduction targets set by the Government as a minimum. We have considered scenarios involving greater reductions in PCC and leakage than that required by guidance. They however come with much greater delivery risk.

6. Analysis of written representations from non-statutory consultees

In addition to the questionnaire responses and the three responses from statutory consultees, we received a total of 466 other written responses, either by email or letter.

The vast majority of these responses were from our customers or members of the public. The majority of consultation representations relate to Havant Thicket Reservoir or the HWTWRP and share common themes.

To address concerns relating to Havant Thicket Reservoir and HWTWRP, we have produced Annex 6 jointly with Portsmouth Water which considers the consultation responses and also describes the work we have done, and continue to do, as part of the Water for Life Hampshire programme.

Feedback from organisations, not based on the questionnaire, is covered in Annex 5.2.

6.1 Summary of comments received

The main themes from the written representations can be summarised as follows:

- General support for our water efficiency strategy; most favour aiming for higher PCC and leakage reduction targets.
- Several responders have asked us to do more and set clearer commitments on non-household water consumption.
- Many organisations requested that we provide clearer explanations on how we will utilise drought permits and drought orders, particularly in Hampshire, and how we plan to reduce our reliance on them in the longer term. This was mainly in the context of a Section 20 Agreement we signed with the Environment Agency as part of our WRMP19.
- Many stakeholders, again primarily in Hampshire, want us to do more to bring forward our abstraction reductions and develop alternative supplies faster, so as to provide protection for the chalk streams.
- Many stakeholders raised concerns over the HWTWRP. The areas of concern include uncertainty around delivery dates, benefits and environmental impacts. There were also concerns that alternative options have not been adequately explored.
- Several stakeholders expressed a desire for us to do more to explore ASR schemes and new reservoirs.
- A number of respondents opposed desalination and water recycling options due to their environmental impact.
- There was some support amongst respondents to maintain a lower level of service for water restrictions in Hampshire on the basis that this will provide protection for chalk streams and reduce reliance on supply-side drought permits and drought orders.
- A number of respondents wanted us to focus more on catchment and nature-based solutions as alternatives to large infrastructure projects.
- Some respondents asked for more clarity on the decision-making process for developing a ‘best value’ plan and how natural and social capital considerations had contributed to plan development.

Please see Annex 5 for our responses to individual comments and Annex 6 for information specifically relating to Water for Life Hampshire (WfLH).

7. Analysis of statutory consultee responses

We received a total 591 responses to our consultation. We have summarised our responses to some of these in the preceding sections and have addressed the responses in the annexes to this document.

7.1 Environment Agency

As an Executive Non-Departmental Public Body responsible to the Secretary of State for Department of Environment, Food and Rural Affairs (Defra), the Environment Agency has a statutory duty to manage water resources in England, and provide information, advice and guidance to water companies on WRMPs. It is responsible for assessing whether we have complied with the Water Resources Management Plan Direction 2022 and WRPG. The Environment Agency deemed our dWRMP24 to be compliant with all Directions. However, in its role as a regulator, the Environment Agency has provided extensive comments and recommendations on the dWRMP24. These are summarised below.

