

## Draft 25 Year Environment Plan



## Our draft 25 Year Environment Plan

Our draft 25 Year Environment Plan sets out the actions we commit to taking to protect and enhance our environment in the short and long-term. It includes detailed targets and activities in support of our business plan to 2045 and beyond.

We are at a critical point for the environment with some difficult and challenging decisions to make. It is important that we fully understand the impacts of these decisions on the environment as a whole and the plan we create does not focus on individual environmental pressures but considers the environment as a system of complex interactions.

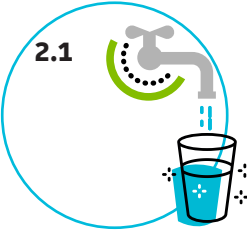
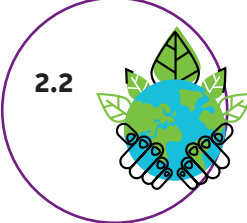
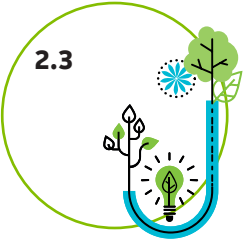
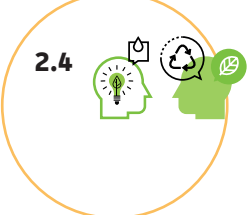
We have created the plan in partnership with many of the other organisations who have an interest in, impact on, or responsibility for the environment, as well as with our customers and employees. We recognise that we can all achieve much more by working together, each organisation doing its fair share.

### Our plan:

- **Demonstrates our commitment to achieving environmental resilience and protecting the supply of high-quality raw water, using sound scientific data in our decision-making**
- **provides a framework for delivery and monitoring to ensure that we deliver 'the environment thrives' element of our Responsible Business Strategy in addition to the environmental commitments we make within this plan**
- **shows how we will comply with environmental legislation and obligations, keeping it in line with external strategies such as the Defra 25 Year Environment Plan**
- **balances all the needs of the environment using methods that allow complex trade-offs to be assessed and delivered**
- **will be revised and updated every 5 years, continually look ahead to the next 25 years, because we know that making lasting changes to the environment takes time.**

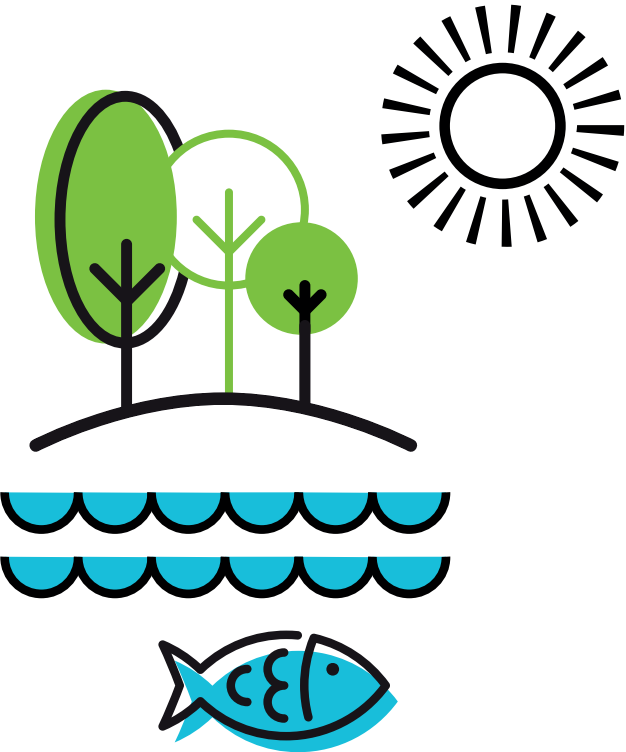





# Contents

<b>1. Setting the scene</b>	5	<b>2. Our co-created 25 Year Environment Plan</b>	24
<b>1.1</b> Welcome to our draft 25 Year Environment Plan	5	<b>2.1</b>  <b>Resilient safe water, now and into the future</b>	24
<b>1.2</b> A holistic approach to the environment	7	<b>2.2</b>  <b>Protection for climate change and environmental hazards</b>	25
<b>1.3</b> Our co-creation approach to developing our 25 Year Environment Plan	8	<b>2.3</b>  <b>Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency</b>	26
<b>1.4</b> Why we need to look after our environment to protect our water supply	11	<b>2.4</b>  <b>Working in partnership with other key organisations to protect and enhance the environment</b>	27
<b>1.5</b> Current and future threats to water – supporting environmental resilience	14		
<b>1.6</b> Priority themes for our draft 25 Year Environment Plan	16		
<b>1.7</b> Linking with key external policies, legislation and regulations	19		
<b>1.8</b> Linking with our business plan strategies	20		
<b>1.9</b> Current environmental performance	22		
<b>1.10</b> Goals and targets for our 25 Year Environment Plan	23		

Contents continued

3.	Our environmental framework for priority environmental themes, outcomes and key objectives	28
Annex A	External influences over environmental resilience	51
Annex B	Internal factors relating to environmental resilience	53
Annex C	Indicative goals and targets	55



3.2		<b>Resilient safe water, now and into the future</b>	55
		3.2.1 Key outcomes required to deliver resilient safe water now and into the future	55
3.3		<b>Protection for climate change and environmental hazards</b>	62
		3.3.1 Key outcomes required to deliver protection for climate change and environmental hazards	62
3.4		<b>Sustainable business, enhancing nature and heritage, reducing waste and source efficiency</b>	65
		3.4.1 Key outcomes required to deliver sustainable business, enhancing nature and heritage, reducing waste and source efficiency	65



# 1. Setting the scene

## 1.1 Welcome to our draft 25 Year Environment Plan

Every day, we supply an average of 520 million litres of top quality drinking water to 2.2 million customers in the south east of England.

To supply today's customers, we draw water from more than 250 boreholes, six rivers and six reservoirs. This water is treated at one of our 83 water treatment works before being pumped to homes and businesses through more than 9,000 miles of underground pipes.

Because we know how much the environment matters to our current and future supply of top-quality drinking water to an ever-increasing population, we are proud that we are the first UK water company to publish a 25 Year Environment Plan. This appears to be a first in other industries, too.

We felt the need to create a 25 Year Environmental Plan as the environment is complex, interventions can take time to deliver change and many of the issues related to the environment interact, meaning that any solutions need to be carefully considered to ensure that they deliver the best overall environmental solution both for now and into the long-term future.

Our draft 25 Year Environment Plan aligns with our current business commitments and core values. It forms a part of our overarching Responsible Business Strategy and is a plan which will set the environmental principles that we will work to as a business. It links to our desire to be a purpose driven business with our purpose being **"To provide today's water service and create tomorrow's water supply solutions, fairly and responsibly, working with others to help society and the environment to thrive."**

This plan is not fixed, but will be revised and updated at least every five years, continually looking ahead to the next 25 years. In it we gather priorities and seek to decide how we will make trade-offs between stakeholder priorities to ensure the environment is managed in a holistic and transparent way.

Over the course of seven months, we worked with more than 250 of our stakeholders, customers and employees to understand their priorities when it comes to the environment. It is these priorities, along with the scientific data and knowledge we hold, we have formed the basis of our draft plan.

You can read more about the research we conducted in writing this plan in our Co-creating our draft 25 Year Environment Plan report.

Through consultation with stakeholders we will seek to set targets and routes for the delivery of our environmental plan, clearly showing how it will inform all processes across our business.

The critical nature of environmental resilience to the future of our company has been an inherent part of our operations for over a century. In the early 1920s, groundwater catchments near Eastbourne were planted with conifers and beech trees to both improve rainwater infiltration into the ground waterbody and to protect the quality of the groundwater.

Moving forward to today, we are using scientific research and modelling approaches through our Interreg partnership project, 'PROWATER' – to determine which habitats are the best to provide environmental resilience to drought and flooding. The protection of raw product to the service we deliver, with emerging risks from climate change, science driven work of this nature is a key element of our environmental planning.

**You can read more** about our involvement in the PROWATER research on page 6.



Emma Goddard  
Head of Environment

## Case study: Using sound science to protect and restore raw water sources

South East England is classed as an area of serious water stress by the Environment Agency, and climate predictions point towards drier and warmer summers with more extreme rainfall events. This could reduce the amount of water available for producing top-quality drinking water in the future.

That's why we're taking part in the European Regional Development Fund's PROWATER project alongside 10 organisations from Belgium, the Netherlands and the UK.

PROWATER stands for 'protecting and restoring raw water sources' and will see us gather data to understand how changes to vegetation types on top of a chalk aquifer underneath Friston Forest in East Sussex can impact water availability, water quality and wildlife.

We abstract this groundwater from deep man-made wells, before turning it into fresh drinking water and pumping it to homes and businesses.

Although we own the land, around 75 per cent of it is managed as a commercial forestry, while the remaining area includes a Site of Special Scientific Interest and National Nature Reserve. These sites are home to rare chalk heathland and grassland habitats which are at risk of being taken over by scrub and gorse, unless carefully managed.

As part of the PROWATER project, we've opened up small pockets of woodland, gorse and scrub to allow the chalk grassland or heathland which originally existed here to regrow.

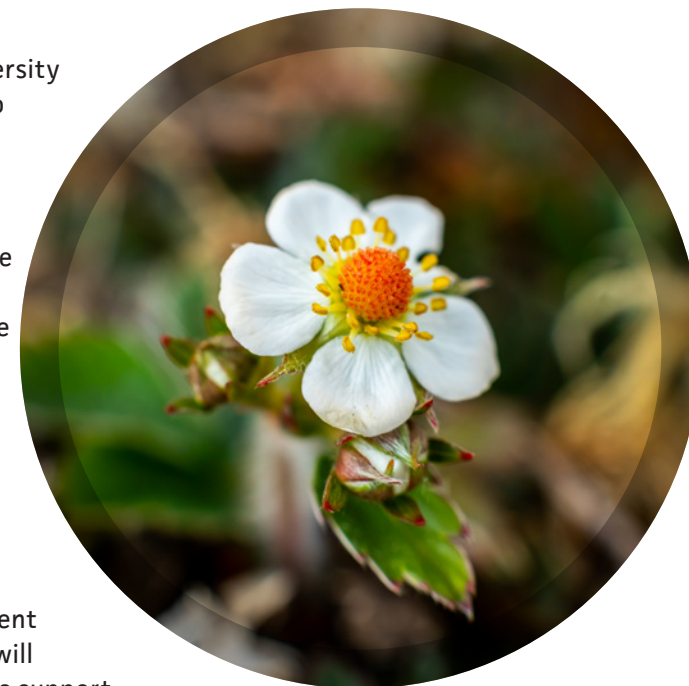
We're monitoring the amount of water infiltrating the ground, water quality and increases in wildlife for each habitat type, to understand how what is grown above the ground influences the water underneath it.

