

AffinityWater

AFW34 - Delivering the Water Industry Strategic Environmental Requirements (WISER)



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1 Introduction

We understand that we play a key role in the long-term sustainability of the natural environment, from providing clean water for customers to protecting sensitive ecosystems. Our purpose is to provide high quality drinking water for our customers and take care of the environment for our communities now and in the future. Our ability to achieve our purpose is dependent on having a healthy and resilient environment to abstract water from.

Over the last 35 years our planned investments have helped leave more water in the environment for sensitive chalk streams and helped enhance and restore protected sites for nature conservation, improving ecological resilience. We have also been working with landowners and catchment partners to improve raw water quality and improve the health of our catchments.

This report sets out how this understanding and the Water Industry Strategic Environmental Requirements (WISER) published by Defra in May 2022 have informed and shaped our Business Plan for AMP8. This report is the second price review period where we have specifically reported on WISER.

The WISER expectations are organised around three key objectives that form the Environment Agency (EA) and Natural England (NE) vision for the water industry. We have structured this report to reflect these objectives:

- **A thriving natural environment** – increased environmental value, healthy rivers, lakes, wetlands, coastal waters, and a sustainably functioning ecosystem
- **Performance and compliance** – day to day service excellence for customers and acts in the long-term interests of society and the environment
- **Resilience for the environment and customers** – resilient, safe, and affordable water and wastewater services today and for future generations.

WISER also describes the statutory and non-statutory expectations for PR24 and expected practice. This has been reflected in this report with summary tables at the start of each section. Cost information has also been included where relevant. These are presented in 2022/23 price base and are subject to Ofwat's final determination.

Requirements associated with our Water Resources Management Plan (WRMP), Drought Management Plan (DMP) and PR24 business plan (Business Plan) are signposted in this report, along with the associated business plan sections and where relevant associated appendices. The activities we are undertaking under our Water Industry National Environment Programme (WINEP) are also summarised.

A number of the requirements and expectations set out in WISER specifically relate to wastewater undertakers. As a water only company, we have therefore excluded these from this report.

1.1 Definition of expectations

The expectations of water companies for PR24 have been categorised into statutory, statutory plus and non-statutory requirements. The definitions have been provided below for ease of reference:

Statutory obligations (S)

Statutory obligations arise from legislative requirements and the need to comply with obligations imposed directly by statute or by permits, licences and authorisations granted by the Secretary of State, the Environment Agency, or any other body of competent jurisdiction. Other statutory obligations include ministerial directions and meeting specific planning requirements. While it is important to understand the costs and benefits of measures needed, these statutory obligations must still be achieved.

Statutory plus obligations (S+)

Statutory plus obligations are categorised as legal requirements where economic evidence forms part of the decision-making process, that is the balance of costs and benefits, and affordability considerations. In cases where action is considered disproportionately expensive to meet statutory plus obligations, alternative objectives, or timescales to meet them may be set.

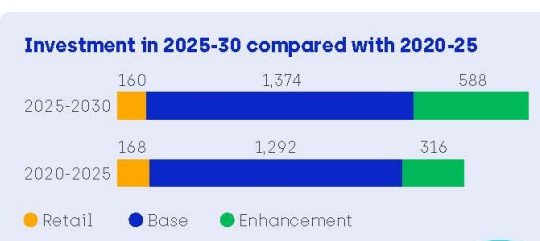
Non-statutory requirements (NS)

Some expectations are not driven by statutory requirements. There may be a public need which may not be underpinned by a specific Act or piece of legislation. Water companies should demonstrate that there is an environmental requirement and customer support and that such investments provide best value for customers over the long term. Effective customer engagement should reveal whether customers (and which types of customers) want to see further environmental improvements, and over what timescale.

1.2 Introducing Our Business Plan for 2025-30

Our PR24 Business Plan is built upon the long-term ambitions set out in our Strategic Direction Statement and are focussed on four key areas: the environment, resilience, customers, and communities. A high-level summary of our Business Plan is provided in Figure 1.

We will invest a total of £2.12bn between 2025 and 2030. This is an 19% increase from 2020 to 2025, reflecting our increased ambition for reducing unsustainable abstraction.



Environment

Our ambition is to leave the environment in a sustainable and measurably improved state.

We will:

- Deliver an investment programme that reduces the water taken from **chalk aquifers** by 35 million litres per day in the next five years
- Deliver a programme of **river restoration and catchment management** to improve the wider river environment
- **Reduce operational carbon** emissions to zero by 2030, helping to reduce the UK water sector's 2.4m tonnes of carbon per year of emissions
- Deliver £78m of **leakage reduction investment** totalling 22.4 million litres per day or 30% by 2029/2030 on our path to a 50% reduction by 2050 (against a baseline from 2020)

Customers

Our ambition is to deliver what our customers need, ensuring affordability for all.

We will:

- Deliver an £76m package of **water quality treatment upgrades to improve water quality further**
- Provide a broad **package of support for customers** struggling to pay
- Water assistance voucher scheme and **debt support scheme**
- Introduce tariff trials to support affordability
- **Introduce payment breaks** & payment plans
- **Free repairs** of customer supply pipes for vulnerable customers
- Industry leading home water efficiency checks to help **reduce water and energy usage**

Resilience

Our ambition is to be prepared for change, and resilient to shocks and stresses.

We will:

- **Reduce total water demand** by 50 million litres a day in 2030 from a 2025 baseline. This equates to a 4.5% reduction in total demand
- Install **400,000 smart meters** (one third of all customers) to help customers control their usage
- Protect key assets from **single point failures**
- **Provide additional flood alleviation** protecting sites from climate change
- Increase **network calming** - an important piece of work that not only reduces leakage but reduces the cost of investing in replacement pipes

Communities

Our ambition is to work with our communities to create value for the local economy and society.

We will:

- **Enhance** our programme of collaborative working with community and local government and charitable organisations
- **Promote** staff volunteer days to help local communities and charities
- **Improve our visitors' experience** by providing public access sites including catering and water sports by third parties and partners
- **Increase river enhancement opportunities** to support biodiversity and flood management within the Colne Valley

Figure 1. Key outcomes of our Business Plan

Our Business Plan includes a number of Performance Commitments (PCs) and price control deliverables (PCDs) to measure our progress and performance through AMP8. We have selected investments for inclusion in our Business Plan that will enable us to deliver on our performance commitments and our statutory obligations. Each investment across both base and enhancement has been developed using a Green Book based methodology, with our optioneering identifying and assessing a range of feasible investment options to address each need. We have then used our Copperleaf portfolio optimisation tool to inform our decisions on which combination of options deliver the best value and enable us to meet our ambitions and the expectations of us over the short and longer term. Chapter 6.3 of our Business Plan sets out our investment planning approach.

Find out more about our performance commitments in Business Plan Chapter 7.1.1 and Appendix AFW17. Our price control deliverables are set out in Chapter 6.5.6 and Appendix AFW19 of our Business Plan.

Sections 2 to 4 of this report explain how the WISER are embedded within our Business Plan. We have included summary tables where appropriate to clearly identify the ambition, PCs or PCD and investments relevant to delivery of the WISER objectives. We have also referenced the relevant business case(s) within our Enhancement Programme Cost Appendix.

1.3 Our Environment

We are the largest water-only supply company in the UK, owning and managing the water assets and network in an area of approximately 4,500km² across three supply regions in the South East of England. Our supply area encompasses three geographically separate areas known as our Central, Southeast, and East regions (Figure 2). We take approximately 65% of our water from groundwater sources with the remainder from surface water sources; principally from the River Thames, an import from Grafham Water Reservoir and in our East region from Ardleigh Reservoir which we jointly own with Anglian Water.

Our supply area is also home to around 10% of England's chalk streams. These chalk streams form part of a rich landscape consisting of a mosaic of habitats with which we interface daily through our operational activities. Our rivers provide their own habitat but also important connectivity for wildlife. They also provide health and wellbeing benefits to our customers. We own land and operate within four Areas of Outstanding Natural Beauty (AONB); Chiltern Hills, Surrey Hills, Kent Downs, and Dedham Vale and recognise our role as a steward of the environment; creating healthy catchments for our communities.

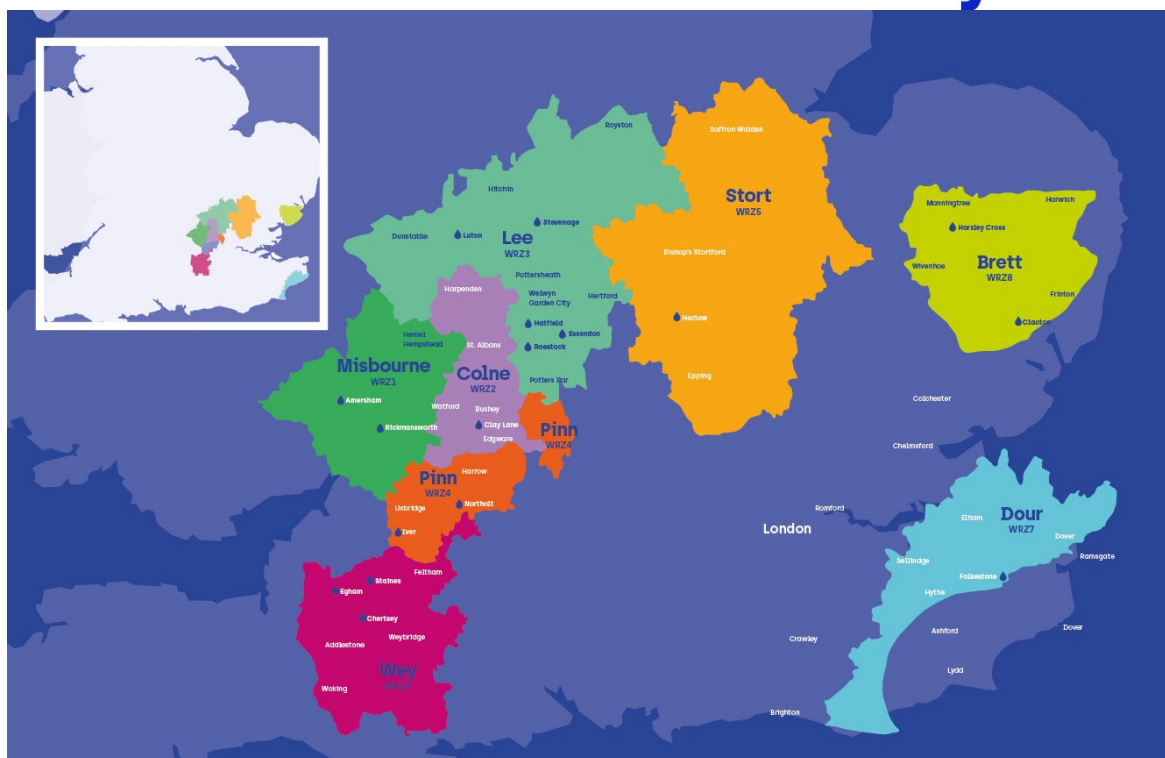


Figure 2. Affinity Water supply area

We face increasing pressures on our water resources and catchments that support these from climate change, population growth, ageing infrastructure, and the need to protect the environment. Protecting these valuable catchments for future generations is core to our purpose; **to provide high quality drinking water and to take care of the environment now and for future generations.** Our Strategic Direction Statement sets out our long-term ambition to **leave the environment in a sustainable and measurably improved state.**

We have a high level of environmental ambition which touches all aspects of our Business Plan. Protecting the globally rare chalk streams in our area is one example of how we are able to deliver greater environmental and social value to our communities, by working in partnership with local stakeholders, and creating new amenities alongside river channels, to allow greater access to our natural environment.

We consider the wider value we can offer in Chapter 3.4 of our Business Plan.

Our revised draft Water Resources Management Plan (rdWRMP) outlines our plans to provide a reliable, resilient, efficient, and affordable water supply to our customers between 2025 and 2075 and sets out how we intend to maintain the balance between water supply and demand. The draft WRMP24 (dWRMP24) was published for consultation in November 2022. The rdWRMP24 reflects the changes made in light

of that consultation and further updates based on new information and updated model outputs.

The significant and complex challenges Affinity Water faces in the southeast of England affect all six water companies in this region of the UK. These water companies are grouped together as Water Resources South East (WRSE). Our Brett community sits outside the WRSE region and instead forms part of Water Resources East (WRE) which is one of the other regional groups formed across the UK.

In line with the Water Resources Planning Guidance, we have ensured our rdWRMP24 continues to reflect the WRSE and WRE best value regional plans and focuses on what those regional plans indicate are the most appropriate measures for Affinity Water to take.

Find out more about our long-term plan for bringing water into the communities we serve in our revised draft Water Resources Management Plan.

1.4 Natural Capital Approach

We developed a Service Measure Framework which quantifies over 85 differing categories of value we can bring to customers across a six capitals approach, including Natural Capital. For our PR24 WINEP and dWRMP environmental assessment of options we have considered Natural Capital. As part of the strategic regional planning and decision making for the WRSE region a Natural Capital assessment followed a three-stage process, with the baseline developed using open-source data as described in NECR2853 to generate a Natural Capital account of the stocks within the Affinity Water region. Please refer to section 8.27 of the rdWRMP and section 6.5.3 'Selecting the Best Options' of our Business Plan.

For WINEP each feasible option was taken through a Natural Capital benefits assessment process following the WINEP methodology. A similar approach will be implemented for each project within the programmes both as a baseline assessment and post-project benefits evaluation. In the development of our WINEP we considered other environmental benefits that are used in the NCRAT approach. NCRAT is the Natural Capital Register and Account Tool developed by the Environment Agency (EA). The tool assesses several ecosystem services and benefits including water supply, agriculture, renewable energy, and hazard regulation. We also used the NCRAT spreadsheet assessment to check and verify our WINEP benefit valuations where appropriate e.g., hazard flooding reduction by woodlands.