- **Water neutrality challenge in Sussex:** The Environment Agency has asked us to provide greater detail around the measures we are taking to address the water neutrality challenge in the Sussex North WRZ). This includes the steps to reduce pressure on our Pulborough source and the timeline for returning Weir Wood Reservoir to service. It has also asked if there are any contingency options that can be brought forward to help address the water neutrality challenge.
- **Sensitivity testing:** The Environment Agency would like us to provide greater detail around delivery risks, delivery timelines and environmental impacts for a number of options. These include groundwater options, water recycling options and desalination schemes. It wants us to explore the risks associated with these schemes through sensitivity testing and to test if we can mitigate some of the near-term risks to supply by bringing some of these schemes forward.
- **Bulk import from Portsmouth Water to Pulborough:** The Environment Agency would like us to confirm that Portsmouth Water will be able to supply up to 15Ml/d to Pulborough as included in our dWRMP24.
- **Impacts of licence changes in the Western and Central areas:** The Environment Agency would like us to consider the potential risks of near-term changes to our abstraction licences on the River Itchen and Pulborough. It wants to see more detail around the Environmental Destination scenarios included in our dWRMP24. The Environment Agency further wants us to test if some of the reductions can be implemented earlier and provide justification where some of them have to be deferred to a later date.
- **Continued use of drought permits and drought orders until 2041:** We are aiming to achieve resilience to a 1-in-500 year drought by 2041. The Environment Agency wants us to provide a more detailed justification of using drought permits and drought orders up to 2041 for some resources, such as the River Itchen and Pulborough.
- **Outage and headroom assessments:** The Environment Agency would like further detail on our outage and headroom assessments. In areas where outage is currently high, it would like to see plans for reducing it in the future.
- **Decision-making process:** The Environment Agency has sought more detail on the decision-making process used to select the 'best value' plan and alternative strategies with an explanation of how factors such as environmental assessments, Biodiversity Net Gain (BNG) and natural capital informed plan development.
- **Levels of service:** The Environment Agency would like to see more detail on our level of service commitments and our justification around reduced level of service for low return period droughts under different planning scenarios. It wants us to better justify our glidepath to achieving 1-in-500 year drought resilience and to explore and justify the optimal timing for this milestone through sensitivity testing.
- **Demand management:** The Environment Agency noted that our demand management strategy did not achieve a dry year PCC of 110l/h/d by 2050. It also wanted clarity on the inclusion of Government-led initiatives in our PCC reduction strategy and reduction in non-household demand. It expects us to meet targets for reduction in household and non-household demand.

- **Supply forecast:** The Environment Agency asked for more detail on our DO assessment at the source level and also sought clarification on our climate change assessment methodology.
- **Lessons learned:** The Environment Agency would also like us to undertake a lessons-learned review of the 2022 drought. This was a common request to all water companies following the dry weather last year. We imposed TUBs in our Western area during the summer of 2022 and made an application for the River Test Drought Permit. The flows ultimately recovered before we required the use of this permit. We also undertook extensive water efficiency messaging, and enhanced leakage repairs as well as other drought actions in line with our Drought Plan. The Environment Agency is keen to understand if the learning from this event can better inform our WRMP24 and any other supply and demand options.

Summary of our response

We have accepted many of the Environment Agency's recommendations and suggested improvements and made necessary changes to our revised dWRMP24. This has included additional information and explanation of our approach to the development of the plan, the assumptions underlying our forecasts and modelling, and providing additional explanation of the development and testing of our preferred strategies.

Our detailed responses to the Environment Agency's comments are contained in Annex 5.2. The following is a brief summary of how we have addressed the main recommendations.

- **Water neutrality challenge in Sussex:** We have developed a contingency plan for Sussex North WRZ. Investigations on the potential environmental impacts of abstractions are being undertaken. An update will be provided in our revised dWRMP24 along with a timeline for bringing Weir Wood Reservoir back into service. Water neutrality in Sussex North WRZ is high on our agenda.
- **Sensitivity testing:** We have included a number of sensitivity tests as part of developing our revised dWRMP24. The tests are designed to assess the impacts of delivery times of key options on the preferred plan, different timelines for achieving 1-in-500 year drought resilience, water efficiency initiatives, exclusion of certain options, cessation of use of supply-side drought permits and drought orders etc. We discuss sensitivity tests and results more fully in our revised dWRMP24.
- **Bulk import from Portsmouth Water to Pulborough:** We have confirmed with Portsmouth Water that it can provide up to 15Ml/d at our Pulborough site.
- **Impacts of licence changes in the Western and Central areas:** The possible delay to delivery of Havant Thicket Reservoir, the HWTWRP and Littlehampton WTW recycling option means that we need to reconsider the potential timing of our proposed licence reductions for Western and Central areas. The delay to delivery of these schemes along with the original Environmental Destination profiles and licence reductions result in unsolvable supply deficits.
- **Continued use of drought permits and drought orders until 2041:** We, together with all other WRSE companies, are aiming to achieve resilience to a 1-in-500 year drought by 2041. However, the potential use of some of the drought permits and drought orders, especially in the Western and Central areas, will cease much earlier. The WRSE investment model selects drought permits and drought orders in preference to the more expensive options such as water recycling and desalination. In reality, we would fully utilise options before applying for drought permits and drought orders. For the dWRMP24, we adopted the output from WRSE investment model without any change. In the revised dWRMP24, we will adjust the use of drought permits and drought orders in line with the utilisation of other options to better reflect the use of the drought permits and drought orders.
- **Outage and headroom assessments:** Outage remains a key focus and to maintain this focus we have an Executive-led steering group which looks at supply-demand resilience across all our WRZ's every month. This group is supported by an investment programme to deliver our outage recovery plan. Due to the significant size of our supply works investment programme, both water quality driven and through our Hazard Review process, we have in place a proactive approach to manage

capital maintenance planned outages. Both short- and medium-term outage to complete works is managed through an internal group that meets weekly. As well as calculating outage in a robust way, we have taken actions such as purchasing critical spares (e.g. pumps) to reduce new outage. We expect this to bring outage down. Our headroom assessment methodology is discussed in our revised dWRMP24.