We hope this project will provide a better understanding of how different habitats can be utilised to provide resilience to climate change. The key purpose of this work being to help develop our understanding of how the wider landscape can protect us from the worst effects of dry weather and flooding to ensure clean and plentiful water for years to come.

It also supports our biodiversity programme, which looks to increase the range and number of species within our supply area.

As the pockets of forest are opened up, the increased sunlight encourages a more diverse range of plants to grow, in turn attracting far more butterflies, moths, bats and reptiles than the wooded areas.

Meanwhile, the chalk grassland, which is considered the UK-equivalent of the Amazon rainforest, will slowly return and be able to support a range of species, including some which cannot survive anywhere else - such as the rare wart-biter bush cricket.



Friston Forest  
wild strawberry



**Find out more:** [southeastwater.co.uk/PROWATER](https://southeastwater.co.uk/PROWATER)

Working in this way supports these environmental outcomes:

- 🌿 Resilient safe water
- 🌿 climate change
- 🌿 sustainable business.

**Key** 🌿 high impact 🌱 medium impact 🔴 low impact

## 1.2 A holistic approach to the environment

The purpose of our draft 25 Year Environment Plan is to supplement our existing approaches to water resource and business planning, meeting the expectations of customers, society and stakeholders. We are creating a roadmap for how we will help develop a more resilient environment across all parts of our operational area, now and into the long-term considering all environment impacts from carbon to abstraction.

Our approach has shaped a plan which is a template for future, long-term environmental planning and one that will be delivered in partnership with a wide range of stakeholders.



When developing our plan we have followed a number of core principles:

1. Compliance with current and emerging legislation.
2. A plan which is integrated, consistent and sets environmental principles for wider business plans.
3. Decisions driven by sound science and data.
4. Covers all environmental impacts and issues to ensure trade offs can be clearly understood.
5. Co-created with stakeholders and customers to target areas which are important to them.
6. Seeks to collaborate on ideas, solutions, innovation and delivery – to ensure that our customers only pay their fair share.
7. Delivery at the right pace to enable nature based solutions to be utilised in preference to 'hard engineering solutions'.
8. Designed through extensive engagement.
9. A plan which is regularly refreshed and always relevant to emerging environmental issues.
10. Uses natural and social capital valuations to drive decision making and ensure the right long term decisions are made both for the environment and our customers\*.
11. Clearly sets out aspirational targets to enable customer willingness to pay to be tested and to inform wider business plans.

\* **Read our case study** on page 17 to find out more about how we used a capitals approach to balance the costs and benefits of two new water sources in East Kent.

### 1.3 Our co-creation approach to developing our draft 25 Year Environment Plan

To achieve our company purpose we need to have a deep understanding of our customers and stakeholders in order to deliver on their expectations of us as an essential service provider.

We recognise that direct input from our stakeholders, customers and employees will make our long-term environment plan more meaningful, robust, holistic and deliverable so we followed the approach set out in our Engagement Strategy.

Over the course of seven months, we spoke with more than 250 customers, stakeholders and employees through nine bespoke workshops to understand what they want to see in the UK water industry's first draft 25 Year Environment Plan.

For the purpose of our draft 25 Year Environment Plan, our overarching question is:

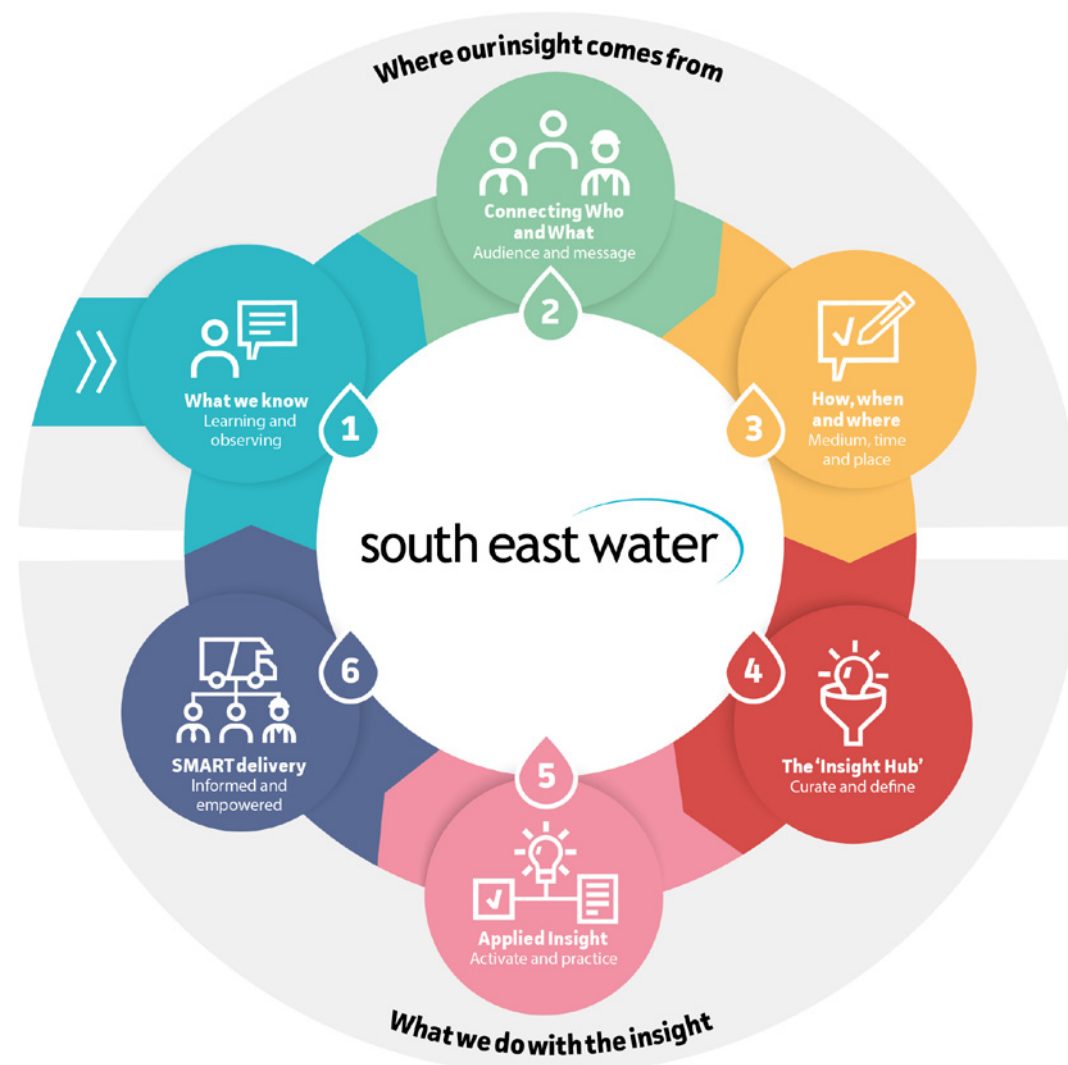
What does society expect us to do to secure the resilience of the environment in which we operate?

It is this which we sought to answer through the engagement with our employees, customers and stakeholders which we carried out to co-create the draft 25 Year Environment Plan.

This approach provides us with a plan that can fully demonstrate how decisions have been made and any trade-offs have been considered in to a fair and balanced reflection of customers and stakeholders views.

The insight we have gathered from extensive consultation tells us that consumers in general, and our own customer base, care deeply about the environment and have some understanding of the links between water use and the natural world.

For this reason, we decided to co-create and, where possible, co-deliver our 25 Year Environmental Plan.





The key groups we engaged with during the development of our plan were:

- Our employees from right across the business, including our environmental team and in-house experts
- third party governance groups (e.g. the Environmental Steering Group, Customer Challenge Group)
- household and business customers
- informed stakeholders in environment-related sectors.

We collaborated with the groups above using a number of techniques including an 'innovation sprint' format, through a series of interactive, online workshops, facilitated by the Big Bang Partnership.

In addition, we've started a two-year research project with more than 100 customers – both household and business – with market research experts Accent.

For further details on who we worked with to create the draft plan, how the research was carried out and what important insight we gained, please see our Co-creating our draft 25 Year Environment Plan.

Alongside the co-creation workshops, we met with regulators the Environment Agency, Ofwat, Defra and Natural England individually to set out our intention to be the first UK water company to develop this plan and explore how our approach might shape the future of environmental planning for the water industry and beyond.

The table below provides a summary of the research we carried out, and what we learned from it.