We have undertaken a Natural Capital Assessment of five river improvement projects completed in AMP6 and AMP7 in the River Beane catchment in Hertfordshire to quantify and where possible and appropriate, value ecosystem services benefits of these projects. This evaluation was used to support the WINEP options development and assessment for our PR24 submission. A Natural Capital pilot assessment was also undertaken to evaluate the wider benefits of one of our AMP7 cover crops schemes.

WISER

AffinityWater

This was also used to help inform our WINEP catchment and nature-based solutions (C&NbS) scheme development and benefit assessment.

2 A thriving natural environment

We have a high level of environmental ambition which touches on all aspects of our Business Plan, building on our knowledge of our catchments to deliver for the environment, customers, and communities. We recognise our role in contributing towards the government's ambition set out in the 25 Year Environment Plan and our catchment-based approach to deliver our WINEP aligns with the ambitions of the Government's Plan for Water.

The following sections summarise the WISER expectations, statutory, statutory-plus, and non-statutory requirements to contribute towards achieving a thriving natural environment.

2.1 Bathing Waters

The Bathing Waters Regulation 2013 sets microbiological standards for designated bathing waters to protect bathers' health. We understand that we have a role in wider catchment health but as a water only company, our impact on bathing waters is minimal. All bathing waters in the Affinity Water supply area achieved a sufficient or above classification according to Defra's Bathing Water classifications 2022 report. We own a number of freshwater lakes but none of these are listed as bathing waters under the Bathing Water Regulations.

2.2 Chemicals

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and associated legislation set out environmental quality standards and permits to discharge issued under the Environmental Permitting Regulations 2016. As a water only company, we do not consider that the five requirements listed under this category are applicable.

We do however hold a number of discharge permits and one environmental waste permit associated with our water treatment works and this is covered under Section 3.2. Through our proposed AMP8 work to develop the Strategic Resource Options (SRO) set out in our rdWRMP we will work with the EA to ensure any new permit required for the implementation of these new resource schemes does not impact water quality or result in a deterioration in status. This is addressed in the Strategic Environmental Assessment (SEA) Environment Report which is an appendix to the rdWRMP.

2.3 Drinking Waters

We abstract circa 35% of our total potable water supply from four intakes on the River Thames in West London. These fall within the Lower Thames and Wey Drinking Water Protected Areas (DrWPAs) and associated surface water safeguard zones (SGZ), that

are impacted by diffuse and point source pollution from agriculture and amenity land use. In addition, we have a number of groundwater sources and associated safeguard zones in Hertfordshire with karst geology included within our DrWPA programme. Our PR24 WINEP includes schemes to deliver against the WISER expectations and meet the statutory and statutory plus requirements for DrWPAs set out in the table below. We plan to build on our experience of working with farmers, landowners, and catchment partners to help reduce concentrations of nitrates and pesticides, utilising Payment for Ecosystem Services (PES) and other innovative approaches to deliver against our objectives. We will continue working with Thames Water and South East Water through the Thames Catchment Management Steering Group (TCMSG) to deliver our programmes.

Our Long-Term Delivery Strategy (LTDS) includes an assessment of raw water quality deterioration and we have used this to assess further investment needs where catchment initiatives are not able to deliver against the requirements set out in the Water Supply (Water Quality) Regulations 2016.

Drinking Waters		
<ul style="list-style-type: none"> • Catchment actions to prevent deterioration in water quality and to reduce the need for additional treatment (S) • Catchment actions to improve water quality to reduce the level of existing treatment (S+) 		
What our Business Plan will deliver	A programme of C&NbS for our DrWPA and groundwater SGZs under our PR24 WINEP	
Ambition(s)	Environment, Communities	
PC or PCD	Catchment & Nature Based Solution PCD	
Enhancement Investment & Primary Driver	Lower Thames DrWPA Catchment Management (DrWPA_ND (S)) Karstic Groundwater Improvements (WFDGW_ND (S))	£3.441m
LTDS	WINEP DrWPA and Raw Water Deterioration	

Creating resilient chalk stream catchments is an integral part of our proposed investment, under the WINEP and our rdWRMP. We plan to invest **£3.441m** on a programme of C&NbS measures for our DrWPAs. The aims of the measures will be to prevent deterioration in water quality, to avoid an increase in the level of water purification treatments and provide for a long-term improvement in water quality. These measures will cover our abstractions from the River Thames and our karstic groundwater sources.

For more information see the following business cases in the Cost Appendix Enhancement Programme:

- WINEP: Lower Thames DrWPA Catchment Management
- WINEP: Karstic Groundwater Improvements

2.3.1 Safeguard Zone Action Plans

We have worked closely with our local EA Area water quality driver leads to define the SGZs for our key surface and groundwater DrWPAs. Most of these have been established since AMP6 and our current AMP7 WINEP water quality schemes 'Measures Specification Forms' set out the actions that form the basis of the SGZ action plans. Our proposed AMP8 WINEP DrWPA schemes for the Lower Thames and Wey DrWPAs and the karstic groundwater sources SGZs will drive future updates and actions in the next revisions of the SGZ action plans.

We are also working closely with the local EA area driver leads providing supporting evidence for current candidate SGZ to be formalised with associated action plans.

2.3.2 Partnership working to achieve drinking water protected area objectives

The 'best value' options described in our Lower Thames DrWPA and Karstic groundwater sources catchment management business cases define a programme of land management focused C&NbS. This includes a programme of spatially and temporally targeted land management measures with agriculture and amenity land managers that can deliver multiple benefits including reduced pollution in surface and groundwater, improved soil health, greater water-holding capacity on land for flood and drought resilience, net zero benefits and biodiversity enhancements.

These schemes have been developed to:

- Prevent deterioration of 'at risk' pesticides
- Mitigate the risks and impacts of nitrate and microbiological pollution arising from agricultural and amenity land use activities.
- Undertake abstraction and catchment monitoring for additional pesticides 'of concern' with actions to address further challenges as they arise.
- Deliver measures that can achieve multiple benefits to contribute to addressing the WINEP wider environmental outcomes including, but not limited to:
 - Improved catchment resilience to drought and flood pressures for land managers, drinking water supply and chalk streams.
 - Connecting wildlife corridors and creation of habitats in partnership with local stakeholders.
 - Wider biodiversity benefits (e.g., to priority habitats and species).
 - Measures that contribute towards achieving the Water UK target of Net Zero by 2030 for operational emissions.

For more information see the following business cases in the Cost Appendix Enhancement Programme:

- WINEP: Lower Thames DrWPA Catchment Management
- WINEP: Karstic Groundwater Improvements

2.3.3 Emerging and current substances - mitigation measures

Our catchment management approach is a land management focused programme of catchment and nature-based solutions working collaboratively with multiple stakeholders including farmers, land managers, environmental non-governmental organisations (NGO), regulators, water companies and businesses to implement measures prioritised both spatially and temporally to achieve the following outcomes:

- Prevent deterioration of surface and groundwater from various pollutants including pesticides, nitrate, and microbiological contaminants.
- Undertake abstraction and catchment monitoring with actions to address further challenges as they arise.
- Fund and deliver measures that can achieve multiple benefits to contribute to addressing the WINEP wider environmental outcomes.

2.3.4 Aquifer remediation and raw water quality deterioration

Under section 164 of the Water Industry Act 1991, we have the ability to enter into agreements with landowners, occupiers, or local authorities, to more effectually collect, convey or preserve the purity of drinking water sources. This includes entering into agreements to fund the remediation of contaminated land at orphaned sites.

We aim to operate our sources in an environmentally friendly way, which also includes aquifer remediation through pump and treat schemes. In most cases, we abstract and treat groundwater to put into supply thereby capturing potentially contaminated groundwater from natural or manmade contaminants. These contaminants are therefore removed from the aquifer via the treatment process, so that any downstream receptors such as river baseflow or other third-party abstractions are protected. There is also one case where we undertake scavenge pumping, but all abstracted groundwater is treated and discharged to the sewer system for onward blending and treatment at the local Sewage Treatment Works. This process has been in place since 2005 and is designed to manage the bromate contamination originating from a former chemical works. Operating this pump and treat scheme has allowed our downstream sources to continue to abstract groundwater at significantly lower concentrations and also other third-party public water supply (PWS) sources belonging to Thames Water Utilities. Costs for operating this scheme are recovered from the Appropriate Persons, identified under a remediation notice.

The LTDS raw water quality deterioration report has been produced as part of the LTDS requirement for the Business Plan. It addresses the issue of potential migration of pollutants following sustainability reductions as per our Environmental Destination Strategy. A high-level risk assessment has been conducted which suggests that the risk to most downstream abstractions (and the environment) can be managed through dilution and natural attenuation. For the cases where the risk remains high, additional investment in treatment would be required for the downstream sources resulting in re-capturing of the plume further downstream.

2.4 Environment Act 2021 targets

This section covers the requirement under the Environment Act 2021 targets. Chapter 9 of our rdWRMP provides further information on demand management. It is also addressed in section 4.4 of this report. The second requirement under this heading has been deemed to be not applicable as we are a water only company.

Environment Act 2021 targets		
Reduce the use of public water supply in England per head of population in line with the Environment Act's long term environmental targets (S)		
Base Investment	WRMP	£279.950m

2.5 Healthy and resilient fish stocks and Eels

This section covers healthy and resilient fish stocks and Eel Regulation 1100/2007 requirements. Our Business Plan seeks to deliver against these requirements through delivery of our WINEP. Measures to deliver against these expectations and requirements are covered within the river restoration element of our WINEP C&NbS schemes, Walton Fish Screen Options Appraisal and through a contribution to the EA led Thames Fish Passage Improvement scheme.

Healthy and Resilient Fish Stocks and Eels		
<ul style="list-style-type: none"> • Screen abstractions and outfalls to prevent the entrainment of eels, salmon, and sea trout and to resolve WFD fish failures (S, S+) • Address barriers to the passage of fish (S+) • Action that supports recovery of Natural Environment and Rural Communities Act 2006 (the NERC Act) S.41 priority fish species (which includes salmon, brown/sea trout, eels, smelt, river and sea lamprey and shad) or at sites where fish form part of the conservation designation (S+) • Water companies must comply with the requirements of the Eels (England and Wales) Regulations 2009 • All intakes (abstracting at least 20 cubic metres per day) and all outfalls must be screened to a required specification to prevent the ingress of eel unless the Environment Agency exempts the requirement. • Actions to enable safe passage of eel past obstructions are required where the Environment Agency serves notice. 		
What our Business Plan will deliver	A programme of C&NbS including river restoration to improve fish passage and enhance habitats Contribute to fish passage improvements on the River Thames Assess options for improved fish and eel screening at our Walton intake	
Ambition(s)	Environment, Communities	
PC or PCD	Catchment & Nature Based Solution PCD	
Enhancement Investment	Walton Fish Screens Options Appraisal River Thames Fish Passage Improvements	£0.307m £0.489m
LTDS	WINEP Water Framework Directive and Biodiversity	

The Eel Regulation 1100/2007, transposed into UK law, requires the protection of eel at water intakes and to make provision for eel passage at obstructions. Three of our four River Thames intakes are fitted with Best Achievable Eel Protection (BAEP). Our intake

at Walton however has passive wedge-wire screens which were installed in AMP4 and now do not meet BAEP requirements. Following a detailed investigation and monitoring exercise in 2016-2017 the intake was considered low risk and an Eel Regulation exemption notice was issued to us by the Environment Agency. This notice is valid until 31 December 2030. We plan to undertake further monitoring at Walton and an options appraisal in AMP8 to identify a screening solution for Walton for installation in Year 1 of AMP9. The primary driver for the Walton Fish Screens Options appraisal is the Eel Regulation 1100/2007. The screens will be designed to prevent entrainment of other fish species including salmonid species (salmon and sea trout).

For more information see the following business cases in the Enhancement Programme Cost Appendix:

- WINEP: Walton Fish Screens

Our river restoration programme which predominantly works on third party assets looks to address barriers to the passage of fish and incorporates improvement to the river geomorphology and habitats. It also looks to create a diversity of flow regimes. These projects aim to deliver multiple benefits. If eels have also been identified in the catchment, where appropriate we will ensure eel passage measures are included. More information is provided in the river restoration section of this report. We are also funding partners to an EA led project to address fish passage on the River Thames in AMP8. The project will focus on the Lower Thames and will include weir refurbishment and fish passage improvement works. The EA have identified the preferred options for the project. More information can be found in the associated business case in the Enhancement Programme Cost Appendix:

- WINEP: Thames Fish Passage Improvements

Our C&NbS schemes include a component of river restoration and habitat enhancement and where possible will contribute towards improving fish passage. This has been included in our WINEP under WFD as a primary driver. Please refer to section 2.10.

Customer feedback has shown a strong level of support for environmental improvements including river restoration, catchment, and nature-based solutions. Feedback was not specifically requested regarding fish stocks. Benefit assessment will be undertaken by the EA as part of their project to address fish passage on the River Thames. The Walton Fish Screens Options Appraisal in AMP8 will assess monitoring and reporting of benefits.

2.6 Invasive non-native species (INNS)

We recognise the impact that INNS can have on a thriving natural environment and the economy, and how climate change will increase the risk of non-native species establishing in the UK. We have an established programme of surveying, treatment and monitoring of INNS on our landholdings and have in place biosecurity measures to reduce the risk of spreading or introducing INNS. Our plans for PR24 build on our

experience in tackling INNS and align with the Great Britain Invasive Non-native Species Strategy: 2022-2030.