- **Decision-making process:** We have worked with WRSE to provide a more detailed narrative around option selection by the WRSE investment model and the way its outputs are influenced by 'best value' metrics. We have included this in our revised dWRMP24.
- **Levels of service:** We have updated our baseline scenario to 1-in-500 year levels of service and will adjust levels of service through options in our planning tables. We have undertaken further sensitivity assessments of the timing to achieve 1-in-500 year resilience and explained the choice in 'best value' terms in our revised dWRMP24.
- **Demand management:** We have revised our demand management strategy. As a minimum, we are aiming to reduce dry year annual average PCC to 110l/h/d by 2045, leakage by 50% by 2050 and non-household demand by 9% by 2037–38.
- **Supply forecast:** Our revised dWRMP24 includes more detail on source level DO to allow easier comparison to our WRMP19 assessments. We have also undertaken further work on our climate change assessments to clarify some of the Environment Agency's questions.
- **Lessons learned:** We have undertaken a lessons-learned review of the 2022 drought and have included this as Annex 25 to our revised dWRMP24. We took a number of steps to manage the 2022 drought including enhanced water efficiency and leakage reduction activity, implementation of TUBs in our Western area and application for the Test Drought Permit. In particular, this review highlighted improvements needed to our Drought Permit HRAs which we have reflected in our environmental assessments for the revised dWRMP24 and for our latest drought plan.

7.2 Natural England

As an Executive Non-Departmental Public Body responsible to the Secretary of State for Defra, Natural England has a statutory duty to help conserve, enhance and manage the natural environment. It is responsible for enforcing laws that protect wildlife and the natural environment. It advises the government on planning policy and development proposals that affect the natural environment and works closely with the water sector to ensure that objectives for European protected sites, Ramsar sites (internationally important wetland sites) and Sites of Special Scientific Interest (SSSI) are delivered by landowners and public bodies.

In its feedback on our dWRMP24, Natural England has raised concerns about potential environmental impacts of our plan.

In Natural England's view:

- Our dWRMP24 did not adequately assess the potential impacts of its proposals on protected sites, such as Special Areas of Conservation (SACs) and SSSIs; in particular the River Itchen SAC and the Arun Valley SAC.
- Environmental assessments done for our dWRMP24 did not include all of the options that are necessary to address current and/or potential water deficits; in particular the existing supply options (abstractions) which are currently undergoing investigations and may confirm adverse effects on Habitats sites.
- Our WRMP24 should include a more detailed assessment of the potential impacts of its proposals, and that it should consider the cumulative impacts of all of the options that are being considered.

Natural England commended us for the catchment measures we are implementing, such as those through the Catchment First programme. It also strongly encouraged us to retain and continue to work towards the PCC target of 100l/h/d (under normal year annual average conditions) considering it a flagship initiative of Southern Water's WRMP19 that shows great environmental ambition.

Summary of our response

Our responses to Natural England's feedback are included in Annex 5.2. A summary is provided below.

We have met with Natural England to discuss and clarify the submission comments and have sought to address its concerns about potential impacts of our proposed schemes on designated sites and habitats.