Date	Audience	Format	Aims	Outputs
19 April 2021	Environmental Steering Group (business senior and technical leads) – 22 employees	Regular internal meeting	To agree engagement process and aims for 25 Year Plan consultation	Agreed plan for engagement and the objectives
8 and 10 June 2021	Informed stakeholder group – 30 people	Two half-day sprints, facilitated by the Big Bang Partnership	Understand stakeholders' environmental priorities, create a PEST analysis, agree strategic themes for the plan	Attendees listed biodiversity, climate change, protecting water sources and regeneration among their reasons for taking part 16 external influences on the environment identified 18 strategic priorities for the plan identified
12 July 2021	Representative staff group – 15 employees	90-minute sprint facilitated by the Big Bang Partnership	Understand employees' environmental priorities, sense-check the outputs from the stakeholder session	17 reasons for taking part shared 60 vision statements for the environment created

## Summary of the research we carried out continued

Date	Audience	Format	Aims	Outputs
14 July 2021	Environmental Scrutiny Group (existing group of environmental and other stakeholders) - 18 people	Regular meeting	Share outcomes of stakeholder sessions and sense-check next steps for engagement	Whitewater Valley Preservation Society said the plan is 'tremendous' and they are keen to help us
17 August, 2 September 2021	Environmental Team and business technical and senior leads – 52 employees	Two half-day sprints, facilitated by the Big Bang Partnership	Sense-checking the plan so far. To set a roadmap with clear objectives and timescales for delivering the strategic themes identified by all audiences	36 comments on the initial draft strategy received 30 strategic priorities identified 21 of the stakeholders' strategic priorities added to/amended Roadmaps initiated for the three themes
28 September 2021	Business leaders – 50 employees	Sprint session facilitated by the Big Bang Partnership	Understand the 'big questions' for customer engagement	Core environmental plan question formulated
12 October 2021	Environmental Steering Group -15 staff	Regular internal meeting	To agree core environmental themes and objectives	Agreement and revision of the three updated environmental themes, outcomes, key objectives and goals
October 2021	Representative customer group 'Water Horizon Forum' – more than 100 people	Online and 'homework' tasks facilitated by market research experts, Accent	Understand customers' environmental priorities and willingness to pay	Identified current and future challenges for the company and created a 'top 10' list for the draft plan
8 November 2021	Employees – more than 120	Chief Executive briefing and Q&A webinar	To share engagement process, outcomes and draft plan	Two questions answered on topics of planning applications, highways authorities and waste management

## 1.4 Why we need to look after our environment to protect our water supply

As a water provider, we are directly linked to the environment in the area that we serve.

We rely upon our streams, rivers and underground aquifers to supply both current and future customers with safe and reliable supplies of drinking water.

### We need to make sure that:

- Water supplies are plentiful, sustainable and reliable in the long-term
- the quality of our raw water remains high and doesn't deteriorate over time
- we maintain and improve groundwater and surface water catchments to ensure that the wildlife dependent on them continues to flourish.

We aren't the only organisation wanting to protect our water, though.

Our water supplies aren't unlimited, and they are also used by industry and other businesses, either directly from the environment or from the public water supply. Water is a key resource for many other stakeholders including agriculture, the brewing industry and for recreation with each having competing interests.

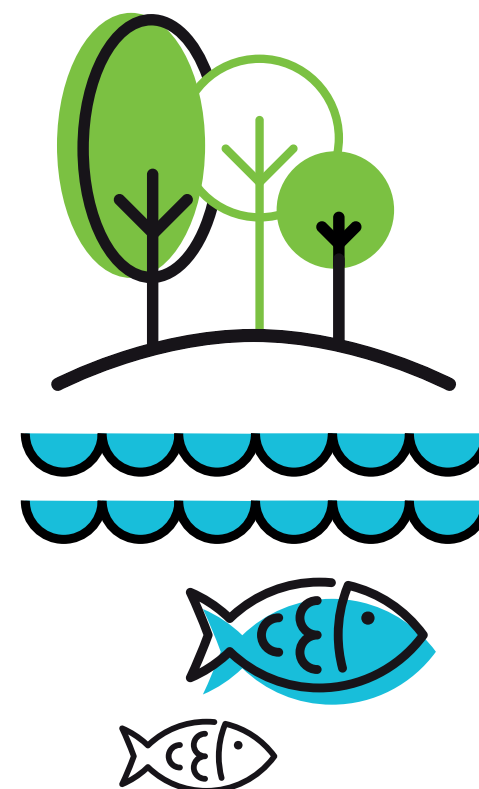
These other users, combined with external factors, can impact both the availability and the quality of the raw water we need for drinking water supplies.

Climate change will also impact our water supply. As changing rainfall patterns mean there may be less water available in some of our rivers and underground sources in future, to turn into clean drinking water. We are also conscious there is an impact on the environment from the choices we make to create new water sources and manage demand. Some solutions use a lot of carbon and others might impact more locally on the environment where the resource is built.

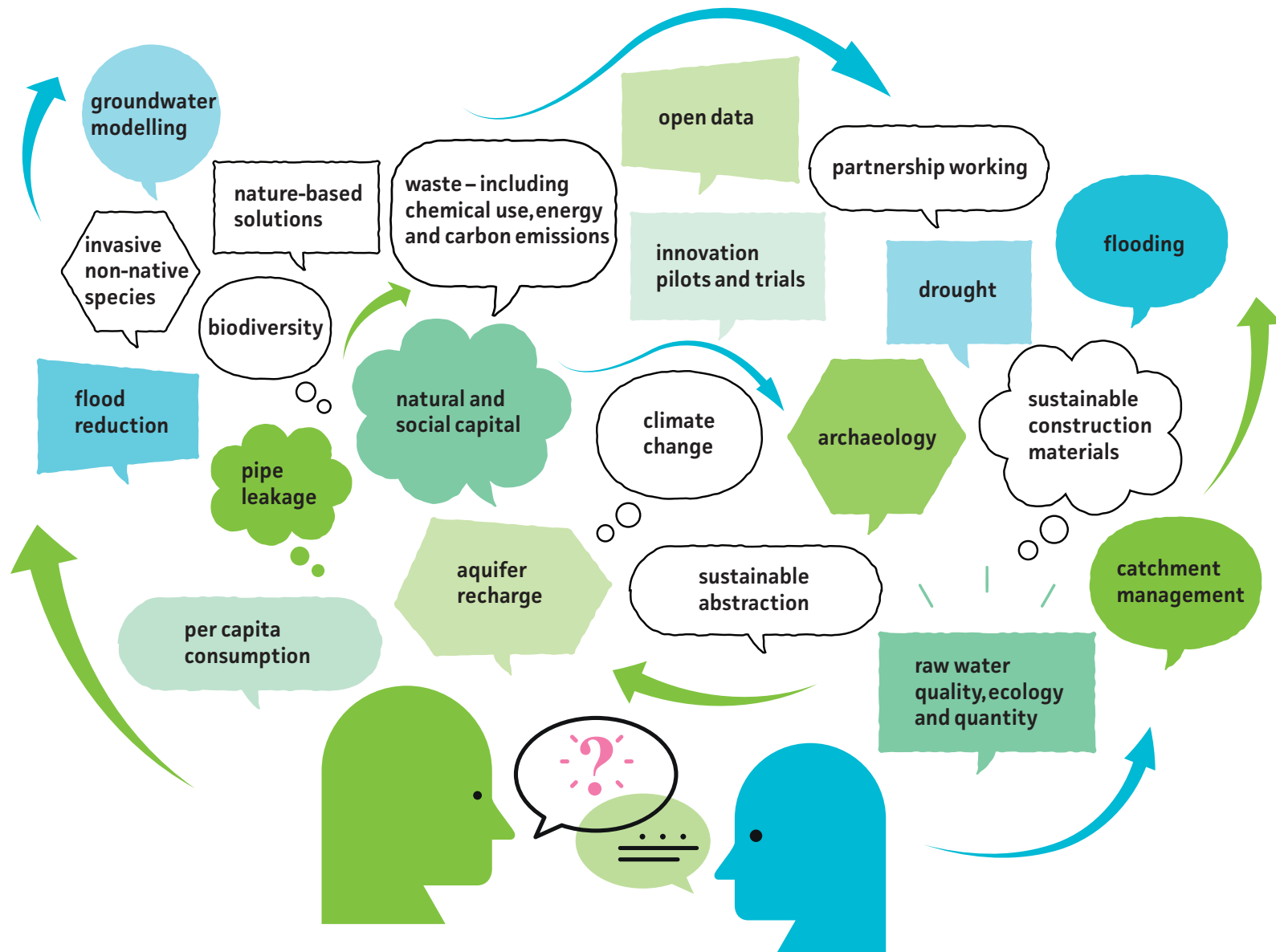
We therefore need to make sure that we make the right, long-term, well-balanced environmental decisions so that we protect and where possible improve our environment – and our water supply – as a result.

We show in our plan that we commit to collaborating with key environmental stakeholders, and to doing our fair share to improve the quantity and quality of raw water, the impact of carbon, biodiversity and efficient use of wider resources in our operating area.

**To find out more** about our existing approach to protecting raw water quality and quantity, read our case study on page 13.



## Environmental factors considered in our plan



## Case study: A holistic approach to safeguarding our water resources

A healthy, vibrant environment where nature can flourish is essential for protecting our valuable water resources and keeping water clean at source which means we have to do less in the water treatment process to make it safe to use.

Not only does this reduce the carbon footprint associated with water treatment but it protects ecosystems for the flora and fauna that depend on them.

Since 2015, we've worked in partnership with Natural England on our award-winning Catchment Management Programme, working alongside farmers, landowners and those in the amenity and equine sectors to tackle raw water quality decline at source.

We do this by providing grants for equipment such as precision farming machinery or pesticide handling facilities, as well as training farmers and contractors on optimal usage of essential farm chemicals and running trials of innovative ways to manage their land.

Over the last seven years, we have administered more than £75,000 of grants and incentives to help farmers and land managers deliver environmental outcomes in priority drinking water catchments.

During that time we have actively engaged with hundreds of farmers and landowners to prevent pesticides, soil particles and fertiliser washing into the rivers and aquifers we take water from.

By 2025 we hope to have improved the sustainability of almost 15,000 hectares of land which could influence the health of our drinking water sources.



**Find out more:** [southeastwater.co.uk/catchmentmanagement](https://southeastwater.co.uk/catchmentmanagement)



Cover crops grown to reduce run off which can lead to increased nitrate levels in raw water supplies

Working in this way supports these environmental outcomes:

- Resilient safe water
- climate change
- sustainable business.

**Key** high impact medium impact low impact



## 1.5 Current and future threats to water – supporting environmental resilience

The environment is a complex system but has the inherent ability to absorb shocks and be resilient if managed in the right way.