Invasive Non-Native Species	
<ul style="list-style-type: none"> • Prevent deterioration by reducing the risks of spread of INNS and reducing the impacts of INNS (S) • Reduce the impacts of INNS, where INNS is a reason for not achieving conservation objectives or good status (S, S+) • Reduce pathways for the introduction and spread of INNS (S, S+) 	
What our Business Plan will deliver	Management of INNS on our landholdings and support of initiatives in our catchments to reduce the presence and impact of INNS, including through use of biosecurity measures.
Ambition(s)	Environment, Communities
PC or PCD	N/A – low materiality
Enhancement Investment	Biodiversity - INNS £2.421m
LTDS	Biodiversity

We plan to invest **£2.421m** in the management of INNS within our landholdings and to support initiatives in our catchments and communities to deliver wider benefits. This will include actions for INNS identification and management, biosecurity audits and funding of associated new biosecurity infrastructure. We will also seek to provide partnership and funding contributions to research into identifying and managing the spread of aquatic INNS through water company operations. This includes partnering on the national INNS project that is looking to research measures to mitigate INNS spread through raw water transfers.

Further information on how we are addressing the statutory requirements is provided in the Enhancement Programme Cost Appendix WINEP Biodiversity business case:

- WINEP Biodiversity

2.7 Natural Environment

Our plans for our AMP8 Biodiversity Programme will deliver against the Natural Environment expectations including statutory, statutory plus and non-statutory requirements. We plan to deliver 55 site management plans for improving Section 41 NERC Act habitats, 40 site management plans to increase pollinator numbers, plant 100,000 trees/hedgerows as well as site specific improvements to sites including Springwell Reedbed Nature Reserve (the largest reedbed in the London area). We will work in partnership with the Wildlife Trust and community groups and support initiatives focussed on biodiversity improvements. Further information can be found in the WINEP Biodiversity business case within the Enhancement Programme Cost Appendix:

- WINEP Biodiversity

Natural Environment		
<ul style="list-style-type: none"> • Action that contributes to meeting and or maintaining conservation objectives of Habitat sites, for example, addressing the potential impact of development and growth (S) • Action that contributes to meeting and/or maintaining favourable condition targets for Sites of Special Scientific Interest (SSSI) (S+) • Action that contributes to the restoration and recovery of habitats and species under the NERC Act to support delivery of the Nature Recovery Network (S+) • Action that contributes to achievement of conservation objectives of Marine Conservation Zones (MCZs) and (when designated) the desired state of the environment within Highly Protected Marine Areas (S, S+) • Actions for biodiversity should deliver the outcomes of the relevant Local Nature Recovery Strategy, Protected Site Strategies and Species Conservation Strategies introduced by the Environment Act (S+) • Contribute to actions under non-statutory initiatives including the England Peat Action Plan, England Tree Action Plan, and the National Pollinator Strategy (NS) • Action that contributes to the conservation and enhancement of landscape character and sense of place, so that landscapes are alive for nature and beauty, and provide opportunities that benefit people's health and wellbeing (where this goes beyond statutory obligations) (NS) • Action that delivers inclusive public access to water company land and water of natural beauty, amenity or recreational value and allow public access for the widest possible range of activities (S+) 		
What our Business Plan will deliver	Site management plans for improving section 41 NERC Act habitats and increase pollinator numbers. Planting of trees and hedgerows. Land management on 10 sites within or adjacent to SSSIs. Abstraction reductions, catchment initiatives and river restoration to help protect chalk streams and create resilient chalk stream catchments	
Ambition(s)	Environment, Communities	
PC or PCD	Biodiversity PC Abstraction Reductions PCD Catchment & Nature Based Solution PCD	
Enhancement Investment	Water resources investigations Biodiversity WINEP C&NbS – catchment initiatives and river restoration schemes in multiple catchments Sustainability Reductions	£0.991m £7.261m £20.138m £125.347m
LTDS	Biodiversity and WINEP Water Framework Directive	

2.7.1 Sites of Special Scientific Interest, Habitats and Ramsar sites

We own ten sites with SSSI designation, two sites within Special Area of Conservation (SAC) and a further two sites which lie within Ramsar and Special Protected Areas (SPA). We understand the expectations around maintaining and/or achieving favourable condition for both the sites we own and those which can be impacted by our activities.

The designated sites that are within our ownership or sites that are within a SSSI zone of influence have been prioritised for enhanced survey and delivery of improvement options under the AMP8 WINEP. This includes investigating how site management will link to increased quality and number of habitats and species associated with the designated nature of the sites. A review of designated sites in our supply region identified no new site designations. We have also considered revised boundaries and

new features added to existing designated sites. In addition, we have built in house capability to apply the Defra Metric 4.0 to baseline Affinity Water owned sites. The output will feed into future management plan development and guide biodiversity improvements through WINEP.

As part of the WINEP development, the Risk and Issue process ensured that Natural England and other stakeholders were engaged with in order to gather risks associated with European sites, linked to the company carrying out its functions. A number of SSSI sites were identified and included under investigative drivers under the WINEP to determine whether there is any impact on the sites from company operation.

Our Sustainability Reduction Programme and the overall Environmental Destination Strategy aims to reduce or cease abstraction in the upper reaches of chalk stream catchments and allow recovery of nearby sensitive habitats. The prioritisation of the reductions has been set based on the sensitivity of those receptors and this has been consulted with both the EA and Natural England. Any further work remaining to address local concerns for specific designated sites, has been scheduled to take place through the AMP8 WINEP.

We plan to invest **£1.868m** on actions that contribute to meeting and/or maintaining favourable condition targets for SSSI. We have produced two management plans for the SSSIs in our supply region: Wraysbury and Denge. Management plans will be produced for the other 8 sites with SSSI designation in AMP8. The Denge management plan is currently under review by the RSPB and Natural England. The management plan for Wraysbury can be found at the following location:

- Wraysbury SSSI management plan: [Wraysbury SSSI Landscape Management Plan](#)

We have undertaken Habitat Regulation Assessments (HRAs) as part of the development of our dWRMP. See section 4.4.2 for more information.

2.7.2 NERC Act 2006

We plan to invest **£5.393m** on actions that contribute to the restoration and recovery of habitats and species under the NERC Act to support delivery of the Nature Recovery Network. Where we have sites with known Section 41 NERC Act habitats or species present, we have management plans and requested funding for delivery through the AMP8 WINEP process. We manage INNS on our landholdings and are baselining our estate to identify where we have the most opportunity to improve habitats for protected species.

We are actively assessing our non-utilised landholdings to identify opportunities for biodiversity schemes linked to both our Performance Commitments and future requirements under Biodiversity Net Gain (BNG). This includes underutilised land within our operational boundaries.

2.7.3 Marine Conservation Zones

The coastal waters that border parts of our East and Southeast supply areas are designated Marine Conservation Zones (MCZ). This includes Dover to Folkestone and

Blackwater, Crouch, Roach, and Colne Estuaries MCZ. As we are a water only company we do not consider our operations impact these designated waters.

2.7.4 Consideration of non-statutory initiatives

Non-Statutory initiatives, including the England Tree Action Plan and the National Pollinator Strategy, have been considered in the development of our AMP8 plan and have been used to help determine high priority sites for the development of biodiversity management plans. These have also been considered in the creation of the WINEP with regard to the priority of delivery of those biodiversity improvement activities.

2.7.5 Local Nature Reserves and National Nature Reserves

The proximity of Local Nature Reserves (LNRs) and National Nature Reserves (NNRs) to our sites has been considered in the prioritisation process for delivery of biodiversity improvements. Improvements will be given a high priority if they are within or close (500m from) these sites. As part of the delivery of the AMP8 biodiversity WINEP projects, particularly on third party land, opportunities will be sought to work with partners and existing high priority areas such as sites within NNRs and LNRs.

Local Nature Recovery Strategies (LNRS) are currently under development across our supply area. We are engaging with stakeholders involved in their development through catchment partnerships and will work with Natural England and local planning authorities to understand the priorities and proposed actions for each plan. We will ensure that our investment plans for AMP8 are aligned with the key priorities for each strategy area, both within the management of our own landholdings and through our WINEP biodiversity and C&NbS programmes supporting the government goal of generating private finance for nature recovery in our supply area.

2.7.6 Landscape, heritage, and recreation opportunities

We own land and operate in four AONBs; the Chiltern Hills, Surrey Hills, Dedham Vale, and the Kent Downs. We are currently working in partnership with a number of organisations to manage our sites which are designated as LNRs for access and recreation to benefit both wildlife and people. We have a long-standing partnership with organisations including the Chilterns Chalk Streams Project and White Cliffs Countryside Partnership and will look to build on these working relationships in the delivery of our AMP8 Business Plan.

We are developing a decision-making process to ensure our statutory duties are taken into account with respect to company owned land within designated landscapes. We will ensure that all decisions made about sites located within an AONB are documented, and the way in which they are managed is recorded.

2.7.7 Public access

We currently have seven company sites with open public access which present opportunities for our customers to enjoy open space and wildlife in their communities. These sites also provide health and wellbeing benefits to the public. Through delivery of our WINEP river restoration programme we have also provided wider recreational,

health and wellbeing benefits to our customers and communities by improving access to chalk streams, by creating or improvement of riverside footpaths. We will continue to work with landowners and catchment partners to further improve access throughout the delivery of our 2025 - 2030 WINEP.

We are actively working to complete an assessment of our key public access sites to ensure that they are accessible to as many of our customers as possible. We are partnering with Experience Community who focus on appraising accessibility on sites. This will enable us to develop a plan to ensure that we minimise our accessibility restrictions and importantly are able to communicate site conditions to users who require additional physical support. We are also looking to install braille signage and dementia friendly signage on key routes to provide further support.

Additional future work includes:

- We are exploring the removal of gates and other infrastructure to allow use of existing paths by alternative travel methods such as bikes and horses.
- We currently provide wild swimming access to Heron Lake, Wraysbury. We are looking at a number of our other lake sites to determine whether or not wild swimming is safe and appropriate, particularly where sensitive habitats are present. We are also looking to diversify our offerings to include paddleboarding, sailing and aqua adventure facilities. Heron Lake is also home to our Access Adventures facility, a world class disabled water skiing / water sports centre that provides training and recreation for users who require specialist support and equipment.
- Updating signage along our public footpaths and permitted paths on our estate where required to ensure that our public users are aware of suitable paths and routes.
- Improve informative signage at our sites to communicate with users the importance of our sites and how they contribute to our water cycle. Where appropriate, signage will also include updated information regarding biodiversity enhancements and education around environmental protection.
- Applying a 'Six Capitals' approach to identify social opportunities relating to our public access sites. These benefits are then monetised and are used in cost / benefit analyses to communicate value to stakeholders.

2.8 Shellfish waters

Wivenhoe is the only shellfish protected area in our supply area. We do not have any abstractions or discharge permits in this area and therefore do not consider that we have any influence on this protected area.

2.9 Urban wastewater

We are a water only company and have therefore deemed the requirements under this heading as not applicable. There are three companies that cover our supply area

and provide wastewater services to our customers: Thames Water, Anglian Water and Southern Water. We have responded to the consultations of the respective companies Drainage and Wastewater Management Plans (DWMP).

We have also engaged with Thames Water and provided a list of groundwater sources that are prone to water quality issues and indicate potential for sewer leakage. This information was fed into their DWMP.

2.10 Water body status - River Basin Management Plan objectives (RBMPs)

In developing our rdWRMP and PR24 WINEP we have considered the objectives for groundwater and surface waters set out in the 2022 RBMPs including abstraction, physical modifications, and actions to prevent deterioration in status. The text provided below describes how we have addressed the water body status requirements. Section references are provided to our Business Plan where more detailed information can be found.

Water body status – River Basin Management Plans objectives		
<ul style="list-style-type: none"> Action to prevent deterioration in current water body status (S) Action to improve water body status (S+) Action to ensure no river, lake or estuary is in poor or bad ecological status due to the water industry (S+) Work with stakeholders and catchment partnerships to explore integrated solutions, including nature-based solutions and delivery of multi-functional benefits (NS) 		
What our Business Plan will deliver	Abstraction reductions and licence capping to deliver flow improvements and to prevent deterioration in status. C&NbS (catchment initiatives and river restoration) to help protect chalk streams and create resilient chalk stream catchments	
Ambition(s)	Environment, Communities	
PC or PCD	Biodiversity PC (for qualifying river restoration schemes) Abstraction Reductions PCD Catchment & Nature Based Solution PCD Leakage PC PCC PC AIM PC	
Enhancement Investment	WINEP C&NbS – catchment initiatives and river restoration schemes in multiple catchments	£20.138m
	WINEP Water Resources investigations	£10.004m
	Sustainability Reductions	£125.347m
	WRMP	£279.950m
Base Investment	Leakage	£78.652m
LTDS	Biodiversity and WINEP Water Framework Directive rdWRMP24	

2.10.1 Sustainability Reduction Programme

We plan to invest **£125.347m** on actions to reduce our abstraction in chalk stream catchments to improve water body status. In our rdWRMP and PR24 WINEP, we have included plans and investment requirements to reduce Chalk groundwater abstraction by a further c21MI/d by the end of AMP8. This will be in addition to the c.100MI/d of sustainability reductions that we will have delivered through our AMP6

and AMP7 WINEP by December 2024. Our AMP8 plan also includes an additional 14ML/d relocation of average deployable output (ADO) from upstream to downstream sources in the Colne catchment to help ensure that the upper reaches of our Chalk streams have as little abstraction as possible. This is in line with Defra's Plan for Water and builds on the Chalk Streams First concept included in the Catchment Based Approach (CaBA) chalk stream restoration strategy, published in 2021. Furthermore, we have mapped out our Environmental Destination strategy to 2050 where we have identified potential further abstraction reductions to be implemented if necessary.