In response to the feedback from Natural England, we have:

- Reviewed the design of key options to examine the opportunities for further refinement and considered the effects avoidance and mitigation. This has led to changes to options (in terms of proposed pipeline siting, routes and outfalls).
- Revised the revised dWRMP Annex 12 (Options Appraisal) to reflect the updated information on the individual schemes and the process of option appraisal which includes details of how we have used the individual option assessments as part of the detailed option screening and selection process.
- Revised the revised dWRMP Annex 9 (Protecting and Enhancing the Environment) to include additional information from existing or planned investigations from the WINEP to address the potential effects of existing licensed abstractions on designated sites (notably the River Itchen SAC and the Arun Valley SAC) and have ensured that this is appropriately referenced in the updated SEA, HRA and WFD assessments (as necessary).
- Revised the SEA, HRA and Water Framework Directive (WFD) assessments to reflect our revised dWRMP, and the revised preferred options suite, taking into account the comments received. For example:
  - We have amended the SEA of the revised dWRMP24 to ensure the consistent treatment of designated conservation and landscape sites and features within the SEA of the revised preferred options.
  - Our assessments of the revised dWRMP now include further detail on in-combination and cumulative effects and we have given due regard to the consideration of effects with other water company proposals (where published) and WRSE Regional Plan expectations.

7.3 Ofwat

Ofwat is a non-ministerial government department established in 1989 when the water and sewerage industry in England and Wales was privatised. Ofwat acts as the economic regulator of the water sector under sections 2 and 3 of the Water Industry Act 1991.

Ofwat is supportive of our plans to reduce leakage and meet the PCC targets but believes that we need to clearly demonstrate how we plan to achieve these targets through a combination of reductions in the key demand components: leakage, household consumption and non-household consumption. In particular Ofwat felt that we need to further justify how the demand management approach presented in our dWRMP24 represents a coherent and optimised strategy and its interaction with the supply-side programme.

Ofwat has noted that our supply-demand balance starting point for the dWRMP24 is significantly lower than our forecast for the same point in the final WRMP19 and is concerned that this may be due to a number of factors, including non-delivery or underperformance of PR19 funded schemes, reducing works outputs, and an increased outage allowance. Ofwat would like us to fully quantify and justify the reasoning for changes between WRMP19 and the starting point for WRMP24 at a supply-demand balance component level with sufficient and convincing evidence. It would also like us to provide granular details of the benefits of funded schemes and their impact on baseline supply-demand balance.

Other key points that Ofwat has made are as follows:

- It would like us to address the points from its pre-consultation feedback in 2022 that in its view have not been appropriately or fully addressed in the dWRMP24.
- It would like to see more detail on how we have tested the timing of achieving 1-in-500 year resilience in terms of both the impacts on the investment programme and 'best value' metrics and how this has informed the choice of date in our final WRMP24.
- It seeks more clarity on how we have assessed levels of service, particularly in WRZs where we are unable to meet our target levels of service. Ofwat would like us to describe the consequences to customers and the environment more clearly in the final WRMP.

- It noted that our outage allowance has increased significantly between WRMP19 and WRMP24 and is high compared to most other water companies. It would like us to present sufficient and convincing evidence that the outage allowance is appropriate in both the short and long term and is not driving unnecessary and high regret investment.
- It would also like us to provide further detail on how our DO has been derived at a source level.
- In Ofwat's view, we have not considered a broad enough range of feasible supply-side options given the supply deficits we face and questioned if this means that the decision-making process has been constrained by the lack of sufficient options to provide confidence that the proposed programme delivers best value in the long term. It would like us to better explore and justify our screening criteria and why relatively few third party options have been considered.
- Ofwat would also like to see further in combination DO assessments and sensitivity testing for SROs.
- It has questioned the robustness and reliability of option costs and the benefits of some options, considered to be higher compared to other companies, and consequently the potential efficiency of the programme and the impact on customer bills. It would like to see convincing evidence to justify the selection of these high unit cost schemes in our strategy.
- Ofwat would also like to see better alignment between our adaptive pathways and its common reference scenarios so to provide greater understanding of the drivers of investment, the sensitivity of the plan to future scenarios and confidence in the investments being proposed, particularly for 'no regret' options.

Summary of our response

Our responses to Ofwat's feedback are included in Annex 5.2. A summary is provided below:

Following the consultation, we met with Ofwat to discuss and clarify its comments and our approach to addressing them.