**We need to protect and support the environment, so that:**

- It can adapt to, absorb and recover from disturbance events by resisting damage and recovering quickly (for example flood and drought events or pollution incidents)
- it has the capability to adapt to the impacts of climate change longer term.

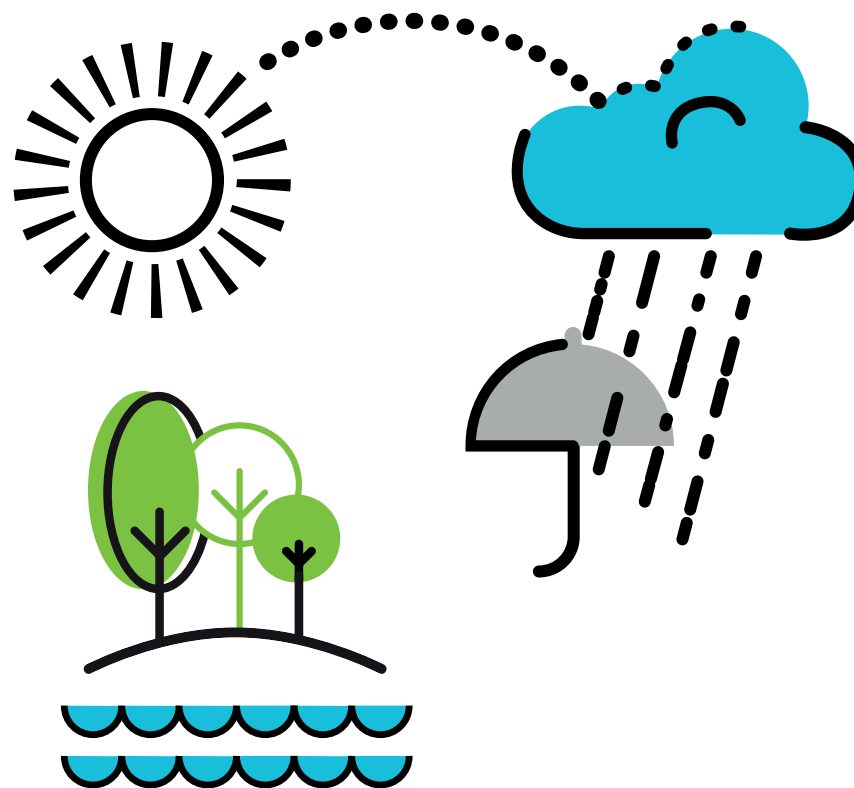
It is this capacity for adaptation and recovery that makes the environment, and the ecosystems that so heavily rely on it, able to become more robust, and consequently more sustainable in both the short and the long-term.

In developing our plan, we collaborated with stakeholders to identify the most significant social, technological, economic and political challenges and opportunities that lie ahead.

We also identified internal strengths, weaknesses, opportunities and threats.

Summaries of our findings are included in Appendix 1.

**Read our case study** on page 15 to find out how we are working with other water abstractors to maintain the sustainability of two of our catchments.



## Case study: Innovation takes flight as we work with other water abstractor

Faced with low river flows and a decline in raw water quality in our catchment areas in Kent and Sussex, we needed to identify pollution sources and others who take water from the environment across almost 3,000 square kilometres of land.

Covering such a large area on foot, with inaccessible locations and numerous landowners, would be virtually impossible so we worked with environmental consultancy APEM to complete aerial surveys, taking ultra-high resolution photography of every square centimetre of the ground with remarkable detail.

The crystal-clear imagery can show changes in vegetation density and colour, indicating water leakage, irrigation or nutrient accumulation while the infra-red camera can detect leaks on company-owned or private water pipes that are invisible to the naked eye.

Back in the office, our team of scientists can take a virtual walk through a digital 3D model of the land, zooming in and out to scrutinise the imagery and visit it time and time again.

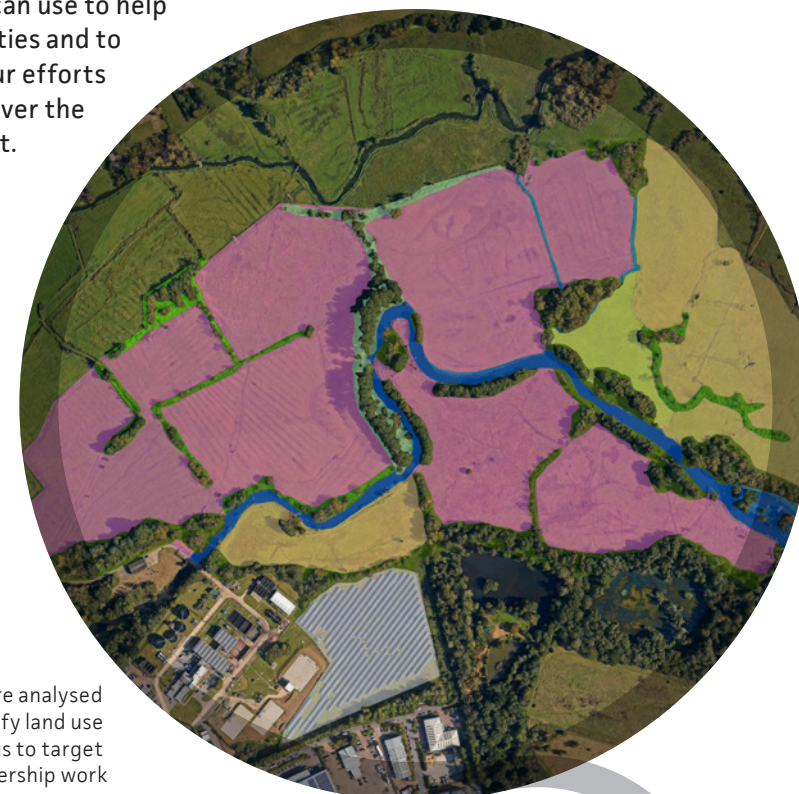
This approach allows us to survey large areas in a matter of hours, compared to days, weeks, or even months via a traditional ground-based approach.

As well as identifying causes of raw water decline, this work forms part of our commitment to engage with 20 per cent of other abstractors in two target catchments, to understand the cause of low river flows.

We recognise that we are not the only abstractor of water, so identifying other abstractors will enable us to offer a range of help and advice including: water efficiency audits, calibration of irrigation machinery, fix leaking pipes and funding of on-farm infrastructure improvements such as rainwater harvesting or grey-water systems.




By working alongside all water abstractors we can help them to ensure that they too reduce their water demands on the wider environment and can maximise the amount of water available for the environment and for drinking and understand how we can make all our catchments more resilient to the impacts of climate change.

The use of drone imagery enables us to not just cover large areas of catchments, quickly. It also provides valuable data on environmental risks which we can use to help focus our activities and to target where our efforts are likely to deliver the greatest benefit.



The aerial photos are analysed to allow us to identify land use types and enables us to target where future partnership work could have the greatest impact and benefits

Working in this way supports these environmental outcomes:

-  Resilient safe water
-  climate change
-  sustainable business.

**Key**  high impact  medium impact  low impact

Land cover

-  Deciduous Woodland
-  Evergreen Woodland
-  Improved Grassland
-  Industrial
-  Mixed Woodland
-  Pastoral
-  River
-  Stream
-  Tree/Hedge Row
-  Unimproved Grassland

## 1.6 Priority themes for our draft 25 Year Environment Plan

Working with customers, stakeholders and the South East Water team, we identified three priority themes for our 25 Year Environment Plan.

These are:



1: Resilient safe water, now and into the future

see more page 24



2: Protection against climate change and environmental hazards

see more page 25



3: Sustainable business - enhancing nature and heritage, resource efficiency and reducing embedded carbon, carbon emissions and waste

see more page 26



The plan will be delivered in partnership with other key organisations such as rivers trust, catchment partnerships, government bodies and university/research institutes to protect and enhance the environment, using innovative solutions to drive our progress. As part of our consultation we are looking at how and where we can deliver our environmental work collaboratively and we would love to hear of any specific projects that could help us to deliver our work in partnership.

**More detail** on each of the three themes can be found from page 23 onwards.



## Case study: Balancing the books with a multi-capital approach

Like all water companies, we carefully plan decades into the future to balance demand for drinking water with the amount available in the environment.

As the combined effects of climate change and population growth mean there will be less water available to supply a growing population, we are combining scientific models with the principles of natural capital accounting to serve our customers and protect the environment at the same time.

Currently, East Kent's water source originates from underground chalk aquifers, many of which feed above-ground rivers and streams such as the Great Stour. In our 2019 Water Resources Management Plan (WRMP) we identified that this combination of reduced rainfall with increased population means that our drinking water abstraction will become unsustainable in future and we would need to find an additional source of water.

Our plan identified a number of options to address the future challenges, we decided to investigate more closely the benefits and impacts of two very different types of option:

- A desalination plant on the North Kent coast could take salty water and turn it into fresh drinking water
- a reservoir on land we own at Broad Oak near Canterbury, to take excess river water when levels are high in winter, and store it until it is needed. We would use the reservoir alongside the chalk groundwater to enable more water to be available in the chalk streams in low flows when it is needed the most.

While we knew that the reservoir option would be more expensive, we also knew that there were serious environmental problems associated with a desalination plant.

Conjunctive management of surface and groundwater sources, resting abstractions and integrated groundwater catchment management has the potential to provide a wide range of benefits including climate change resilience, improving raw water quality and improving biodiversity whilst being a more sustainable water resource option than alternatives such as desalination.

To determine which is the best overall option, we analysed the wider costs and benefits of the two options over a 40-year time period, using a six capitals approach – which measures six types of benefit and cost, as illustrated on page 18.

Our aim was to discover which option was not the least cost, but the best value overall.



Chalk aquifers provide important base flow to Chalk Streams

Working in this way supports these environmental outcomes:

- 🌿 Resilient safe water
- 🌿 climate change
- 🌿 sustainable business.