Our Sustainability Reduction Programme and Environmental Destination Strategy set out in our rdWRMP has been designed with the aim to leave the upper reaches of Chalk streams in as natural a state as possible with very little to no abstraction. This will allow the natural wetting and drying pattern to function without any anthropogenic influence (i.e., abstraction), and allow recovery near sensitive, groundwater dependent habitats. The prioritisation of the reductions has been set based on the sensitivity of those receptors and this has been consulted with both the EA and Natural England. Any further work remaining to address local concerns for specific designated sites has been scheduled to take place through the AMP8 WINEP. Enhanced monitoring will also continue to take place throughout the following AMPs to ensure that the expected benefit in river baseflow and the associated ecology are realised in order to shape future actions. More information can be found in the Sustainability Reductions business case in the Enhancement Programme Cost Appendix:

- WINEP: Sustainability Reductions

2.10.2 Abstraction Incentive Mechanism

To supplement the Sustainability Reduction Programme, we propose to include 16 sources under the Abstraction Incentive Mechanism (AIM) in AMP8. AIM encourages water companies to reduce their abstraction during low flows. The chalk groundwater sources were put forward based on the perceived environmental sensitivity of the sources identified in previous studies.

Further information on our Environmental Destination Strategy can be found in the appendices of our rdWRMP.

To find out more about Abstraction Incentive Mechanism bespoke performance commitment please refer to Business Plan Appendix AFW18.

2.10.3 Preventing deterioration in waterbody status

The EA have introduced licence capping in order to prevent deterioration in water body status. Licence capping will be introduced in the form of "operational max peak" (the highest value of the annual average abstraction over the period 2010-15). The EA have also advised that further capping will apply at recent actual rates (based on the average abstraction during 2010-15). Licences will also operate on a six-year rolling basis to ensure that in any one year the "operational max peak" volumes can be abstracted to meet any peak demand year. For AMP8, the operational max peak licence capping will result in c5ML/d reduction in abstraction which has been

incorporated in our rdWRMP and Business Plan as part of the c21Ml/d total sustainability reduction volume (excluding the ADO relocation volumes).

Our AMP8 WINEP water resource investigation proposals also include the assessment of the impact of the sustainability reductions on water quality and potential for deterioration in waterbody status (chemical status). The investigation also includes the investigation and options appraisal into the risk of deterioration of water body status. Further information can be found in the Water Resources Investigations business case in the Enhancement Programme Cost Appendix:

WINEP: Water Resources Investigations

2.10.4 River Restoration Programme

Over the centuries, chalk streams have been altered for many reasons including: moving them from the lowest point on the landscape to work with field boundaries or create bigger areas for agriculture, being straightened to act as mill races for industry, or relocated for housing development or road crossings. These changes mean that the rivers are less resilient to extreme climatic conditions such as flood and drought, as they no longer operate in a natural way.

Our River Restoration Programme is working to create resilient river systems by restoring the rivers and enhancing habitats at a catchment scale. We have been working with the EA, landowners, and other partners to meet Water Framework Directive objectives. The projects that we have delivered have addressed barriers to fish passage by removing obstacles like weirs, created bypasses around obstacles that cannot be removed, narrowed channels to increase speed of water, created meanders and carried out tree works to allow more light into the river channel. All these measures should mean the rivers are more resilient to the impacts of climate change. It should also contribute to increased lateral connection along the rivers in our supply area. We have an extensive monitoring network to evidence the hydrological and ecological responses from undertaking river restoration. This monitoring provides key baseline information, and we continue monitoring to demonstrate success once the project has been implemented. We plan to continue this into AMP8. In addition, we work in partnership with a number of catchment stakeholders to co-design, co-fund, co-deliver and ensure a joined-up approach to river improvement works across each waterbody.

We plan to continue to undertake works on the 14 rivers we have been working on in AMP7 and expand the programme to six new rivers in AMP8: Hughenden, Rib, Ash, Stort, Oughton and Hiz, which have been proposed for inclusion through WINEP.

Find out more about our C&NbS for AMP8 and how this builds on our AMP7 programmes in Section 3.5 of the Business Plan.

For more information, please see the following business cases in the Enhancement Programme Cost Appendix:

- WINEP: River Colne Catchment and River Restoration
- WINEP: River Dour and Little Stour Catchment and River Restoration

- WINEP: River Upper Lea Catchment and River Restoration
- WINEP: Ivel and Cam Catchments and River Restoration Business Case
- WINEP: River Beane Flagship Scheme

2.10.5 Investigating the impact of abstraction

We have set out in our rdWRMP our plans to end unsustainable abstraction where this is identified. The starting point for our Environmental Destination Strategy is meeting the EA's Environmental Flow Indicator (EFI) as currently defined. The EFI is subject to change as it is typically calculated using regional groundwater models that are updated periodically to reflect the latest best conceptual understanding of a catchment. We will continue to liaise with the local EA teams to ensure that we feed the best available information in the regional groundwater models which in turn will be used to calculate the EFI.

Our WINEP Water Resources Investigations will feed into this assessment and help identify the location and volume of future abstraction reductions to maximise environmental benefit. For more information see WINEP: Water Resource Investigations business case in our Enhancement Programme Cost Appendix

- WINEP: Water Resources Investigations

2.10.6 Environmental monitoring

We have an extensive monitoring network across our water supply areas which cover parameters such as river levels, river flows, groundwater levels, rainfall, surface water quality data, fixed point photography and ecology. The majority of this data is publicly available via our Environmental Monitoring Portal. An interactive map provides a user-friendly interface to view and export data (see Figure 3). More information can be found on our website¹ and in the Sustainability Reductions business case. Representatives from the team also regularly attend local river group meetings. This provides an opportunity to discuss the data that we have collected to improve our understanding of our local catchments.

¹ <https://www.affinitywater.co.uk/environmental-monitoring>

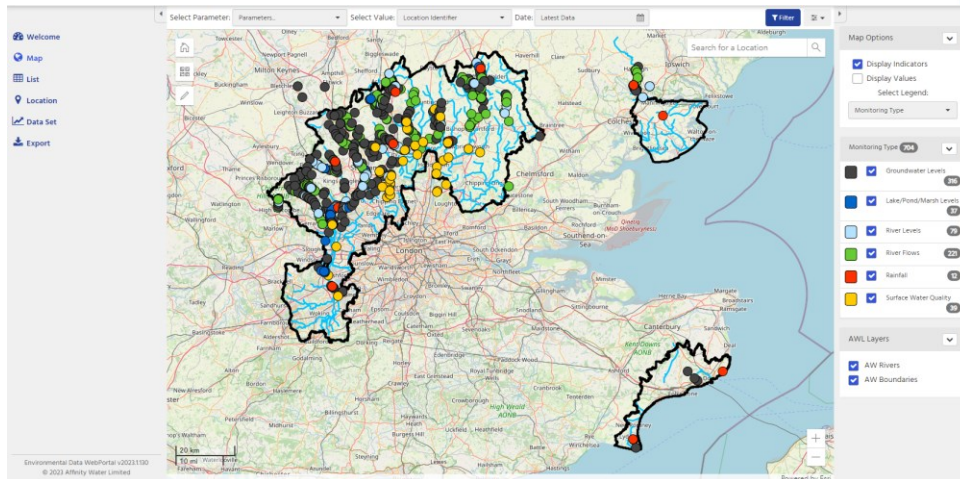


Figure 3. Screenshot from our Environmental Data Portal

2.10.7 River Brett case study: delivery of multi-functional benefits

We have experience of delivering schemes with multifunctional benefits through delivery of our WINEP. The below case study provides an example of this and our plans for AMP8 and beyond will build on this approach. This scheme also provides an example of the importance of improving catchment conceptualisation to inform decision making. At PR19 output from the EA regional groundwater model indicated the need for a large (15-20MI/d) abstraction reduction. Through this AMP7 project this was refined, and a solution identified to meet the revised environment flow indicator (EFI).

The River Brett investigation and options appraisal has been delivered as a collaborative project between Affinity Water, Anglian Water, Essex and Suffolk Water and the EA, with technical support provided by academics, research projects and consultants.

The investigation comprised a period of intensive environmental monitoring and data collection. This was supplemented by performing tests at our abstraction sites, to record how the environment responded. Through a series of collaborative project meetings, the regional groundwater model was updated to account for the findings of the Brett investigation, initially in the Brett catchment but then across the entire model area. This has benefited regional water resources management by improving model accuracy and confidence in the results, such that it could be used as a predictive tool to compare the likely outcomes of different combinations of interventions during the options appraisal phase.

This assessment favoured an in-combination solution, comprising abstraction reductions, refinements to the river support and river restoration, with continued environmental monitoring, following the 'adaptive management' principles.

We have engaged with the EA, landowners, and local interest groups throughout the project to identify opportunities for undertaking river restoration on the River Brett. This includes the Stour Catchment Partnership, presenting to the local Cluster Farm group and undertaking a series of river walkovers to identify opportunities for restoration. When complete, the work will improve the natural functioning of the river, improve fish

passage, make the river more drought resilient, improve flood plain connectivity and reduce the impoundment over the river, increasing velocities, meaning that ecological communities can benefit from flow improvements which are being targeted through refinements to river support and abstraction reductions in the catchment.

2.10.8 Programme to meet RBMP requirements

To support the development of the proposed solutions to contribute to meeting RBMP requirements by 2027, we have undertaken a detailed review of risks and issues for each waterbody catchment as part of the stage 2 WINEP programme development. We have taken a collaborative approach to define the PR24 WINEP scope and develop the feasible options and ultimately determine each best value option. As part of this process, we have completed the following activities:

- Early engagement with the EA and Natural England (workshops at area level) and follow up meetings meetings/correspondence with Driver leads).
- Reviewed, discussed, and incorporated Natural England's Nature Recovery List for our region.
- Detailed review of Catchment Data Explorer, CaBA Catchment Plans, River Group meetings, stakeholder workshops and meetings alongside discussions with neighbouring water companies.
- Documented all risks and issues register collated through this process and used to develop the proposed solution described in this Business Case.

As part of the development of our proposed solutions to contribute to addressing the risks and issues described in each WINEP business case, we have engaged with key stakeholders including the EA, Natural England and catchment partnerships, as well as drawing on experience through our AMP7 WINEP programme delivery to explore options around developing, co-designing, and co-delivering schemes which have formed the basis of the best value options for our AMP8 WINEP programme.

We continue to work with a wide range of stakeholders to develop joint solutions. We have described a number of pilots and research projects that we are currently working on in the areas our WINEP business cases.

3 Expected performance and compliance

We understand the importance of environmental performance and compliance to protect the environment in which we operate and achieving this, is a clear expectation of our customers. We have set ourselves the highest standards for our environmental performance by committing in our Business Plan to achieving 100% compliance for our discharge permits. We are setting up processes to report this metric, so that we can understand our performance against our own sampling and identify where improvements can be made.

Ten of the fifteen requirements listed under the expected performance and compliance heading for WISER have been listed below. As water only provider, we have deemed five of the requirements to be not applicable as they are related to sludge produced at wastewater treatment works. A section on our corporate risk register has also been provided.

Expected Performance & Compliance		
<ul style="list-style-type: none"> • Achieve 4-star status on the Environmental Performance Assessment (NS) • 100% compliance for all licences and permits (NS) • 100% compliance at water treatment works with numeric limits and for storm overflows (S) • 100% compliance with environmental impact and operational performance permit conditions at water treatment works with descriptive not numeric limits (S) • 100% compliance with abstraction and impoundment licences (S) • 100% compliance with flow conditions, including dry weather flow, flow to full treatment, maximum daily volume and flow rates, MCERTS certification, at water treatment works (S) • Zero serious pollution incidents (category 1 and 2) (S) • At least a 30% reduction of all pollution incidents (category 1 to 3) by 2030 on current 2025 targets (S) • High levels of self-reporting of pollution incidents with at least 90% of incidents self-reported by 2030. More than 95% of incidents self-reported for wastewater treatment works and pumping stations (NS) • Business plans should include all measures identified within the WINEP. Schemes should be delivered on time and to agreed specification (S) 		
What our Business Plan will deliver	Compliance with licences and discharge permits Delivery of our WINEP	
Ambition(s)	Environment, Communities	
PC or PCD	Discharge Permit Compliance PC Serious Pollution Incidents PC Biodiversity PC (WINEP river restoration where applicable) WINEP Sustainability Reduction PCD	
Enhancement Investment	WINEP C&Nbs – catchment initiatives and river restoration schemes in multiple catchments WINEP Water Resources investigations Sustainability Reductions	£20.138m £10.004m £125.347m
LTDS	WINEP Water Framework Directive	

3.1 Environmental Performance Assessment

There are currently six Environmental Performance Assessment (EPA) metrics that water and wastewater companies are assessed against. The EPA is yet to be formally introduced for water only companies.

We have undertaken a review of the reporting requirements as a whole and how we can be more proactive in self-reporting. In addition, we have started shadow reporting for EPA on serious pollution events as per the EPA methodology from the EA and improvement activities are taking place around discharge permit compliance and pollution incidents.

Further information on permit compliance and pollution incidents can be found in the Outcomes section 7 of our Business Plan.

We have also implemented an internal process for shadow reporting on our WINEP delivery which forms part of our internal corporate Balanced Scorecard. This is supported by regular liaison meetings with the respective EA Area Teams and associated Driver Leads to update progress on WINEP delivery throughout each reporting period. This is further supported by a third-party assurance process undertaken annually as part of our June Return confirming progress of, and completion within agreed timescales, our WINEP schemes and investigations throughout the AMP. This process will be reviewed and revised to support our AMP8 WINEP delivery and associated EPA reporting.

3.2 Abstraction licence and discharge permit compliance

We will ensure that we comply with the conditions of our abstraction licences and environmental permits during AMP8 through use of our operational systems, processes and compliance monitoring. We will continue to hold our ISO 9001, 14001 and 18001 certifications.

Abstraction is managed centrally by the Control Operations team via our company wide telemetry system. Controls have been put in place across all of our abstraction sites on our telemetry system, to ensure compliance with abstraction volumes. Additional controls are also in place to ensure we comply with site specific constraints on some of our licences, known as Hands off Flow or Hands off Level constraints, and additionally where we have requirements to provide river support/augmentation.