- **Baseline position:** We have provided a more detailed breakdown of the relative supply-demand balance position between WRMP19 final outcome and WRMP24 baseline in our revised dWRMP24. The principal difference in 2025–26 is that benefits of supply-side drought permits and drought orders have been excluded from our baseline supply forecast. The increase in household demand due to COVID-19 has also been a factor.
- **Points from Ofwat's pre-consultation feedback:** Ofwat referred to several points that it had made in its pre-consultation feedback that it did not think we had addressed. We address these in detail in Annex 5.2. However, specifically on the point about re-appraising schemes funded at WRMP19, we can confirm that they have not been re-appraised but they are pre-selected in the investment model i.e. they are available as per their WRMP19 delivery dates.
- **Timing of 1-in-500 year drought resilience:** We have worked with WRSE to undertake further sensitivity testing of the timing to achieve resilience to a 1-in-500 year drought and cease reliance on supply-side drought permits and drought orders. The results of these sensitivity tests are included in our revised dWRMP24.
- **Reduced levels of service:** We have provided narrative on this in Annex 5.2 and have also included an expanded narrative in our revised dWRMP24.
- **Outage allowance:** In the meeting with Ofwat, we described some of the work we are doing to make our outage assessment more robust in response to the Environment Agency point on outage (and headroom) above. Regarding our higher outage compared to other UK water companies, whilst we do not have sight of other companies' detailed methodologies, it is important that sector-wide comparisons are made on a directly comparable basis. For example, we do not look at outage at a zonal level like some companies, but rather we assess it at the site level. Similarly, we do not exempt outage even if supplies are maintained.

We revisited our outage methodology, but this resulted in outage increasing significantly in some WRZs (by 100% or more). As a result, we reverted to the previous values. We have additional investment in place in 2020–25 to reduce outage to target WRMP levels and we remain on plan to deliver this.

- **Deployable Output:** We have provided more detail on our source level DO assessments in our revised dWRMP24 to allow easier comparison to our WRMP19 assessments.
- **Options appraisal:** We have discussed the options appraisal process in more detail in our revised dWRMP24.
- **DO assessment of SROs:** We have updated and enhanced our system simulation model for the HWTWRP. We have used these models to update our DO assessments and conjunctive use benefits associated with HWTWRP for the revised dWRMP24. We have also tested the impact of timing of key SROs on our preferred plan through sensitivity testing. This is further discussed in our revised dWRMP24.
- **Cost estimates:** We have revised costs of our demand-side measures and updated the costs of a number of our major supply-side options as discussed in Section 4.3.
- **Long Term Delivery Strategies (LTDS):** Annex 28 of the revised dWRMP24 describes how we, together with WRSE, have used adaptive pathways. WRSE has now included specific sensitivity scenarios to cover the LTDS.

8. Feedback from customer research and workshops

Our WRMP24 customer engagement has far exceeded the statutory requirements. Our consultation was accessible to customers through our website.

However, we wanted to make sure that we went beyond this and made the plan as inclusive as possible to represent the breadth and depth of the customers across our region.

As part of our ongoing insight work, we have gone out and spoken to a range of customers. We specifically targeted certain audiences to make sure their views were incorporated. These include vulnerable, future and business customers (both informed and uninformed). We also undertook a quantitative survey with over 100 customers, which was a complete replication of the consultation but with customers who may not have had a chance to express their opinion. We made sure we reached out to the local communities where the schemes are being proposed as part of our plan to get more local feedback on the challenges. This robust approach has ensured we have feedback from a representative sample across our region. We summarise the feedback we received below, and the full customer insight report is included in Annex 7.1 of this SoR.

- Customers want Southern Water's WRMP24 to reflect the 'best value' Regional Plan (93%). They understand and agree that we should align with our neighbouring water companies. However, some want to see more details on the 'best value' decision-making process and to know that we have a considered rationale behind our decisions.
- Customers expect Southern Water to prioritise investment in existing infrastructure before developing new supply solutions.
- Customers have high expectations of WRMP24, which the plan largely meets; however, they want to see more ambition on leakage targets. Any reduction is supported, but any leakage will always be wasteful.
- Trust in the sector and Southern Water's reputation has damaged confidence. They want to see more immediate action.
- Customers believe the challenge has been made harder by perceptions of insufficient progress and investment since previous plans.
- Customers are reassured by the extent of the planning, in particular the adaptive elements. They want to see and are supportive of the plans that are flexible and can be adapted if future scenarios change.
- Reducing average PCC to 100l/h/d (normal year annual average conditions) is seen as challenging. Customers are sceptical whether enough mass behaviour change can be achieved.
- The Government intervention is welcome, though timescales feel too long. This is seen as especially an issue for minimum standards for devices (2045) and building regulations (2060).
- They see a role for water recycling and welcome consideration of new reservoirs, both of which feel environmentally positive. 100% of the 'average person in the street' supported the recycling schemes, and future customers particularly favour this as a sustainable future source. Desalination is more contentious, although it is supported. Transfers are not seen as a long-term solution, more as an emergency measure. Supply-side solutions need to be assessed by how efficient, costly, and environmentally friendly they are.
- Customers support the use of catchment and nature-based solutions; however, they need greater explanation and to understand the principles and ambition behind it.
- Education is considered key for supporting WRMP24, customers are particularly hopeful education will heavily reduce demand.
- Any plans need to be affordable, and customers want to see improvements that are not solely funded by increases in their bills.