**Key** 🌿 high impact 🌿 medium impact 🌿 low impact

## THE SIX CAPITALS





This approach supports the concept of intergenerational equity; that future generations should not have to bear the cost of hard engineering solutions in years to come to fix environmental problems that could be resolved at a lower cost, and with more benefit to the environment and society, if we act now.

**The key findings in comparing the two options were:**

- Both the reservoir and the desalination option provide similar benefits in terms of tackling the water supply issue
- the desalination option is significantly cheaper to build than the reservoir option – although the initial build cost is much lower, the operating costs are higher
- the desalination option's carbon footprint is much higher and the environmental issues related to discharges to the marine environment
- the reservoir would provide a range of wider benefits (e.g. biodiversity, recreation, local employment) while the desalination option would entail a range of wider costs (e.g. impacts to water quality, biodiversity)
- the net present value for the reservoir is greater than the desalination option due to the wider benefits it provides
- the benefits of the reservoir outweigh the costs.

From this study, we were able to conclude that the reservoir would be the best value option as it provided a suite of far reaching benefits for society and the environment when compared to the least cost option.

## Comparison of total costs and benefits of the reservoir and a desalination plant

Option	Whole life cost (£m)	Quantifiable benefits (£m)	Net Present Value* (£m)
Reservoir	-£113	£190	£77
Desalination plant	-£87	£120	£33

\*Net Present Value is the six-capitals equivalent of profit - the positive benefits brought about by each option.

## 1.7 Linking with key external policies, legislation and regulations

There are recent key policy documents and programmes, along with established legislation and regulations, which have influenced the development of our plan.

**These key documents are:**

1. The Environment Act, 2021
2. Defra's 25-year Environment Plan, 2018, updated 2021, which includes clear goals for improving the environment within a generation and leaving the environment in a better state than we found it
3. Water Industry Strategic Environmental Requirements (WISER), 2021. This is a priority strategic direction statement from our two environmental regulators, the Environment Agency and Natural England. It sets out the actions our regulators would like to see from the water companies over the next several years to tackle the increasing risk of long-term water shortages
4. Biodiversity 2020, a strategy for England's wildlife and ecosystem resilience
5. Water Industry National Environment Programme (WINEP), the UK's statutory environmental programme for restoring sustainable abstractions and improving raw water quality and biodiversity
6. Guidance Note: long-term planning for the quality of drinking water supplies, developed by the Drinking Water Inspectorate (DWI) (Sept 2017)
7. UN Sustainable Development Goals from the 2030 Agenda for Sustainable Development (2015).

Working in collaboration with our stakeholders, we have ensured that our plan aligns with each of these key areas and initiatives.

## 1.8 Linking with our business plan strategies

Our 25 Year Environment Plan complements and sets key principles for our wider business plan strategies and corporate policies, these include:

Business Plan 2024

Carbon routemap our route to net zero 2021

Climate Change Adaptation Report

Responsible Business Strategy Plan 2024

Water Industry National Environment Plan 2024

Water Resources Management Plan 2024

It is directly aligned to our **Environmental Resilience Policy**, designed to deliver our overarching environmental purpose driven outcome, '*our environment thrives*', and ensure that we value our natural assets just as we do our financial ones to drive the right long-term decisions.

We have a long history of managing the land we own for the benefit of the environment.

**Read more about** our biodiversity programme on page 21.

### OUR DRAFT 25 YEAR ENVIRONMENT PLAN



Business Plan  
2024



Carbon routemap  
our route to net zero 2021



Climate Change  
Adaptation Report



Responsible Business  
Strategy Plan 2024



Water Resources  
Management Plan 2024



Water Industry National  
Environment Plan 2024

## Case study: Boosting biodiversity for a thriving environment

Headlines over the last few years have brought the biodiversity crisis to the front of many people's minds, but this isn't news to us.

For decades, we have owned and managed dozens of special protected sites for the benefit of the natural world and the quality of the water held in aquifers beneath the ground.

Between 2015 and 2018, we worked with Buglife, Natural England and the Zoological Society of London to release 233 extremely rare wart-biter bush crickets on land we own within the South Downs National Park.

These crickets were previously only found at five sites in the UK after becoming extinct from our South Downs site in the 1980s after the mosaic of grassland habitat they need to thrive was taken over by scrub.

Wart-biters have complex habitat requirements as they need sunny chalk grassland habitat with a mixture of short grass, longer tufts and small areas of bare ground in which to lay their eggs.

Before we could release the crickets, the scrub needed to be removed to allow the native chalk grassland to regrow - we began this process in 1997 and work continues to manage the habitat and monitor the cricket population to this day.

But, because the land is above a chalk aquifer we need to remove the scrub carefully without using herbicides, so as not to send soil particles or chemicals into the groundwater beneath. As the scrub is constantly re-growing, we use a mixture of cutting by hand and grazing by Herdwick sheep - a breed which likes to browse off scrub regrowth.

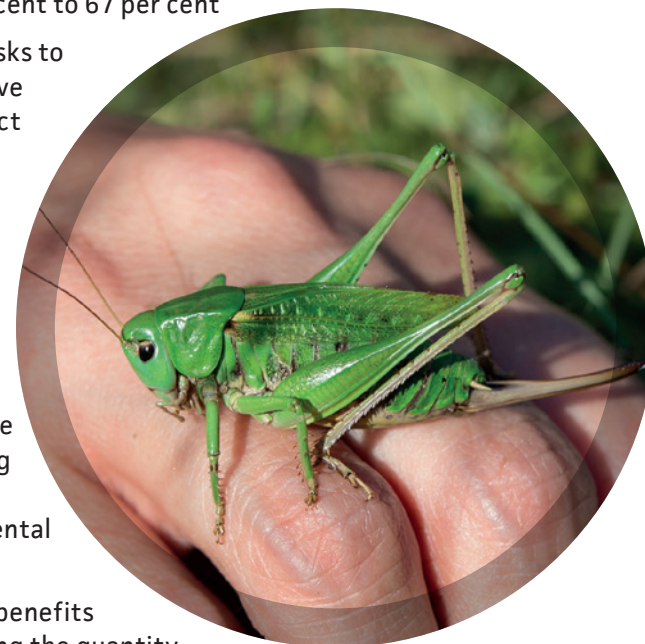
Even when the scrub has been removed, it takes years for the chalk grassland species to diversify and for the structure of the grassland to recover, until there is a large enough area of suitable habitat to support the wart-biters.

Our role in this project was Highly Commended in the 2018 Chartered Institute of Ecology and Environmental Management Awards and Commended in the 2019 Rushlight Awards.

Other biodiversity projects completed in the last five years included chalk grassland, marsh and ancient woodland restoration and the control of Invasive Non-Native Species.

### Never standing still, we're continuing to build on this success by:

- Increasing the amount of land we own and manage for biodiversity from 54 per cent to 67 per cent
- identifying and mitigating risks to the environment from Invasive Non-Native Species to protect raw water quality
- beginning investigations to understand the role our land plays in capturing and storing carbon dioxide to help mitigate or defer global warming
- introducing new performance measures linked to enhancing our supply area's natural capital assets and environmental resilience.



Managing land in this way also benefits groundwater supplies, increasing the quantity of rainfall reaching the aquifer and ensuring raw water quality is high, in turn helping reduce carbon needs in drinking water treatment.

Thanks to our careful habitat management the rare wart-biter cricket now thrives



**Find out more:** [southeastwater.co.uk/biodiversity](https://southeastwater.co.uk/biodiversity)

Working in this way supports these environmental outcomes:

- 🌿 Resilient water
- 🌿 climate change
- 🌿 sustainable business.

**Key** 🌿 high impact 🌿 medium impact 🔴 low impact

## 1.9 Current environmental performance

Environment is an area that we focus on as a business, our current Corporate Plan having objectives for the following areas:

- Protecting wildlife and increasing biodiversity
- managing the risk of Invasive Non-Native Species (INNS)
- building greater resilience into our surface water catchments
- building greater resilience into our groundwater catchments
- ensuring our abstractions are sustainable
- implementing Abstraction Incentive Mechanism (AIM)
- helping others to ensure their abstraction is sustainable
- carbon reduction
- natural capital accounting, ensuring we value nature in the decisions we make.

Over the period of 2020 to 2025 we have already committed to delivering the following:

Environmental resilience area	What we will deliver
Protecting wildlife and increasing biodiversity	One Water Framework Directive (WFD) river investigation  A programme to protect wildlife and enhance biodiversity on 1,460 hectares of company land
Invasive Non-Native Species (INNS)	One new pipeline (to prevent INNS transfer)  Five local projects where INNS is an emerging risk
Surface water catchment management	Eight projects across six catchments to improve water quality
Groundwater catchment management	28 projects across ten WFD groundwater bodies
Ensuring our abstractions are sustainable	22 projects across 18 WFD surface and groundwater bodies  3 Abstraction Incentive Mechanism (AIM) sites
Helping others to ensure their abstraction is sustainable	Working with other abstractors in the River Cuckmere and Little Stour
Carbon	Carbon reduction programme
Natural capital valuation and accounting principles	Natural capital commitments (responsible business)

## 1.10 Goals and targets for our 25 Year Environment Plan

We have set specific goals, draft targets and high-level timescales for each priority theme as a means of starting dialogue for our final 25 Year Environment Plan, however these are not yet set and will be consulted upon as part of our co-creation process. It is our ambition to report against these targets once they have been further refined. All results and performance will be freely available on our performance micro-site - performance.southeastwater.co.uk.

Performance on Environmental Outcome Delivery Incentive (ODIs) and WINEP commitments will be reported through Our Performance People and Planet report, on our website and to the appropriate regulators. In addition, wider environmental performance will be reported via monthly and quarterly reports to the Board, Shareholders, Customer Challenge Group and Environmental Scrutiny Group.

Transparency in our reporting will be paramount to our commitments as a responsible business.

This plan, along with our Environmental Policy and associated topic-specific policies and procedures, are reviewed and scrutinised at various levels, internally and externally by groups such as the Environmental Steering Group, the Responsible Business Committee, Environmental Scrutiny Group and the Board of Directors.