For discharge permit compliance, we will be transitioning towards our own sampling programme. This is a change from the current method where the EA undertake spot checks of our discharge permits via sampling at selected sites. In addition, a common PC on discharge permits will be introduced from the beginning of AMP8 with a target compliance of 100% following guidance from Ofwat. It is also described in the EPA guidance from the EA. We are on track to achieve the target compliance based on our current performance. More information on the PC can be found in Section 7.2 of

our Business Plan. Meeting our commitment for discharge permits continues our ambition to protect and enhance the local environment.

Abstraction and impounding licensing will be transitioned into the Environmental Permitting Regulations (EPR) in 2024. We responded to the consultation from Defra in 2021 and we currently sit on the steering group which is led by the Environment Agency. Once the legislation is in place, we will seek to update our permits in order to combine our discharge permits and abstraction licences for an individual site into one legal document.

3.3 Compliance at Water Treatment works

We have a process in place to track all numeric limits at our water treatment works for compliance purposes. As we are a water only company, we have deemed storm overflows to not be relevant.

Some of our discharge permits have environmental monitoring requirements. We have undertaken a comprehensive review of all of the requirements set out in our discharge permits and have ensured we are fully compliant with those that are specific to the location.

MCERTS certification is in place where it is a requirement. In terms of MCERTS flow monitoring; dry weather flow, flow to full treatment, maximum daily volume and flow rates are all recorded.

3.4 Serious pollution incidents

We self-report pollution incidents to the EA to ensure openness and transparency. Our historic self-reporting of incidents has been considered as industry leading for the water-only companies and we have an embedded process throughout our business. We will continue to review our processes to ensure robust and accurate self-reporting. The programme will include delivering a workshop with key stakeholders across the business and improvements to the current reporting method. Training and provision of relevant equipment will be key to this.

We hold ISO14001 certification for environmental management which provides a framework for all potential incidents to be investigated. Our emergency response process is in place to address serious environmental pollution incidents and mitigate impacts. Lessons learnt are communicated and controls are put in place to prevent reoccurrence.

A PC will also be introduced for AMP8 covering serious pollution incidents with a target of zero for category 1 and 2 incidents. This has been introduced as a common PC by Ofwat and is described in the EPA guidance from the EA. The aim of the PC will be to hold the industry to account for the purpose of reducing the number of serious pollution incidents that occur and to improve the quality of the environment. More information is provided in section 7.2 of our Business Plan.

3.5 Measures identified within WINEP

To support the development of the WINEP for AMP8, we have undertaken a detailed review of risks and issues for each waterbody catchment. We have taken a collaborative approach with the EA, Natural England and key catchment partners to define the PR24 WINEP scope and develop feasible options and ultimately determine the best value option for each measure identified within the WINEP to include in our Business Plan.

As part of the development of our proposed solutions to contribute to addressing the risks and issues and associated identified measures that form our PR24 WINEP programme, we have drawn on experience through our AMP7 WINEP programme delivery to explore options around developing, co-designing, and co-delivering schemes which will support the delivery of our WINEP in AMP8.

All measures identified have been included in our Business Plan under their respective Action IDs. We have undertaken a detailed assurance process internally and will work in collaboration with the EA Area Driver leads to develop Action Specification Forms for each measure to demonstrate how each scheme will be delivered with agreed objectives, outcomes and success measures to ensure successful delivery of our WINEP.

3.6 Corporate risk register

We have recently implemented a new Risk Management Framework, which formalises the process through which risk information is captured, reviewed and reported by the various directorates across the organisation and ensures alignment of directorate risks with the over-arching strategic risks managed by the Executive team.

We also participate in the water industry and Defra discussions around long-term risks or short-term unforeseen risks to learn from best practice and raise awareness of risks within the industry. Our environmental management system is updated when required to ensure processes and procedures are updated to mitigate these risks and to align practises to national standards or expectation. This enables early warnings on long-term issues through trends or gaps in environmental incident reporting. Our environmental management system is certified by an accredited organisation to demonstrate our commitment to prevent pollution and our performance in mitigating risks.

3.7 Green finance

Our green finance framework enables the company to issue Green Bonds/Financing instruments to support our environmental objectives. The framework aligns with the International Capital Markets Association (ICMA) Green Bond principles and the Loan Market Association (LMA) Green Loan principles. Net proceeds will be allocated to green projects which are related to sustainable water and wastewater management, pollution prevention and control, terrestrial and aquatic biodiversity conservation and energy efficiency.

More information on our green finance framework can be found in Appendix AFW15 of our Business Plan.

4 Resilience for the environment and customers

4.1 Climate Change

There are seven expectations under the climate change heading which have been listed in the table below. Subheadings with information on each of the expectations has been provided.

Climate Change		
<ul style="list-style-type: none"> • Report on understanding of risk from climate change and how they are being addressed through Adaptation Reporting Power reports (S) • Contribute to the sector's ambition to achieve net zero carbon by 2030 as set out in Water UK's 'Net Zero 2030 Routemap' (NS) • Apply adaptive planning for a range of future climate change scenarios (NS) • Safeguard services and ensure risks are proactively identified and actions implemented using an adaptive planning approach (NS) • Deliver actions to restore form and function of the natural environment to improve resilience of ecosystems to warmer water temperatures, more frequent flooding and drought, and rising sea level (where this goes beyond statutory obligations) (NS) • Deliver actions that help to mitigate rising water temperatures (NS) • Deliver actions that mitigate the impact of low flows and rising temperatures on water quality (where this goes beyond statutory obligations) (NS) 		
What our Business Plan will deliver	Biodiversity Programme will deliver improvements on our sites and where possible we will align this with Nature Recovery Networks. We will support community projects and give priority to sites and habitats in Local Nature Recovery Strategies. Alignment with the rdWRMP	
Ambition(s)	Environment, Communities	
PC or PCD	Operational Greenhouse Gas Emissions PC Whole life carbon PC (Bespoke)	
Enhancement Investment	Net Zero WINEP C&NbS – catchment initiatives and river restoration schemes in multiple catchments Flood Resilience	£4.302m £20.138m £1.064m
LTDS	Net Zero and WINEP Water Framework Directive	

4.1.1 Climate risk register and climate change adaptation report

We maintain a climate risk register developed as part of our response to the National Adaption Programme (NAP) published in 2018 and the following Adaptation Reporting Power report commitments. The risk register captures planned actions which are periodically reviewed and updated as part of business planning. The climate risk register underpinned our 2021 climate change adaption report which identifies six headline climate risks:

- Increase in demand due to higher temperatures.
- Equipment and asset failure due to extreme weather events.
- Increase in competition for and price of raw water imports.
- Reduced availability of ground and surface water due to drought.
- Outage due to flooding of assets.
- Changes to raw water quality.

Each risk has been assessed and mitigation action measures identified to reduce future risk.

In addition to this report, we undertook a review of surface water flood risk to our assets in 2022. As part of our business planning for PR24 and specifically our LTDS we have considered how future climate scenarios could impact the natural assets we rely on and our built infrastructure and identified adaptive pathways to manage these risks (which accommodate 2°C and 4°C climate scenarios). We have developed a specific PR24 business case for flood risk management which includes consideration of surface water.

Further information can be found in our Flood Resilience business case in our Enhancement Programme Cost Appendix:

- Flood Resilience

Adaptive planning has been applied to a range of future climate change scenarios for the rdWRMP. The problem characterisation undertaken for our WRMP24 showed that the scale and complexity of the issues that we face in water resources planning meant that we needed to formally recognise and incorporate adaptive planning within our decision-making process. Working with WRSE, we enhanced the sophistication and optimisation capability of the adaptive planning approach for our dWRMP24. The range of uncertainty around the supply-demand balances for the WRSE region is large, because of climate, growth and environmental destination uncertainty. Our rdWRMP considers the Ofwat Common reference scenarios including high and low climate change scenarios. Please refer to Chapter 9 of the rdWRMP24 for more information.

4.1.2 Net Zero Strategy

During 2022-23 we updated our Net Zero Strategy, which reaffirmed our commitment to achieving Net Zero for operational emissions by 2030. Our operational emissions have reduced by over 80% since 2016-17, and we plan to target the removal or reduction of our remaining operational emissions through AMP8. Our plans include a transition to Electric Vehicles and use of Nature Based solutions to manage residual emissions. We are also exploring science-based targets to add further depth to our commitment to reduce emissions. More information on our Net Zero roadmap is available on our website².

Our Net Zero strategy recognises the need to reduce scope 3 emissions. We will do this through adopting the principles of the PAS 2080, recognised as best practice for managing carbon in infrastructure, and engaging our supply chain to support us in reducing emissions. At the heart of our strategy are four key principles which outline how we will reduce emissions:

1. Adopting a Net Zero culture, using the Carbon Literacy Project as a framework.
2. Applying a carbon management hierarchy to prioritise reduction before removal.

² <https://www.affinitywater.co.uk/sustainability/net-zero>

3. The use of nature-based solutions to manage residual emissions, rather than through offsetting.
4. Working with others to share knowledge and innovate.

We have included enhancement investment of **£4.302m** in our Business Plan for Net Zero (greenhouse gas reduction).

For more information, please see the following business case in our Enhancement Programme Cost Appendix:

- AMP8 Electric Vehicles

4.1.3 Resilience to severe weather events

We have developed plans to improve our resilience to severe weather events which include both emergency planning and our response to such events.

We are working with the Met Office to predict events further in advance, giving us longer to prepare. We have a robust Emergency Plan which incorporates well practised processes for seasonal weather events. These plans include standing up additional resources prior to a forecasted weather event, reviewing and where necessary, cancelling planned work to facilitate building storage levels in advance. We have increased the quantity of internally held bottled water stocks to ensure we can provide alternative supplies in the event of failure of piped supplies and have increased the number of customers on our Priority Services Register to ensure help is provided to those who need it most.

We have reviewed the criticality of our sites from a power resilience perspective, understanding which have direct customer impact, and developing our response plans if such an event were to occur. We are also reviewing our standby generator fleet and looking to install generator connection points where appropriate if a permanent generator is not a viable option.

We are also looking to work with third parties to understand the risk of severe weather more holistically. An example is how we have developed a working relationship with UK Power Networks (UKPN), the Distribution Network Operator (DNO) for the majority of our supply area. Electricity is one of our most critical requirements as a business and extreme weather can put the electrical network at a higher risk. We have reviewed the resilience of our most critical sites with UKPN and used this to inform our plans in the event of a power outage. We have also developed this relationship to be part of their storm planning sessions and enable prioritisation of restoration for our most critical works.

4.1.4 Mitigation of rising water temperatures

Our Sustainability Reduction Programme has been designed with the aim of allowing the maximum possible benefit in river baseflow in areas where the geology allows for this to happen. Having more baseflow during certain flow conditions would then provide a habitat of constant temperature that would not be impacted as severely by climatic extremes due to the chalk groundwater's constant temperature. We consider that the planned abstraction reductions, in combination with targeted river

restoration works, will provide the maximum environmental benefit and enhance resilience in a changing climate. A catchment scale approach to tree works is being considered to ensure that sufficient shading is available. This may contribute to mitigation of rising water temperatures and enhancement of flora and fauna.

Our catchment and nature-based solutions programme will implement measures across our catchments, such as cover crops, to reduce pollution losses to water bodies and groundwater. Emphasis will be given to reduction of nutrient losses from agriculture into chalk groundwater and chalk streams. Our schemes will focus on reducing sediment and soil losses from our catchments into waterbodies which will mitigate the impact of rising temperatures on eutrophication and associated algal blooms.

4.1.5 ISO50001

We acknowledge the WISER expectation to implement ISO50001 and have assessed this in the context of our AMP8 plans. We currently follow the principles of ISO50001 with our data, processes, reporting, benefits tracking and improvements. However, we have taken the decision to achieve Energy Savings Opportunity Scheme (ESOS) compliance via a submission as part of Phase 3 of the scheme rather than through ISO50001 implementation. We expect to publish in late 2023, in line with the statutory reporting requirements. We are seeking to gain external validation of our energy management system through ESOS and this is also being used to support our ISO14064 (greenhouse gas reporting standard) accreditation. We therefore consider ISO50001 is unlikely provide any further material benefit to our energy management and reporting at this time but will keep this under review.

4.2 Ecosystem and natural function

Three requirements are listed under the ecosystem and natural function heading and a response has been provided to demonstrate how we are working towards and delivering against those expectations.

Ecosystem and natural function		
	<ul style="list-style-type: none"> Action that contributes to restoring natural function to allow capacity for growth and development and to allow nature recovery (NS) Action which supports Nature Recovery Networks through enhancing ecosystem resilience and ecosystem function on which nature recovery is reliant (where this goes beyond statutory obligations) (NS) Restore and reconnect priority habitats (e.g., wetlands and peatlands) as part of coherent ecological networks to strengthen freshwater and marine resilience to challenges such as climate change (S+) 	
What our Business Plan will deliver	Biodiversity Programme will deliver improvements on our sites and where possible we will align this with Nature Recovery Networks. We will support community projects and give priority to sites and habitats in Local Nature Recovery Strategies.	
Ambition(s)	Environment, Communities	
PC or PCD	Biodiversity PC Abstraction Reductions PCD	
Enhancement Investment	Biodiversity	£7.261m
	WINEP C&NbS – catchment initiatives and river restoration schemes in multiple catchments	£20.138m

	Sustainability Reductions	£125.347m
LTDS	Biodiversity and WINEP Water Framework Directive	

4.2.1 Nature Recovery Network & Local Nature Recovery Schemes

Our biodiversity programme aims to identify opportunities on company owned land where improvements could be made to habitats and species listed in Section 41 of the NERC Act, for pollinators, and to improve biosecurity to manage INNS both on company owned sites and also working in partnership to address INNS in our catchments and communities.

As part of this process, management options have been created for 83 company sites which identify where improvements can be made to increase the quality or number of Section 41 NERC Act habitats. 50 sites were audited to identify options for increasing pollinator numbers and management options were created for these sites to contribute to restoring natural function and to allow nature recovery.