"After reading all this. I do feel reassured that Southern Water are doing all they can for the future. The measures they are putting into place are correct. Planning for population growth, climate change and environmental factors are essential".

Household customer

Table 7.1: Summary of our consultation activities for the WRMP

Project	Project overview	Approach and sample	Output
Water Futures 2050	Online panel of future customers who come together every few months to tap in and review elements of our long-term strategy – focusing on that future view.	30-minute launch event with panellist, followed by a one week online community with 23 members of the youth panel understanding views on the regional plan. A two week online community with 34 members of the panel – building knowledge and understanding views on WRMP24 and gathering responses to the consultation questions followed by 60-minute online sessions with highly engaged members of the panel.	Southern Water WRMP Future and Business Consultation Full report
Water Futures 2030	Online panel of household customers which runs alongside our PR24 programme and allows for regular engagement.	Exploration of WRMP24 consultation material by over 40 panellists as part of our online community reflecting our household customer views.	Water Futures 2030 January/February Summary
Water Future Business	We used an existing network of businesses across our region and that of Portsmouth Water to engage these customers on the proposed drought plan.	30-minute launch events with members of the Business Panel – gathering spontaneous thoughts and questions. A two week online community with 34 members of the panel followed by a 60-minute online session with our non-household customer panel committee members.	Southern Water WRMP Future and Business Consultation Full report
Southern Water WRMP Consultation Quant	Recruitment of 102 customers to read through a replication of the consultation and complete the questionnaire as presented on our website.	102 customers from across the Southern Water region, a mix of gender, age, social grade, satisfaction levels and attitudes towards nationalisation.	Turquoise Southern Water WRMP Consultation quant report
Water Futures Vulnerable	Members of the vulnerable customer panel recruited by Turquoise were asked to review the consultation material either online or via hard copy before taking part in a video call where the consultation questions were discussed.	Fourteen members of the vulnerable customer panel were able to engage with this piece of research. They were a mix of males and females, varying ages and all with different reasons for being on the priority services register.	Southern Water Vulnerable Customer Research WRMP full report final
WRMP Relish Research	Regional spread of customers which included some South East Water, Southern Water and Portsmouth Water customers as well as vulnerable customers and a number were recruited from areas relevant to WRMP24.	180 minutes of participant time and completion of 11 tasks relating to the consultation questions. These customers are a spread from across the region to reflect the diverse region we operate in.	Full Household WRMP Report Dec 2022
Community Engagement WRMP	Four areas visited where WRMP24 solutions are proposed across ten days to understand customer reaction to the plans in their areas.	Over 1200 customers engaged across the four areas we visited including Littlehampton, Shoreham, Aylesford and Henfield. Lots of awareness of water scarcity issues and feedback on the plans set out in WRMP24.	Zest WRMP Community Engagement 2022

Summary of our response

Our response to the key themes raised through our customer research and workshops and the representations received, is as follows:

- We have continued to work with our neighbouring companies through WRSE to develop a 'best value' Regional Plan.
- We have provided more information on the decision-making process and how we have assessed our revised dWRMP24 strategy to represent 'best value' outcomes for our customers and the region. This includes clearer assessment of the relevant 'best value' metrics.
- We aim to reduce leakage by 50% by 2050.
- Our plan includes a number of options to further enhance output from existing sources. However, the opportunities for this are presently limited by the potential environmental impacts of existing abstraction and will need to be addressed through our environmental ambition.
- We are sorry that we have not always met expectations in recent years, particularly with regard to wastewater. We are now in a position to deliver significant change for our customers and the environment. We are investing £2 billion (ca. £1,000 per household) over the 2020–25 period over and above our regulatory allowance, to significantly improve our performance.
- Our plan will continue to be an adaptive plan to ensure we sufficiently plan for the range of possible outcomes for an uncertain future.
- We have also revised the options for reducing demand and the associated costs. We aim to reduce dry year annual average PCC to 110l/h/d by 2045, five years earlier than required. By 2050, we will further reduce it to 106l/h/d. We also plan to reduce non-household consumption by 9% by 2037–38.
- Our revised options for reducing consumption now include Government-led interventions. We have adopted the scenarios developed by WRSE for the savings associated with these interventions.
- We consider water recycling to play a key role in meeting our future supply challenges, along with reducing leakage and consumption, improving the transfer of water between companies, and constructing new reservoirs. We also recognise the need to continue engaging with our customers and stakeholders as we develop recycling schemes, so that all parties can have confidence that the water we produce is of the highest standard.
- We recognise that there are significant cost and environmental challenges around desalination schemes and that we need to continue work to mitigate potential environmental impacts. We are likely to continue to need to consider desalination options alongside alternatives, especially under more challenging future pathways as few other options other than water recycling can deliver comparable volumes of water. We have reassessed the costs and delivery timelines for the desalination options in our plan to ensure that they represent our best current estimates.
- Our revised dWRMP24 includes an expanded Annex 9 on our Environmental Ambition which provides clearer explanation of how we intend to use catchment and nature-based solutions. It will also highlight the work we are already undertaking in this area through our Catchment First programme.
- We are committed to working closely with customer groups and individual customers to reduce demand. We already deliver community education through our dedicated 'New Wave' school education programme. Our community ambassadors also meet thousands of customers across our region to engage, discuss and listen to our communities about our plans, responsible water habits, billing and tariffs.
- We recognise that some stakeholders felt that there was insufficient clarity in our dWRMP on certain topics. As a result, we published the following two documents:

  southernwater.co.uk/media/8026/sws_western_area_sdb.xlsx

  southernwater.co.uk/media/8027/dwrmp24_western_area_supply_demand_balance-1.pdf

  In addition, we are also intending to undertake further targeted consultation and we welcome comments on these documents as well as on our rdWRMP24 and the associated annexes.

9. Next steps

We're grateful for the feedback we've received from customers, stakeholders and regulators. This SoR provides a summary of the insight and our responses.

The document provides information to enable the reader to determine the broad nature of the changes we have made to our dWRMP, as a result of the representations received during public consultation. The changes to our dWRMP24 are described in full in our revised dWRMP24.

9.1 Mitigation Plan

We are developing an annex to our revised dWRMP24 that will detail the supplemental short/medium term measures we are taking to mitigate any potential adverse impacts of the potential delays to Havant Thicket Reservoir, the HWTWRP and the Littlehampton WTW recycling option, and where possible, accelerate the delivery of, these, and alternative schemes.

Our mitigation measures to address potential adverse impacts includes measures to reduce the supply-demand deficit and reduce the frequency and duration of implementing supply-side drought permits and drought orders.

The HRA associated with our revised draft plan also contains mitigation measures to reduce the environmental impact of drought permits and drought orders, if they are needed. These measures will be informed by the environmental assessment work we have carried out for our WRMP24. These will build upon the package of mitigation measures previously agreed as part of the Section 20 Agreement between the Environment Agency and Southern Water.

9.2 Further consultation

In our view, the nature and scale of some of the changes to the dWRMP24 mean it would be appropriate to further consult on some aspects of the plan. Our rdWRMP24 will be accompanied by a mitigation plan that outlines our proposed measures to mitigate the impacts of the key changes to our dWRMP24. We're working closely with the regulators on the potential consequences of these changes and the impact on timelines for the next stages of our plan. However, we would expect the further consultation on our rdWRMP24 to begin in late 2023 or early 2024, depending on regulatory approval.

As part of our further targeted consultations, we intend to consult on the following areas including but not limited to:

1 Our adaptive planning approach and the range of viable options

2 Our Mitigation Plan to reduce reliance on drought permits and drought orders, while we deliver our long-term solution

3 The delay in implementing our environmental destination scenarios in order to reduce our reliance on drought permits and drought orders, while we deliver our long term solution

4 Our plan to achieve per capita consumption of 110 litres per head per day in a dry year, five years earlier than the government requirement of 2050

WATER forLIFE®

from Southern Water®

6759_0823