Because we know that making lasting changes to the environment takes time, this plan will be revised and updated every five years, continually looking ahead to the next 25 years.





## 2. Our co-created draft 25 Year Environment Plan

Through our co-creation process, we have developed a number of themes for the delivery of our draft 25 Year Environment Plan. These themes are explained in Annex C. This section provides a full record of all of the insight gathered through the co-creation workshops and provides an outline of gaps and draft target setting).



### 2.1 Resilient safe water, now and into the future

We access raw water from the environment and treat it, ready for supply to our customers for drinking and other uses. Raw water is a limited resource.

To protect the water that we access from the environment.

We will:

- Reduce demand for water by promoting water efficiency and reducing leakage
- make sure using sound science that our drinking water abstractions do not negatively affect the environment
- ensure we have the right mix/balance of water resources to be resilient to the hazards posed from current and future climate change (particularly drought and flooding)
- work with others in our groundwater catchments to ensure land use supports recharge of groundwater. For example, by slowing the flow of rainfall to enable it to recharge groundwater more effectively rather than losing this vital resource through flooding
- protect the quality of raw water when we make investment, operational and environmental decisions
- introduce measures to avoid deterioration of our raw water
- protect the infrastructure that delivers our water supply
- manage our current water stocks and resources sustainably
- understand and monitor the impact of changes to catchment land use on water supply
- through setting best practice and pilots, assist those who also discharge to and abstract from the environment.

## 2.2 Protection for climate change and environmental hazards

To protect for climate change and environmental hazards.

We will:

- Achieve carbon net zero for our operational emissions and set targets to reduce embedded carbon
- minimise future energy demands
- improve our monitoring of climate change, working in partnership with other expert organisations to share data and build resilience
- value our natural assets just as we do our physical ones to drive the right long-term investment decisions
- make long-term investment decisions that are more resilient to future climate change predictions
- ensure that we recharge our aquifers (porous rock containing groundwater) effectively and for the benefit of the environment overall
- develop and update plans to protect and improve raw water quality, working in partnership to drive cohesive improvement to raw water quality whilst adapting to emerging risks
- introduce new water infrastructure designed to have a positive impact on the environment and communities, whilst providing long-term resilience to drought and flooding
- continue giving appropriate access to our reservoirs and landholdings, providing wider recreation, health and wellbeing opportunities.



## 2.3 Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency

To ensure that we operate as a sustainable business, we will operate efficiently, understanding waste production and setting actions and targets to reduce waste.

### We will:

- Sustainably manage and reduce methane and nitrous oxide emissions from our operations
- achieve carbon neutrality for our emissions and embedded carbon
- quantify all company energy use, track performance and put in place plans to reduce total energy consumption
- establish a baseline and quantify chemical use per megalitre of water delivered, setting targets to reduce chemical use
- continue giving appropriate access to our reservoirs and landholdings, providing wider recreation, health and wellbeing opportunities.

To support our household and business customers in playing their part to reduce waste, we will:

- Work in partnership to enable other abstractors, businesses and retailers to reduce their waste and demand for water
- promote a water footprint approach to raise the finite nature of water both outside and inside the company
- incentivise our contractors and supplier partners to minimise waste at the outset through project design and delivery
- introduce procurement rules to track and incentivise waste reduction
- use construction materials from sustainable sources to assist in our embedded carbon reduction ambition
- facilitate circular economy activities (activities which favour preserving value in the form of energy, labour and materials. This means designing for durability, reusing materials, remanufacturing and recycling to enable products, components and materials to be circulating in the economy).

To enhance biodiversity and manage the risk of Invasive Non-Native Species.

### We will:

- Commit to ensuring we design infrastructure which adds to its landscape and promotes our environmental resilience themes
- proactively manage and monitor to produce a net gain in biodiversity and wildlife through active conservation work, producing five-year site management plans and working with other parties
- conserve and enhance our Sites of Special Scientific Interest and other protected sites to enhance biodiversity
- protect priority habitats and species
- develop an Invasive Non-Native Species strategy, set across our estate, linking to future resilience threats, including training and a biosecurity facility
- prevent the movement of Invasive Non-Native Species via inter catchment raw water transfers.



## 2.4 Innovation and data sharing through bespoke partnerships, projects and open data - to protect and enhance the environment

We know that making lasting, positive, change to the environment takes time and that we can't do it alone. It is our intention to deliver this plan with a range of partners and we need their support with this. Partnership working will feature across all aspects of the delivery of our environmental work.

### We will:

- Innovate through wider partnership working and data share our work to drive wider interest and collaboration
- work in partnership to deliver integrated catchment solutions
- develop partnerships to reduce water use with household and business customers
- innovate and educate, using science and data to drive behavioural change
- work with citizen science and academic institutes to further scientific knowledge and to help direct our environmental roadmap
- work holistically with key partners to test the art of the possible with regard to specific environmental pilots and schemes
- open data and knowledge sharing to drive innovation and explore capability of wider nature based solutions to provide long-term environmental resilience.



### 3. Our environmental framework for priority environmental themes, outcomes and key objectives

To ensure our environmental plan is holistic in its approach, we have set out the priority themes, outcomes and key objectives that will deliver our holistic draft 25 Year Plan. We have worked together with our stakeholders to develop this across all environmental areas over a 25-year timeframe. Table 3.1 sets out this approach.

#### What we require further from you:

1. Are our priority environmental themes all encompassing? Are there any gaps you feel we need to fill?
2. do you agree with short and long-term targets that we have set?
3. are there any targets that you want us to include?
4. we have set out aspirational targets (areas where we could go beyond statutory legislation) – can you help us to prioritise which of these targets are most important to you?
5. finally, are there areas in our draft plan where we could deliver more by working with established or new partnerships?

Table 3.2 sets out the gaps, performance targets, goals and principles that will help to deliver our priority environmental themes. In this work we have linked existing Outcome Delivery Incentives (ODI) and Key Performance Indicators (KPI) to show current methods of monitoring and supporting a more resilient environment.

For more detail, please see **Annex C** - This section sets out the outcomes and key objectives for our plan using high, medium and low scoring, showing how each objective supports our priority themes. It also includes tables that set out our performance targets and aspirations for 2025, 2030, 2040 and beyond.

The aspirational targets we have set are based on sound science and the research we carried out to co-create our draft plan. As part of the consultation, we are looking to understand if our customers, employees and stakeholders agree with the targets and timings we have outlined.

As the purpose of this plan is to set a framework around how we make future environmental decisions, we are specifically looking for feedback from our employees, customers and stakeholders to understand which areas of the plan they feel are more of a priority than others. To make sure we are delivering environmental improvements at the right time and at the right pace, we are also looking for feedback on the timescales we have set for the goals and targets section of this plan.

Finally, because we know that no one organisation can deliver this plan in isolation, we are actively looking for projects within our supply area which we could support during our delivery of this plan.


Table 3.1 on page 29 brings together our priority themes, strategic outcomes and key objectives for this plan, alongside aspirational targets for delivery of each element of the plan. It also demonstrates how these objectives have been directly influenced by our stakeholders, customers and employees throughout the co-creation process.

For further details on the process we went through to create this plan alongside others, and the finding of our research, please read our 'Co-creating the draft 25 Year Environment Plan' appendix.


This plan will be reviewed and updated at least every five years, in line with our statutory Business Plan, and our Water Resources Management Plan (WRMP), which will both be published in 2025. As we gain new evidence about the wishes of our stakeholders, customers and employees, and advances are made in science, technology and innovation, we will review and update the targets within this plan to ensure that the business decisions we make always result in the best outcome for the environment as a whole.



**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives

Resilient safe water, now and into the future	Strategic outcomes	Key objectives – summarised (full detail shown in Table 5.2)	Regulatory target	Link to stakeholder, customer and employee research
	Resilient water resource	<p>Understanding total water demand and reduce it</p> <p>Understanding and reduce water losses</p> <p>Abstracting sustainably to ensure enough water is left in the environment now and into the long-term</p> <p>Ensuring groundwater catchments are managed to allow as much rainfall as possible to reach groundwater aquifers and to support river base flow</p>	50% reduction in water company leakage by 2050 delivered in an environmental and economically sustainable way. Establish customers support for a pilot to establish best practice in this area	<p>Statutory target set by our regulators</p> <p>Customers identified a reduction in pipe leakage as one of their top 10 wishes for the plan</p>

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Resilient safe water, now and into the future	Strategic outcomes	Key objectives – summarised (full detail shown in Table 5.2)	Regulatory target	Link to stakeholder, customer and employee research
	Resilient operator	<p>Legal compliance</p> <p>Data based sustainable abstraction (quality and quantity) now and in the long-term</p> <p>Conjunctive management of water resources which responds to new data and climate change</p> <p>Understand impacts of raw water quality decline on power, chemical use and waste disposal</p> <p>Impact of changes to catchment land use understood and monitored</p>	<p>100% compliance with all environmental permits</p> <p>100% compliance with statutory reservoir safety requirements</p>	<p>Statutory target set by our regulators</p> <p>Sustainable abstractions, making sure there is always enough water for people and the environment, reducing our waste, maintaining compliance and looking at land use were all suggested by our internal expert group</p>