Alongside this under the NERC Act driver through WINEP, we are also including a scheme to enhance woodland and hedgerow habitats in our supply area through the planting of trees and whips and a programme of third-party land biodiversity enhancement projects as part of our contribution to restoring natural functions of water and wetland ecosystems with partners on third party land. We will seek opportunities to align our programme and actively support **Nature Recovery Networks**.

In addition, a programme of investigations and schemes to maintain and/or prevent deterioration have been developed for SSSIs with the potential to be impacted by our water supply activities.

A further initiative within our biodiversity programme for AMP8 is to develop a mechanism by which support could be given to community projects aiming to improve biodiversity. A proposal was developed, and investigation outcomes were signed off by the EA in April 2022 with the expectation that the scheme will go live in AMP8. As part of the roll out of this scheme we will align with **the Local Nature Recovery Strategies** (LNRS) and priority for funding support will be given to priority sites and habitats identified in the LNRS.

For more information see our Enhancement Programme Cost Appendix business case:

- WINEP Biodiversity

In addition, we have developed under our WINEP for AMP8 and AMP9 a programme of C&NbS following a holistic approach in each of the operational catchments within our supply area which will support nature recovery alongside a range of ecosystem services. This includes a programme of land management focused C&NbS that will be spatially and temporally targeted to:

- Protect and restore natural assets in the operational catchments identified through our 'Catchment Assets for Water' project to improve water resource and chalk stream resilience.
- Implement appropriate C&NbS measures upstream of river improvement works under the river restoration programme (see section 2.10.4) to ensure greater

resilience of those schemes and maximise environmental benefits through a holistic catchment management approach.

- Deliver multiple benefits for water quality, resources, climate change regulation and biodiversity.

For more information see the following business cases in our Enhancement Programme Cost Appendix:

- WINEP: River Beane Flagship Scheme
- WINEP: River Colne Catchment and River Restoration
- WINEP: River Dour and Little Stour Catchment and River Restoration
- WINEP: River Upper Lea Catchment and River Restoration
- WINEP: Ivel and Cam Catchments and River Restoration

Our AMP7 Sustainability Reduction Programme will also support improved resilience of chalk stream habitats, by leaving more water in the environment and contribute to improving river flows and WFD status.

4.2.2 Risks presented by pests and diseases on our assets

Appendix 1 of the Climate Change Adaption report addresses the risks of an increase in pests and diseases on our natural assets. We have made progress in adapting to those risks and plan to further adapt by implementing our Tree Strategy which will provide guidance around inspection and identifying high risk trees. We will also continue to invest in catchment management through targeted nature-based solutions and identify additional interventions. Our INNS surveys, treatment and monitoring will also provide an integral role in addressing these risks.

4.3 Flood resilience

There are seven expectations under the flood resilience heading. The expectations under the future drainage heading have been deemed to be not applicable since we are a water only company and do not provide wastewater services. We have prepared an Enhancement business case for Flood Resilience which aligns with our long-term strategy to ensure that our network and treatment facilities are resilient to a range of external risks including the impacts of climate change. Protecting our key treatment works from flooding events supports our long-term resilience delivery strategy.

Flood Resilience
<ul style="list-style-type: none"> • Act in a manner consistent with the National Flood and Coastal Erosion Risk Management Strategy for England and have regard to Local Flood Risk Management Strategies (S) • Co-operate with other risk management authorities and Regional Flood and Coastal Committees in improving flood resilience and exercising water company flood risk management functions (S, NS) • Co-ordinate and share data and information with risk management authorities to deliver flood resilience, and with category 1 and 2 responders to manage incidents (S) • Comply with statutory reservoir safety requirements (S)

<ul style="list-style-type: none"> Engaging with stakeholders to understand service and system risks and implement solutions to improve flood resilience (NS) Contribute to reducing the number of properties at risk of all sources of flooding through co-funded or co-delivered schemes with other risk management authorities and other parties, including by using nature-based solutions (NS) Deliver sustainable drainage systems and nature-based solutions, for example by promoting these solutions through the business plan process (NS) 		
What our Business Plan will deliver	Flood resilience improvements at our operational sites WINEP catchment initiatives under our C&NbS schemes which will provide wider benefits including natural flood risk management	
Ambition(s)	Environment, Communities	
PC or PCD	Resilience PCD +ODI	
Enhancement Investment	Flood Resilience	£1.064m
LTDS	WINEP Water Framework Directive, Raw Water Deterioration, Flood resilience	

4.3.1 Flood Risk Management Strategies and incident management

We provide input to Flood Risk Management Strategies relevant to our supply area when requested, for example we provided feedback to Bucks County Council on their Flood Risk Management Strategy in 2023. We also responded to the EA consultation on 'Draft flood risk management plans for 2021-2027' in 2021 for the EA areas relevant to our operations.

We act in a way consistent with National Flood and Coastal Erosion Risk Management (FCERM) strategy for England by:

- Ensuring that our flood protection includes a climate change allowance, so that our work is future proofed.
- Continuing to plan to invest in flood protection between now and 2050, to address both current and emerging risks.
- Continuing to update our flood risk assessments to take account for changing risks at our sites, including those posed by climate change.

As at category 2 responder, we attend Local Resilience Forum meetings when relevant; this can include when responding to widespread flooding events.

We have internal triggers and procedures which we use to help manage groundwater flood risk.

4.3.2 Improving Flood resilience at our operational sites

We have carried out flood resilience works to protect our sites from fluvial and groundwater flooding risks since AMP5. Pluvial flooding has been assessed since AMP7, it was not assessed previously as there was no information available on pluvial flood risks. Flood proof doors have been installed at all our operational sites that are potentially vulnerable to flooding. As described in the Security and Emergency Measures (Water and Sewerage Undertakers and Water Supply Licensees) Direction

2022 (SEMD); these doors have also been installed with the appropriate Loss Prevention Certification Board (LPCB) security rating.

However, climate change is predicted to increase the risk of flooding by up to 25%. This means that severe weather events will become more common, and rainfall will become more intense. This will lead to increased river flows, a rise in groundwater levels, and more surface water runoff. As a result, the likelihood of our flood prone production sites being affected is higher, and could impact on our ability to produce and deliver water to customers.

We have and will continue to invest in both base and enhancement investment areas to provide flood resilience. Our base expenditure will improve the effectiveness of our existing flood resilience measures and manage emerging risks that may arise as we improve our understanding of our flood risks.

Our enhancement expenditure for AMP8 will deliver effective flood resilience works across production sites to:

- Fulfil our obligations set out in the WISER document;
- Mitigate the impact of climate change; and
- Address the emergence of additional flood related supply risks influenced by abstraction reductions and our WRMP (section 4.3.6).

Over the next 25 years, our LTDS core plan focuses on enhancing 17 fluvial, 71 pluvial, and 5 groundwater flood-prone sites, alongside modernising flood risk assessments and regional strategies. This core plan, chosen for its value through net present value assessment, will be adapted to 2050 to ensure resilience against extreme weather, climate change, population growth, and abstraction reductions.

Further information can be found in our Flood Resilience business case in the Enhancement Programme Cost Appendix:

- Flood Resilience

4.3.3 Statutory Reservoir Safety Inspections

We have 13 statutory reservoirs under the Reservoirs Act 1975. Our local operations teams undertake monthly site monitoring as part of routine visits and these reservoirs are inspected by a Supervising Engineer at a minimum twice every year and an annual statement sent to the Environment Agency. Furthermore, they are inspected once every ten years by an Inspecting Engineer in accordance with Section 10(2) of the Reservoir Act 1975. All 13 reservoirs have certified Onsite emergency plans for potential incident management purposes.

4.3.4 Sustainable Drainage Systems (SuDS) and nature-based solutions

We are looking at developing innovations focused on nature-based solutions to store and naturally filter flood waters. Our floodplain landholding at Oxhey provides a rare opportunity to explore alternative solutions that maximise benefits to flood storage, water quality, biodiversity and social engagement through wetland development.

As part of our C&NBS programme for AMP8, we will work with farmers and land managers across our supply area to incentivise the adoption and uptake of nature-based solutions such as regenerative agriculture measures, that, alongside benefits to water quality and biodiversity, can increase the water-holding capacity of soils that provide flood resilience in our chalk stream catchments.

For more information on Nature Based Solutions see the Catchment and Nature based Solutions Business Case in our Enhancement Programme Cost Appendix

- WINEP Beane Flagship Scheme

4.3.5 Partnership opportunities

We submitted a detailed response to the Flood Risk Management Plan consultation which provided an opportunity to assess partnership opportunities across the strategic measures in the plan. We are an active member of Lee 2100 and we are supporting the delivery of the Rediscovering the River Colne project with several key partners. The project is likely to involve the construction of a low flow channel which will create additional storage capacity during high flow events.

4.3.6 Groundwater emergence and fluvial flood risk

Groundwater emergence and fluvial flood risk has been identified as a potential unintended consequence of the implementation of some abstraction reductions. Our proposed AMP8 WINEP Water Resources Investigation programme includes assessment of these risks prior to the implementation of the AMP7 sustainability reductions in March 2030 and where necessary the identification of appropriate mitigation measures. These mitigation measures could include the introduction of high groundwater level triggers operated under a water resources management agreement under s20 of the Water Resources Act.

4.4 Security of supply: Water Resources Management Plan (WRMP)

There are 10 requirements under the security of supply heading. These have been addressed under separate subheadings below. More information can be found in our rdWRMP which was published on our website on 31st August 2023.

WRMP
<ul style="list-style-type: none"> • Demonstrate that the government expectations for water companies water resources planning have been met (NS) • Ensure WRMPs reflect the relevant regional water resource plans and show how strategic scale solutions are implemented to meet long term water supply needs and environmental destination (NS) • Abstractions and operations meet current regulatory requirements to support the achievement of environmental objectives (S, S+)- see section 2.10 • Incorporate sustainability changes into supply forecasts (NS) • Deliver solutions to meet the need identified in final WRMPs for 2030 and the long term (NS)

<ul style="list-style-type: none"> • Commitment to reduce demand and per capita consumption in line with the Environment Act target and set out in the Meeting Our Future Water Needs: a national framework for water resources (NS) • Set challenging targets for leakage informed by water company customers' views and the potential for innovation (NS) • Water companies in seriously water stressed areas may implement wider water metering programmes where it is shown within their WRMPs that there is customer support and it is cost effective to do so. Smart meters should become the standard meter installed, given the wider benefits or there should be justification for using older technology (S+) • Implement solutions to meet the needs identified in the final WRMP aiming for resilience to a 1-in-500-year drought by 2039 (or by 2050 where costs are exceptionally high locally in comparison to benefits) (NS) • Ensure agreed and up to date plans are in place to manage a drought and minimise environmental impacts (S)- see section 4.5 		
Base Investment	WRMP	£279.950m

4.4.1 Progress with WRMP24

The dWRMP 2024 consultation period has closed and we considered the responses and published on our website a statement of response and revised plan on 31 August 2023. A non-technical summary and a revised draft version of our WRMP (rdWRMP) was also published on the same date. Our WRMP addresses the balance between water supply and demand taking future pressures such as climate change and population growth into account. Sustainability reductions identified in WINEP have been included in the supply demand baseline and factored into our Business Plan options. The WRMP provides a roadmap for a reliable, resilient, sustainable, efficient and affordable water supply to customers between 2025 and 2075.

The table below outlines how the WRMP interacts with each relevant plan / policy and the section of the WRMP in which more information can be found.

Plan / policy	Link with the WRMP	Where to find
Government's 25 Year Environmental Plan	Our WINEP and long-term environmental destination	Chapter 5 – Water supply
	Natural capital and Biodiversity Net Gain in decision-making	Chapters 8,9 – Decision-making and Best value planning
	Our approach to catchment options	Chapter 7– Our options
Ofwat Long Term Delivery Strategies	Decision-making and best value plan we have incorporated the Ofwat scenarios in our adaptive planning branches	Chapters 8,9 - Decision making and best value planning
Drought Management Plan	Our explanation of our Levels of Service is aligned to our Drought Management Plan (DMP)	Chapter 2 – Basis of planning
River Basin Management Plans	Our WINEP ensures no deterioration from existing abstractions	Chapter 5 - Water supply
	SEA, HRA, WFD ensures that we prevent deterioration from future options and that we propose a secure sustainable set of options for the long-term security of supply	Chapter 7 - Our options

	Our approach to catchment management options	Chapter 7 - Our options
Drainage and Wastewater Management Plans	Options to supply multiple needs for both water only and wastewater companies	Chapter 7 - Our options
Drinking Water Safety Plans (or Risk Assessments) (DWSPs)	All our SRO programmes have incorporated DWSPs, and every non-SRO supply option has assessed risks associated with drinking water quality	Chapter 7 - Our options
Local Authority Development Plans	Our growth forecasts incorporate local authority estimates of planned growth	Chapter 4 – The demand for water
Local Nature Recovery Strategies	Awaiting legislation and further guidance from Natural England	Not available before WRMP24 publication will be considered for WRMP if available
Drought Vulnerability Strategies	How our WRMP24 links with the Drought Management Plan Drought vulnerability to supply	Chapter 2 – The basis of planning Chapter 5 – Supply

4.4.2 WRMP development

Our WRMP24 was produced in order to fulfil requirements of the Water Industry Act 1991 and the WRMP regulations 2007, which includes the other relevant sections of the WRMP directions. In Appendix 2.1 we provide signposting between the WRMP directions and our WRMP24 to help the reader locate the chapters where the WRMP directions are addressed. Additionally in England, the requirement for a SEA stems from the Environmental Assessment of Plans and Programmes Regulations 2004, while the requirement for Habitat Regulation Assessment (HRA) is contained in the Conservation of Habitats and Species Regulations 2017 (HRA Regulations). Our WRMP24 is subject to an SEA, HRA, WFD assessment and these can be found in Appendix 7.2 of the main plan. The SEA considers the effects of all feasible options on a range of environmental and socio-economic themes (including air, biodiversity, climatic factors, historic environment, landscape, material assets, population and human health, soil and water).