**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Resilient safe water, now and into the future	Strategic outcomes	Key objectives – summarised (full detail shown in Table 5.2)	Aspirational target	Link to stakeholder, customer and employee research
	Resilient water resource	Understanding total water demand and reduce it	Through partnership work establish lowest possible Per Capita Consumption (PCC) for new housing developments using rainwater harvesting and dual water systems to guide future target setting and to quantify wider environmental benefits and cost to housebuilders	Customers prioritised measures to reduce water demand over bill increases or other action. Managing the supply/demand balance featured in customers top 10 wishes for the plan
		Understanding and reduce water losses	Quantify all licenced and unlicensed abstractors in our catchments	Sustainable abstractions and making sure there is always enough water for people and the environment was demonstrated in our stakeholder and wider employee research
		Abstracting sustainably to ensure enough water is left in the environment now and into the long-term	Through partnership work deliver pilots across key non-household customer sectors to pilot and establish reference case studies to establish best practice for water use and leakage. Target agriculture, brewing/wine production, housebuilding and golf sectors. Establish lowest possible water consumption and leakage levels for each activity and use pilots to guide future target setting and to quantify wider environmental benefits and cost to non-household sectors	Our customers, stakeholders and employees all placed a high value on making sure our abstractions are sustainable. Stakeholders in particular called for a holistic approach
		Ensuring groundwater catchments are managed to allow as much rainfall as possible to reach groundwater aquifers and to support river base flow	0% process losses on our sites Water Resources Management Plan 2024 (WRMP24) used to establish the best value investments to address long-term sustainable source mix for all catchments Water Industry National Environment Plan 2024 (WINEP24) used to prioritise land use studies to establish optimal habitat and land use for rainfall capture/groundwater replenishment/flood reduction When data available publish reports to set out main sectors impacting raw water quality and quantity of our catchments	

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued


Resilient safe water, now and into the future	Strategic outcomes	Key objectives – summarised (full detail shown in Table 5.2)	Aspirational target	Link to stakeholder, customer and employee research
	Resilient raw water quality	<p>Data based raw water quality understanding</p> <p>Understand and act on the drivers of raw water quality decline</p> <p>Avoid raw water deterioration</p>	<p>Baseline raw water quality and ecology – clear and comprehensive monitoring strategy produced by December 2022</p> <p>Establish, quantify and publish factors/sectors impacting raw water quality in our catchments</p> <p>WINEP24 and WRMP24 establish optimal land use for all of our catchments</p> <p>Live data driving groundwater models – ground and surface water models developed, maintained and shared for the whole of our supply area</p> <p>Full catchment land use mapping, data collection and monitoring in place for all of our groundwater and surface water catchments</p> <p>Framework developed to ensure nature based solutions are implemented where possible (as part of a systematic hierarchy) in preference to engineered solutions</p>	<p>When we asked stakeholders to provide 5, 10 and 20 year milestones for the plan, modelling, pilot projects and trials were the focus of the first 10 years</p> <p>Clean water for all was a recurring theme with all groups</p> <p>WRMP24 will be used to establish customer and stakeholder priority catchments. This will inform WINEP24 and our future Business Plan submissions</p>
	Resilient infrastructure	<p>Ensure South East Water's infrastructure is resilient to external threats</p> <p>Understand impact of discharges to resilience (wastewater, highways and agriculture discharges)</p>	<p>Establish, quantify and publish factors/sectors impacting raw water quality in our catchments</p> <p>When data available publish reports to set out main sectors impacting raw water quality and quantity of our catchments</p>	<p>Operational resilience featured in our internal expert groups wishes for the new plan, as well as reducing pollution and improving water quality</p>

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued


Resilient safe water, now and into the future	Strategic outcomes	Key objectives – summarised (full detail shown in Table 5.2)	Aspirational target	Link to stakeholder, customer and employee research
	Resilient operator	<p>Legal compliance</p> <p>Data based sustainable abstraction (quality and quantity) now and in the long-term</p> <p>Conjunctive management of water resources which responds to new data and climate change</p> <p>Understand impacts of raw water quality decline on power, chemical use and waste disposal</p> <p>Impact of changes to catchment land use understood and monitored</p>	<p>100% conjunctive management of water resources</p> <p>Live data driving groundwater models – ground and surface water models developed, maintained and shared for the whole of our supply area</p> <p>Reduce waste and chemical use</p> <p>Reduce power use – set targets per mega litre of water supplied for different types of water sources, from this set targets to reduce future power consumption</p>	<p>Sustainable abstractions, making sure there is always enough water for people and the environment, reducing our waste, maintaining compliance and looking at land use were all suggested by our internal expert group</p>




**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Protection for climate change and environmental hazards	Strategic outcomes	Key objectives	Regulatory target	Link to stakeholder, customer and employee research
	Protection against environmental hazards	<p>Monitoring data utilised to understand the impact of changes to catchment land use understood and monitored</p> <p>Data based evidence establishes effective recharge of aquifers</p> <p>Data based evidence ensures Source protection zones are accurate and are adapted to reflect emerging risks</p> <p>Capitals approach ensures new water infrastructure designed to have a positive impact on the environment and communities whilst providing long-term resilience to drought and flooding</p> <p>Access to assets providing wider health and wellbeing opportunities</p> <p>Flood and drought resilience</p>	<p>Natural capital and social capital evaluations driving all business investment decisions by 2030</p> <p>Resilience to a 1:500 drought by 2040</p> <p>Resilience to a 1:1000 flooding by 2025</p>	<p>Statutory target set by our regulators</p> <p>Stakeholders said that nature-based solutions should be prioritised over hard engineering. This was further supported by our group of internal experts</p> <p>Increasing the resilience of the environment and our infrastructure was an output of both the stakeholder and internal expert groups' research</p>

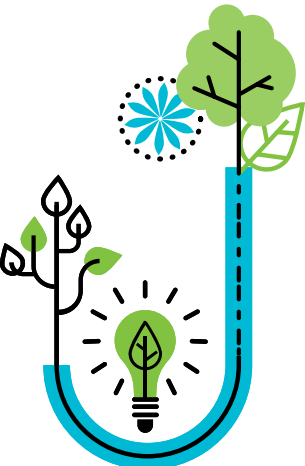
**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Protection for climate change and environmental hazards	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	Climate change resilience	Improved monitoring of climate change and working in partnership to share data and build resilience	Live data driving groundwater models - ground and surface water models developed, maintained and shared for the whole of our supply area	Carbon footprint, reaching net zero and adapting to climate change were mentioned as key priorities by all groups engaged with  WRMP24 will be used to establish customer and stakeholder priority catchments. This will inform Water Industry National Environment Plan 2024 (WINEP24) and our future Business Plan submissions
		Carbon route to net zero for operational and embedded carbon	0% operational carbon emissions by 2030	
		Future carbon footprint – do not grow future energy demands	Baseline and consistent accounting for carbon emissions from embedded carbon by 2023	
		Natural capital accounting and evaluation to drive the right long-term investment decisions	Water Resources Management Plan 2024 (WRMP24) – produce a plan which clearly sets out energy use for future water resource scenarios to enable stakeholders to understand environmental trade-offs. Energy use to feature as a key part of the Strategic Environmental Assessment	
		Make long-term investment decisions that are more resilient to future climate change predictions	Natural capital and social capital evaluations driving all relevant business investment decisions by 2030	

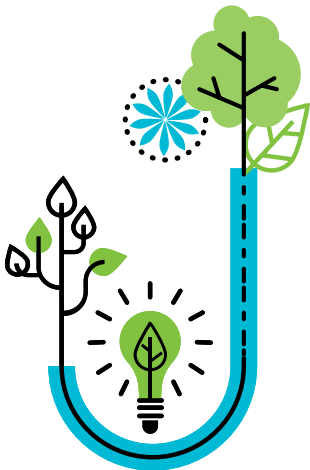
**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Protection for climate change and environmental hazards	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	Protection against environmental hazards	Monitoring data utilised to understand the impact of changes to catchment land use understood and monitored	Live data driving groundwater models - ground and surface water models developed, maintained and shared for the whole of our supply area	<p>Stakeholders felt that more robust groundwater modelling was needed to understand where our water comes from at source and the factors which impact on its quality and quantity. They also said that nature-based solutions should be prioritised over hard engineering. This was further supported by our group of internal experts</p> <p>Increasing the resilience of the environment and our infrastructure was an output of both the stakeholder and internal expert groups' research</p>
		Data based evidence establishes effective recharge of aquifers	Full catchment land use mapping, data collection and monitoring in place for all of our groundwater and surface water catchments. Catchment prioritisation will be informed by stakeholders and customers as part of WRMP24 and Business Plan 2024	
		Data based evidence ensures Source protection zones are accurate and are adapted to reflect emerging risks		
		Capitals approach ensures new water infrastructure designed to have a positive impact on the environment and communities whilst providing long-term resilience to drought and flooding		
		Access to assets providing wider health and wellbeing opportunities		
		Flood and drought resilience		

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Strategic outcomes	Key objectives	Regulatory target	Link to stakeholder, customer and employee research
	Operating efficiently, understanding waste streams and setting targets to address them	<p>Monitoring plan for emissions to air</p> <p>Sustainably manage and reduce emissions to air from operations</p> <p>Carbon – net zero emissions for both emissions and embedded carbon</p> <p>100% compliance for all licences and permits – abstraction/ discharge licences, flow conditions and zero serious pollution incidents (category 1 and 2)</p>	10% biodiversity net gain across our development work by 2023	<p>Statutory target set by our regulators</p> <p>All groups consulted with listed biodiversity, restoring habitats and looking after rivers and wildlife as a high priority</p>

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

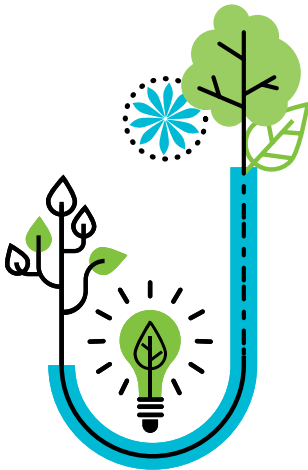
Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	Operating efficiently, understanding waste streams and setting targets to address them	<p>Monitoring plan for emissions to air</p> <p>Sustainably manage and reduce emissions to air from operations</p> <p>Carbon – net zero emissions for both emissions and embedded carbon</p> <p>100% compliance for all licences and permits – abstraction/ discharge licences, flow conditions and zero serious pollution incidents (category 1 and 2)</p>	<p>0% operational carbon emissions by 2030</p> <p>Set targets for carbon emissions from embedded carbon by 2025</p> <p>Reduce waste and chemical use</p> <p>Reduce power use – set targets per mega litre of water supplied for different types of water sources, from this set targets to reduce future power consumption</p> <p>Quantify all company energy use, track performance and put in place plans to reduce total energy consumption</p> <p>Assess use of sustainable construction materials as part of wider capital assessment process</p>	Wider employees, our internal experts and stakeholders all felt we should reduce all forms of waste, pollution and our carbon footprint. Green energy use and renewable energy production also featured in the above groups as well as our customers. Customers also wanted us to use sustainable construction materials, while members of our ‘internal expert’ group wanted to ensure regulatory compliance