4.4.3 Opportunities for collaboration and engagement

The table below provides a summary of the different types of engagement that have been undertaken for WRMP24.

Type of engagement	Description
Regional engagement	WRSE engaged with the public, customers and stakeholders in the preparation of its regional plan. This has been utilised by us in preparation of our draft plan because we operate in shared geographical areas. The programme of engagement aimed to allow stakeholders to input during the critical development of the regional planning approach. In addition, our board assurance process ensures that our WRMP closely aligns with the regional plan.

Strategic schemes engagement	Engagement with customers and stakeholders potentially impacted by the six SROs. Their feedback has helped inform the development and design of the schemes.
WRMP pre consultation engagement	We have executed a programme of regular forums to supplement the regular meetings for pre consultation with the statutory consultees. This has enabled us to share and test our approaches in developing the WRMP24 with a more local audience.
PR24 engagement	WRMP24 forms a key part of the Price Review process and coordinates the wider company customer and stakeholder engagement programmes with the WRMP24 research and engagement to ensure consistency and alignment. This shared engagement across the two plans enables line of sight for both our customers and stakeholders.

4.4.4 'Best Value' approach

We have created our rdWRMP24 using cost, risks, benefits, and impacts to evaluate the best value investments (demand management initiatives and supply-side schemes) to maintain the supply-demand balance. This enables us to adapt it in the face of those 'best' and 'worst' case future scenarios. The "Best Value Planning" process allows the identification of the underlying issues, the possible solutions and the updated methods used to deliver a strategy that not only meets the objectives of the WRMP, but also provides the best possible outcome for stakeholders and the environment.

We determined that delivery of demand management should be phased over three AMP periods as the best value approach, for the following key reasons:

- It is a practical rate of delivery (100,000 smart meters per annum on average), although still at a rate higher than we have achieved to date.
- Delivering over a period of 15 years is fast enough to ensure that the benefits are in place before the rate of delivery of environmental destination might be accelerated within the Central communities (2040-2050), whilst at the same time it is conservative enough allowing us to take advantage of technological developments and hence reduce costs to customers.

Based on our current experiences of customer engagement and access to properties, this proposed smart meter rollout would cover the 90% of customers targeted by the current manually read meter installation programme.

4.4.5 Link with Drought Management Plan (DMP)

The probabilities for Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBs) are based on the groundwater triggers identified in our Drought Plan. These use groundwater triggers based on modelled data for the historic record back to 1918, and the frequency is calculated as the number of years in that record divided by the number of times that the generated curves are breached. Post 2025 the use of supply

side Drought Permits will reduce to 1 in 200 year return period, which has been calculated using the same models as for TUBs and NEUBs, but with stochastically generated input data to derive the 1 in 200-year curves. The same process was then used to generate the curves for the 1 in 500-year failure events post 2040. These trigger curves were used in the water resources system modelling described in Chapter 5 of the rdWRMP, so all of the supply side drought supply capability described in the rdWRMP24 are fully aligned with the levels of service (i.e., resilience to a 1 in 500-year drought). We have modelled our baseline data in the WRMP tables at 1 in 500-year resilience and then uplifted back to 1 in 200 for the years 2025-26 to 2038-2039. We are then aiming for resilience to a 1 in 500-year drought by 2039-40.

4.4.6 Sustainability Changes

Our rdWRMP and PR24 WINEP includes AMP8 sustainability reductions (reductions in deployable output) in four of our eight Water Resources Zones.

Please refer to section 2.10.1 of this report for further information.

4.4.7 Demand Management

Since 2013, our supply areas have been classified as under serious water stress by the EA. In February 2023, Defra released their expectations for demand management in their Environmental Improvement Plan (EIP). This resulted in the following assumptions and targets being applied to create our demand management strategies for the rdWRMP24:

Table 1 Environmental Improvement Plan 2023 targets in rdWRMP

Target	Reduction from	2027	2032	2038	2050
		AMP8	AMP9	AMP10	AMP12
Leakage	2017/18	20%	30%	-	50%
PCC	-	-	-	122l/p/d	110l/p/d
NHH	2019/20	-	-	9%	15%
DI (per head of population)	2019/20	9%	14%	20%	-

Our rdWRMP includes plans to install 1.5 million Advanced Metering Infrastructure (AMI) smart meters by 2040 to help reduce demand. We need to ensure that this programme continually makes the best use of innovation to deliver the best value possible. These measures will seek to reduce per capita consumption (PCC) average water use (litres/person/day). The PCC target aligns with the action set out in the ministerial statement made on 1st July 2021 for reducing demand for water. It is also set out in the EA report 'Meeting our Future Water Needs: A National Framework for Water Resources.

4.4.8 Leakage

We understand the importance of leakage reduction to our customers and the environment. Our leakage reduction target is 30% by 2029-30 and 50% by 2050 compared to a 2020 baseline. We received positive engagement and interest from stakeholders and customers regarding our leakage reduction target. The target is also

aligned with the commitments captured in the ministerial statement made on 1st July 2021 for reducing demand for water. More information on how we will deliver our leakage reduction target is provided in our Business Plan in sections 6.2.4 and section 7.2.

For more information on our best value plan including demand management and leakage strategies, please refer to Chapter 9 of our rdWRMP.

4.5 Drought Management Plan (DMP)

Our final draft DMP was submitted to Defra on 21 September 2022, following minor revisions based on EA comments. Defra and the Secretary of State approved our new plan in June 2023, which has now been published. We believe that our plan is clearer and more robust and technically sound than our 2018 DMP, offering greater protection to public water supply and the environment. This feedback has been echoed by the EA.

The following guidance/directions were taken into account when preparing our draft DMP:

- Water Company Drought Plan guideline, December 2020, Environment Agency
- The Drought Plan Direction 2020, Defra
- Government expectations, letter sent to water company CEOs on 6 April 2020

Following the dry weather/drought of 2022, we have conducted an internal review of our drought management triggers, processes and performance, as well as contributing to EA run 'Lessons Learnt' workshops. We have concluded that our drought management triggers and processes performed well during 2022 and were appropriate to the risks posed by drought to the resources in our supply areas.

5 Appendix – Summary Table of WISER

WISER	Category	Where to find this expectation or requirement in our Business Plan
Objective: a thriving natural environment		
Bathing Waters		
Action to improve waters with a current planning class of poor	S	N/A
Action to improve waters at risk of deterioration to a planning class of poor (more than 20% risk of failing sufficient)	S	N/A
Action to improve waters to good or excellent where this is evidence of customer support	NS	N/A
Action to improve waters failing their baseline class	S	N/A
Action to improve waters non-designated waters where there is evidence of customer support	NS	N/A
Action to communicate to the public the location and quality of designated bathing waters and actions they can take to support bathing water quality	NS	N/A

Chemicals		
Action to prevent deterioration (includes standstill measures)	S	N/A
Action to achieve compliance with environmental quality standards	S+	N/A
Develop and implement operating targets for chemical removal for existing and upgraded wastewater treatment works as part of assessing performance in reducing chemical loads to the environment	NS	N/A
Review and strengthen management of trade effluent, tankered waste and sludge transfers to improve effluent and sludge quality	S	N/A
Investigate existing and emerging substances occurring in sewerage systems, inform and work with consumers, businesses, and other stakeholders to develop innovative approaches to reduce loads entering sewerage systems or treatment techniques to improve the environment	NS	N/A
Drinking Water Protected Areas		
Catchment actions to prevent deterioration in water quality and to reduce the need for additional treatment	S	WINEP Business Cases: Lower Thames DrWPA Catchment Management, Karstic Groundwater Improvements & Dour & Little Stour

Catchment actions to improve water quality to reduce the level of existing treatment	S+	WINEP Business Cases: Lower Thames DrWPA Catchment Management, Karstic Groundwater Improvements & Dour & Little Stour
Environment Act 2021 Targets		
Reduce phosphorus loadings from treated waste water in line with the Environment Act's long-term environmental targets (S)	S	N/A
Reduce the use of public water supply in England per head of population in line with the Environment Act's long-term environmental targets	S	Section 3.6 Innovation, Section 6.5.3 Selecting the best options, Section 7 Outcomes - PCC performance commitment. revised draft Water Resources Management Plan
Healthy and resilient fish stocks		
Screen abstractions and outfalls to prevent the entrainment of eels, salmon, sea trout and to resolve Water Framework Directive fish failures	S, S+	WINEP Business Case: Walton Fish Screens Options Appraisal
Address barriers to the passage of fish	S+	WINEP Business Cases: River Thames Fish Passage Improvements and River Restoration component of our C&NbS schemes
Action that supports recovery of Natural Environment and Rural Communities Act (NERC) Act S.41 priority fish species (which includes salmon, brown sea trout, eels, smelt, river and sea lamprey and shad) or at sites where fish form part of the conservation designation	S+	WINEP Business Cases: River Thames Fish Passage Improvements and River Restoration component of our C&NbS schemes

Invasive non-native species (INNS)		
Prevent deterioration by reducing the risk of spreading INNS and reducing the impact of INNS (S)	S	Biodiversity Business Case - INNS
Reduce the impact of INNS, where INNS is a reason for not achieving conservation objectives or good status (S, S+)	S, S+	Biodiversity Business Case - INNS
Reduce pathways for the introduction and spread of INNS (S)	S	Biodiversity Business Case - INNS
Natural Environment		
Action that contributes to meeting and or maintaining conservation objectives of Habitats sites, for example, addressing the potential impact of development and growth	S	WINEP Business Cases C&NbS and Biodiversity
Action that contributes to meeting or maintaining favourable condition targets for Sites of Special Scientific Interest	S+	Business Plan Section 3.5, Section 2.7.1 of this report WINEP Business Cases C&NbS and Biodiversity
Action that contributes to the restoration and recovery of habitats and species under the NERC Act including supporting delivery of the Nature Recovery Network	S+	Business Plan Chapter 3.5, Section 2.7.2 of this report WINEP Business Cases C&NbS and Biodiversity
Action that contributes to the achievement of conservation objectives of Marine Conservation Zones and (when designated) the desired state of the environment within Highly Protected Marine Areas (S, S+)	S, S+	N/A

Actions for biodiversity should deliver the outcomes of the relevant Local Nature Recovery Strategy, Protected Site Strategies, and Species Conservation Strategies introduced by the Environment Act	S+	Biodiversity Business Case
Contribute to actions under non-statutory initiatives including the England Peat Action Plan, England Tree Action Plan, and the National Pollinator Strategy	NS	Section 2.7.4 Biodiversity Business Case
Action that contributes to the conservation and enhancement of landscape character and sense of place, so that landscapes are alive for nature and beauty, and provide opportunities that benefit people's health and wellbeing (where this goes beyond statutory obligations)	NS	Biodiversity Business Case and C&NbS. Business Plan Section 3.5
Action that delivers inclusive public access to water company land and water of natural beauty, amenity or recreational value and allow public access for the widest possible range of activities	S+	Business Plan Section 3.5.1 Enhancing catchment resilience
Shellfish waters		
Action to prevent deterioration of shellfish water protected areas	S	N/A
Action to achieve shellfish water protected area objectives	S	N/A
Urban wastewater		

Reduce the frequency and volume of sewage discharges from storm overflows in line with the Storm Overflow Discharge Reduction Plan	S	N/A
Action to protect newly identified Sensitive Areas	S	N/A
Action to improve wastewater treatment where population thresholds are exceeded and, in line with Defra policy, provide secondary treatment where water company owned septic tanks discharge to surface water	S	N/A
Maintain sewers to minimise sewer leakage especially in source protection zones	S	N/A Note - We have engaged with Thames Water and provided a list of groundwater sources where water quality analysis suggests there is potential for sewer leakage.
Provision of first-time sewerage schemes	S	N/A
Action to increase flow to full treatment and storm tank capacity at wastewater treatment works where the Urban Waste Water Treatment Regulations requirements are not being met	S	N/A
Water body status (river basin management plan objectives)		
Action to prevent deterioration in current water body status	S	Section 2.10.3 of this report WINEP Sustainability Reductions Business Case WINEP Water Resource Investigations Business Case

Action to improve water body status	S+	<p>Section 2.10.1 of this report</p> <p>Section 2.10.4 of this report</p> <p>WINEP Sustainability Reductions Business Case</p> <p>WINEP Colne Catchment and River Restoration Business Case</p> <p>WINEP Dour and Little Stour Catchment and River Restoration Business Case</p> <p>WINEP Upper Lea Catchment and River Restoration Business Case</p> <p>WINEP Ivel and Cam Catchments and River Restoration Business Case</p>
Action to ensure no river, lake or estuary is in poor or bad ecological status due to the water industry	S+	<p>Section 2.10 of this report</p> <p>WINEP Sustainability Reductions Business Case</p> <p>WINEP Water Resource Investigations Business Case</p>
Work with stakeholders and catchment partnerships to explore integrated solutions, including nature-based solutions, and delivery of multi-functional benefits at a catchment scale	NS	<p>Business Plan Section 3.5.2</p> <p>Section 2.10.4 of this report</p> <p>WINEP Sustainability Reductions Business Case</p> <p>WINEP Water Resource Investigations Business Case</p>
Objective: expected performance and compliance		
Regulatory compliance (all regimes)		
Achieve 4-star status on the Environmental Performance Assessment	NS	<p>Section 3.1 of this report</p> <p>Outcomes section 7 of our Business Plan</p>

100% compliance for all licences and permits	NS	Section 3.2 of this report Section 7 of our Business Plan.
100% compliance at wastewater treatment works and water treatment works with numeric limits and for storm overflows	S	Section 3.3 of this report Business Plan Performance Commitment section
100% compliance with environmental impact and operational performance permit conditions at wastewater treatment works and water treatment works with descriptive not numeric limits	S	Section 3.3 of this report Section 7 of our Business Plan.
100% compliance with abstraction and impoundment licences	S	Section 3.2 of this report
All the correct authorisations (permits and exemptions) are held and 100% compliance with installation permits, waste operation permits and waste exemptions	S	Section 3.2 and 3.3 of this report Outcomes section 7 of our Business Plan
100% compliance with flow conditions, including dry weather flow, flow to full treatment, maximum daily volume, and flow rates, MCERTS certification, at wastewater treatment works and water treatment works	S	Section 3.2 and 3.3 of this report Outcomes section 7 of our Business Plan
100% compliance with ultra-violet dose conditions	S	N/A
zero serious pollution incidents (category 1 and 2)	S	Section 3.4 of this report Chapter 7 of our Business Plan

At least a 30% reduction of all pollution incidents (category 1 to 3) by 2030 on current 2025 targets. There may be some variation on our expectation depending on company performance during the current asset management plan period (2020 to 2025)	S	Business Plan Section 7 Outcomes - Performance Commitment for Serious Pollution Incidents
High levels of self-reporting of pollution incidents with at least 90% of incidents self-reported by 2030. More than 95% of incidents self-reported for wastewater treatment works and pumping stations	NS	Section 3.4 of this report Section 7 of our Business Plan
Business plans include all actions identified within the WINEP and these are planned well and completed to agreed timescales and specification	S	Section 3.5 of this report Relevant WINEP Business Cases
Either good or excellent rating of self-monitoring provisions under Operator Monitoring Assessment. Compliance with self-monitoring conditions, including data quality and providing data on time for Operator Self-Monitoring, Urban Waste Water Treatment Regulations and flow monitoring, event duration monitoring and ultra-violet disinfection	S	N/A
Sustainable management of sludge treatment and onward sludge use so as not to cause regulatory breaches or pollution to land, surface water or groundwater by implementation. Including modernisation of the regulatory controls through delivery of the Environment Agency's sludge strategy, which moves sludge from Sludge (Use in Agriculture) Regulations to Environmental Permitting Regulations	S	N/A
100% compliance with satisfactory use of sludge on agricultural land	S	N/A

Objective: resilience for the environment and customers		
Climate change		
Report on understanding of risks from climate change and how they are being addressed through Adaptation Reporting Power reports	S	Section 4.1.1 of this report Climate Change Adaption Report
Contribute to the sector's ambition to achieve net zero carbon by 2030 as set out in Water UK's 'Net Zero 2030 Routemap'; to meet the government's 2050 net zero target, the sector will need to go beyond the stated net zero ambition as currently scoped 1 and 2 greenhouse gas protocol to account for, and reduce, existing indirect emissions greenhouse gas protocol Corporate Value Chain (Scope 3) Standard, that result from: future asset management plan delivery; new national requirements; and measures taken in adapting to and addressing climate change impacts	NS	Section 4.1.2 of this report
Apply adaptive planning for a range of future climate change scenarios	NS	Section 4.1.1 of this report
Safeguard services and ensure risks are proactively identified and actions implemented using an adaptive planning approach	NS	Climate Change Adaptation Report Climate change considered throughout development of Business Plan and rdWRMP
Deliver actions to restore form and function of the natural environment to improve resilience of ecosystems to warmer water temperatures,	NS	Section 4.1.4 of this report

more frequent flooding and drought, and rising sea level (where this goes beyond statutory obligations)		
Deliver actions that help to mitigate rising water temperatures	NS	Section 4.1.4 of this report
Deliver actions that mitigate the impact of low flows and rising temperatures on water quality (where this goes beyond statutory obligations)	NS	Section 4.1.4 of this report
Ecosystem and natural function		
Action that contributes to restoring natural function to allow capacity for growth and development and to allow nature recovery (NS)	NS	WINEP Biodiversity business case Section 4.2.1 of this report
Action which supports Nature Recovery Networks through enhancing ecosystem resilience and ecosystem function on which nature recovery is reliant (where this goes beyond statutory obligations) (NS)	NS	WINEP Biodiversity business case Section 4.2.1 of this report WINEP Beane Flagship Scheme Business Case River Restoration Business Cases
Restore and reconnect priority habitats (such as wetlands and peatlands) to strengthen freshwater and marine resilience to challenges such as climate change (S+)	S+	WINEP Biodiversity business case Section 4.2.1 of this report WINEP Beane Flagship Scheme Business Case River Restoration Business Cases
Flood risk management		

Act in a manner consistent with the National Flood and Coastal Erosion Risk Management Strategy for England and have regard to Local Flood Risk Management Strategies	S	Section 4.3.1 of this report Flood Resilience Business Case
Co-operate with other risk management authorities and Regional Flood and Coastal Committees in improving flood resilience and exercising water company flood risk management functions	S, NS	Section 4.3.1 and 4.3.4 of this report Flood Resilience Business Case
Co-ordinate and share data and information with risk management authorities to deliver flood resilience, and with category 1 and 2 responders to manage incidents	S	Section 4.3.1 and 4.3.4 of this report Flood Resilience Business Case
Comply with statutory reservoir safety requirements	S	Section 4.3.3 of this report
Engaging with stakeholders to understand service and system risks and implement solutions to improve flood resilience	NS	Section 4.3.1 and 4.3.4 of this report Flood Resilience Business Case
Reduce sewer flooding of homes and businesses trending towards zero	NS	N/A
Contribute to reducing the number of properties at risk of all sources of flooding through co-funded or co-delivered schemes with other risk management authorities and other parties, including by using nature-based solutions	NS	Section 4.3.1 Section 4.3.2 Section 4.3.4 and Section 4.3.5 of this report Flood Resilience Business Case

Deliver sustainable drainage systems and nature-based solutions, for example by promoting these solutions through the drainage and wastewater management plan process and business plans	NS	Section 4.3.3 of this report Flood Resilience Business Case
Future drainage		
PR24 business plans should reflect the requirements including the extent and pace of these reductions as set out in the Secretary of State's "Storm Overflow Discharge Reduction Plan" to be published by 1st September 2022	S	N/A
Water and sewerage companies drainage and wastewater management plans should provide the evidence base for reducing spills from current and future baselines to meet the requirements of the Storm Overflow Discharge Reduction Plan (NS)	NS	N/A
Improve and monitor networks and wastewater treatment works to reduce the number of failures	NS	N/A
Ensure compliance with permitted flow to full treatment settings	S	N/A
PR24 business plans should address the Environment Act duties on water and sewerage companies to: - continuously monitor the receiving water quality potentially affected by storm overflows - publish data on storm overflow operation on an annual basis and make spill information available in near real time	S	N/A

Water resources – security of supply		
Demonstrate that the government expectations for water companies' water resources planning have been met	NS	revised draft Water Resources Management Plan Section 4.4 of this report
Ensure water resource management plans reflect the relevant regional water resource plans and show how strategic scale solutions are implemented to meet long term water supply needs and environmental destination	NS	revised draft Water Resources Management Plan Section 4.4.1 and 4.4.2 of this report
Abstractions and operations meet current regulatory requirements to support the achievement of environmental objectives	S, S+	Section 2.9.3 of this report revised draft Water Resources Management Plan
Incorporate sustainability changes into supply forecasts	NS	revised draft Water Resources Management Plan Section 2.9.1 of this report
Deliver solutions to meet the need identified in final water resource management plans for 2030 and the long term	NS	revised draft Water Resources Management Plan Section 4.4 of this report
Commitment to reduce demand and per capita consumption in line with the Environment Act target and set out in the Meeting our future water needs: a national framework for water resources	NS	Chapter 9 of revised draft Water Resources Management Plan Section 4.4.7 of this report
Set challenging targets for leakage informed by water company customers' views and the potential for innovation	NS	Section 4.4.8 of this report Chapter 9 of revised draft Water Resources Management Plan Main business plan in sections 6.2.4 and section 7.2

<p>Water companies in seriously water stressed areas may implement wider water metering programmes where it is shown within their water resource management plans that there is customer support and it is cost effective to do so. Using the latest evidence provided by the Environment Agency, additional areas in the South, East and the Midlands were designated as in serious water stress by the Secretary of State in July 2021. Smart meters should become the standard meter installed, given the wider benefits or there should be justification for using older technology</p>	<p>S+</p>	<p>Chapter 9 of revised draft Water Resources Management Plan Section 4.4.7 of this report</p>
<p>Implement solutions to meet the needs identified in the final water resource management plan aiming for resilience to a 1-in-500-year drought by 2039 (or by 2050 where costs are exceptionally high locally in comparison to benefits)</p>	<p>NS</p>	<p>revised draft Water Resources Management Plan Section 4.4.5 of this report</p>
<p>Ensure agreed and up to date plans are in place to manage a drought and minimise environmental impacts</p>	<p>S</p>	<p>revised draft Water Resources Management Plan Final Drought Management Plan 2023 Section 4.5</p>
<p>Section 2: Expected approach and practice</p>		
<p>Demonstrate leadership:</p>		
<p>Valuing the environment by considering the social and economic value of the water environment, using it to inform decision making, and secure wider benefits for communities and society</p>		<p>HM Treasury Green Book approach to options assessment. Cost benefit analysis for our Business Cases has considered social, environmental, and economic value and wider public value.</p>

<p>Embracing innovation by seeking opportunities to improve the environment through better industry practices, better urban design, and better land management</p>		<p>WINEP C&NbS business cases. Business Plan Section 3.5.2 Resilience Chalk Catchments</p>
<p>Building stronger and more collaborative catchment and flood partnerships to maximise and integrate benefits and evolve solutions work with others to allow catchments to function more naturally, wildlife to thrive and to build resilience to future climate impacts</p>		<p>WINEP Beane Flagship Scheme Business Case Section 4.3.4 of this report Flood Resilience Business Case WINEP river restoration business cases</p>
<p>Water companies should seek partnership opportunities to</p>		
<p>Achieve their business plan outcomes</p>		<p>Business Plan Section 3.5 'Environmental gains through partnership Working' and 6.6 'Efficiency' WINEP C&NbS Business Cases.</p>
<p>Improve efficiency</p>		
<p>Enable more sustainable, resilient options</p>		
<p>Water companies should work with other local plan makers and authorities to align ambition, programmes, funding, and action in a catchment. This is to make sure there is adequate water for growth, development, and the environment in a changing climate.</p>		

<p>Working with other place-based partnerships (for example, local nature partnerships, local enterprise partnerships, and coastal partnerships) and engaging with local nature recovery strategies will support a nature recovery network as highlighted in the government's 25 Year Environment Plan.</p>		<p>Section 2.3.2 of this report WINEP Lower Thames DrWPA Catchment Management Business Case WINEP Karstic Groundwater Sources Catchment Management Business Case WINEP River Dour and Little Stour Catchment: WINEP Dour and Little Stour Catchment and River Restoration Business Case Section 2.9.7 River Brett case study</p>
<p>Developing a shared vision and understanding with catchment partners will help water companies optimise their investments and gain support from local communities and businesses who benefit from a healthy water environment and enhanced landscapes.</p>		<p>Section 2.3 Section 2.7.7 Section 2.9 Section 2.10.7 and Section 3.5 of this report</p>
<p>Green finance</p>		
<p>Water companies should adopt, promote, and encourage green finance use to help grow the UK market, green their supply chains and set a green framework for the network of stakeholders that help achieve and support water company outcomes.</p>		<p>Section 3.7 of this report Green finance framework Appendix AFW15 of our Business Plan</p>
<p>Helping people connect with the water environment</p>		
<p>Water companies can help achieve a significant change in improving access to the outdoors for all to improve public health, support children and young people and contribute to nature recovery and net zero.</p>		<p>Section 2.7.7 of this report</p>

<p>Water companies are ideally placed to provide people with access to their land and blue spaces.</p>		
<p>Natural Capital and environmental valuation</p>		
<p>Water companies should adopt a natural capital approach to inform their planning and long-term investment decisions.</p>		<p>Section 1.4 of this report Business Plan Section 3.5.1 and 3.6</p>
<p>A Natural Capital asset and ecosystem service register will enable water companies to value the environment benefits assets provide through a Natural Capital account.</p>		<p>Section 1.4 of this report Section 8.27 of the revised draft Water Resources Management Plan</p>
<p>The Environment Agency has produced a Natural Capital Register and Account Tool (NCRAT) which water companies could use to create a Natural Capital register and account using open-source data.</p>		<p>Section 1.4 of this report</p>
<p>Water companies can carry out surveys to draw out people's preferences for changes in the environment. These can be used in benefit valuation work if appropriate. Questions directly linked to well-described environmental changes will help to estimate people's preferences and the economic value they place on changes to the environment.</p>		<p>Business Plan Section 4 - 'What customers want'. WINEP Customer Engagement - see relevant section of WINEP Business Cases. dWRMP consultation and regional water resources public value engagement work carried out for WRSE.</p>

Using sustainable drainage systems		
Water companies should take account of the developing knowledge and approach to sustainable drainage systems including the consultation on the Government's Storm Overflow Discharge Reduction Plan.		N/A
Technology and smart networks		
Embracing technology and developing smart networks is essential to drive process efficiency and to achieve carbon reductions. Employing smart technology to inform drainage and wastewater planning and water resource planning will enable companies to develop targeted solutions.		Section 4.4.8 of this report Revised draft Water Resources Management Plan
Working with nature-based solutions and catchment scale thinking		
The Environment Agency and Natural England expect water companies to consider using catchment and nature-based solutions more broadly, wherever they can achieve whole or part of the environmental outcome. Proposed solutions should have a plausible mechanism for achieving the required solution, biodiversity gains and improvements to ecosystem integrity. The longer planning timeframe of 25 years enables the delivery of options which require a longer lead-time such as catchment and nature-based solutions.		Section 2 of this report WINEP Business Cases