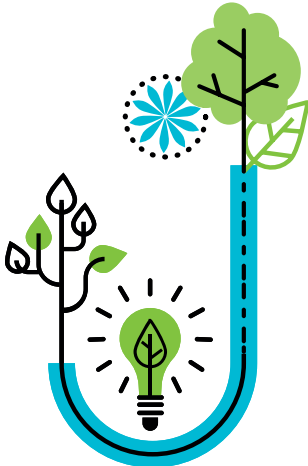
**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	Resilient customer strategy enabling customers to play their part in reducing waste	<p>Working in partnership to enable other abstractors, businesses and retailers to reduce their waste and demand for water. Promote water footprint approach both outside and inside company. Embedding water footprint in all activities and working in partnership to innovate</p> <p>Incentivise /contractors/supply chain/partners to minimise waste at the outset through project design and delivery</p> <p>Work with other abstractors, businesses and retailers to reduce their waste and demand for water</p> <p>Facilitation of circular economy activities</p>	<p>Water Industry National Environment Plan 2025 – partnership and innovation trials to deliver and set pathway for others to deliver wider resilience</p> <p>Flagship catchment pilots – to establish best practice methods for two of our key catchments. Priority catchments to be agreed through Water Resources Management Plan 2024 (WRMP24) consultation</p> <p>Current suggested pilots are for: –</p> <ul style="list-style-type: none"> <li>• A priority chalk stream catchment</li> <li>• a priority surface water catchment</li> <li>• a priority groundwater catchment – to link land use with impact to groundwater quality, quantity and ground water dependent priority habitats</li> <li>• a priority surface water to quantify the impact of ‘other abstractors’ on the drought resilience of a river system</li> <li>• a housing development pilot to establish the cost and potential of sustainable building provision (both for the customer and the wider environment)</li> <li>• pilot work with equestrian and golf course sectors to establish best practice related to water use, nutrient and pesticide application</li> <li>• pilot work to establish how management of Invasive Non-Native Species (INNS) could lead to wider environmental resilience</li> <li>• pilot project to establish potential for circular economy/nature based solutions for drinking water sludge management and disposal.</li> </ul>	<p>Customers felt that the ‘burden’ of environmental resilience and reducing water use should be shared between water companies, customers, individual organisations (such as farmers, landowners, industry) and bodies such as housing developers, local authorities and the Environment Agency</p> <p>A list of key pilot projects has been set out, consultation with customers and stakeholders will establish key priority catchments and opportunities for the delivery of this work</p> <p>Stakeholders were keen to ensure we look at the environmental credentials of our supply chain</p>

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	Enhancing biodiversity and management of Invasive Non-Native Species (INNS)	<p>Biodiversity net gain across all areas of our work</p> <p>Monitoring data utilised to prevent movement of INNS via inter catchment raw water transfers</p> <p>Development of INNS policy to include implementation of biosecurity facility provision and INNS training</p>	<p>100% company sites managed to protect and enhance biodiversity by 2035</p> <p>Establish mechanisms for biodiversity net gain across all permitted development work by 2030</p> <p>All catchment and innovation pilots to include biodiversity gain</p> <p>Data driven INNS strategy set across company estate and linking to future resilience threats</p> <p>WRMP24 – no transfer of raw water between catchments where risk from INNS would be increased by 2025</p>	<p>Customers were surprised to learn that we manage the risk of INNS already and supported its inclusion in our plan. Restoring habitats and looking after rivers and wildlife featured in their top 10 wishes for the plan</p> <p>Our informed stakeholders identified INNS as one of the top external influences on the environment, and listed re-wilding, biodiversity and nature recovery as key strategic themes for the plan. Our internal expert group and wider workforce groups both listed biodiversity as a key priority</p>



















**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	Protecting heritage	<p>Design project to avoid environmental harm where possible</p> <p>Avoidance of ancient woodland and irreplaceable habitats</p> <p>Commit to ensuring we design infrastructure which adds to its landscape and where possible promotes our environmental resilience themes</p>	<p>For all WRMP24 and development work to optimise projects during design phase to avoid irreplaceable habitats, protect and enhance priority habitats and species</p> <p>Avoidance and protection of archaeology during project design</p>	<p>Restoring habitats after operational work and looking after wildlife were suggested by customers whose main preference was for us to protect their local environment. For our plan, while our stakeholders and internal expert groups called for a holistic approach that combines each environmental discipline</p>

**Table 3.1** Environmental Framework for Strategic Environmental Themes, Outcomes and Key Objectives continued

Partnership working	Strategic outcomes	Key objectives	Aspirational target	Link to stakeholder, customer and employee research
	<p>Innovation and data sharing through partnership working</p> <p>Working in partnership to deliver integrated catchment solutions</p> <p>Partnerships to reduce water use with household and business customers</p> <p>Innovation and education, using science and data to drive behavioural change</p> <p>Citizen science</p>	<p>Working in partnership to enable other abstractors, businesses and retailers to reduce their waste and demand for water. Promote water footprint approach both outside and inside the company</p> <p>Play our part in national and regional water resource management to enable holistic environmental decisions to be made – using data and learning from the delivery of our 25 Year Environment Plan</p> <p>Delivery catchment flagship projects to provide a framework to reverse failures in ground and surface catchments and to enable organisations to work cohesively to deliver environmental change</p> <p>Contribute to the Government's target of 11 million trees planted by 2030 but following the principle of 'right tree in the right place/habitat' – by working in partnership</p> <p>Nature-based solutions to environmental problems – work in partnership in key catchments to restore the natural form and function of rivers, floodplains and catchments to improve the natural resilience of ecosystems</p>	<p>Water Industry National Environment Plan 2025 – partnership and innovation trials to deliver and set pathway for others to deliver wider resilience</p> <p>All pilot work to be delivered where possible in partnership</p> <p>Open data – share all data and findings from our work with partners and make it accessible via our website</p> <p>Use data from pilots as a benchmark to show potential savings that can be made – utilise to drive change as appropriate with regulators</p> <p>Ensure the 25 Year Environment Plan is an evolving document and updated at least every 5 years or sooner as needed</p>	<p>Customers prioritised measures to reduce water demand over bill increases or other action, while managing the supply/demand balance featured in customers' top 10 wishes for the plan. They also recognised the need to work in partnership with others</p> <p>Sustainable abstractions and making sure there is always enough water for people and the environment was demonstrated in our stakeholder and wider employee research, as well as by our internal expert group. Stakeholders and our internal experts in particular called for nature-based solutions and partnership working</p> <p>When stakeholders were asked about their motivation for taking part in our research, partnership, collaboration and sharing knowledge were the top three answers</p>






















**Table 3.1** Linking aspirational targets to wider environmental resilience

Aspirational target	 <b>Resilient safe water, now and into the future</b>	 <b>Protection for climate change and environmental hazards</b>	 <b>Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency</b>
Through partnership work establish lowest possible Per Capita Consumption for new housing developments using rainwater harvesting and dual water systems to guide future target setting and to quantify wider environmental benefits and cost to housebuilders	 high	 high	 high
Quantify all licenced and unlicensed abstractors in our catchments	 high	 high	 high
Water Industry National Environment Plan 2025 (WINEP25) – partnership and innovation trials to deliver and set pathway for others to deliver wider resilience	 high	 high	 high
Flagship catchment pilots – to establish best practice methods for two of our key catchments. Priority catchments to be agreed through Water Resources Management Plan 2024 (WRMP24)consultation	 high	 high	 high
Current suggested pilots are for: <ul style="list-style-type: none"> <li>• A priority chalk stream catchment</li> <li>• a priority surface water catchment</li> <li>• a priority groundwater catchment – to link land use with impact to groundwater quality, quantity and ground water dependent priority habitats</li> <li>• a priority surface water to quantify the impact of ‘other abstractors’ on the drought resilience of a river system</li> <li>• a housing development pilot to establish the cost and potential of sustainable building provision (both for the customer and the wider environment)</li> <li>• pilot work with equestrian and golf course sectors to establish best practice related to water use, nutrient and pesticide application</li> <li>• pilot work to establish how management of Invasive Non-Native Species (INNS) could lead to wider environmental resilience</li> <li>• pilot project to establish potential for circular economy/nature based solutions for drinking water sludge management and disposal.</li> </ul>	 high	 high	 high

**Key**  high impact  medium impact  low impact






























**Table 3.1** Linking aspirational targets to wider environmental resilience continued

Aspirational target	 Resilient safe water, now and into the future	 Protection for climate change and environmental hazards	 Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency
0% process losses on our sites	 medium	 low	 low
50% reduction in water company leakage by 2050 delivered in an environmental and economically sustainable way. Establish customers support for a pilot to establish best practice in this area	 medium	 low	 low
WRMP24 used to establish the best value investments to address long-term sustainable source mix for all chalk groundwater catchments	 high	 medium	 medium
When data available publish reports to set out main sectors impacting raw water quality and quantity of our catchments	 high	 high	 medium
Baseline raw water quality and ecology – clear and comprehensive monitoring strategy produced by December 2022	 medium	 medium	 medium
Establish, quantify and publish factors/sectors impacting raw water quality in our catchments	 high	 medium	 medium
WINEP24 and WRMP24 establish optimal land use for all of our catchments	 high	 high	 high

























**Key**  high impact  medium impact  low impact

**Table 3.1** Linking aspirational targets to wider environmental resilience continued

Aspirational target	 <b>Resilient safe water, now and into the future</b>	 <b>Protection for climate change and environmental hazards</b>	 <b>Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency</b>
Live data driving groundwater models – ground and surface water models developed, maintained and shared for the whole of our supply area	 high	 high	 high
Full catchment land use mapping, data collection and monitoring in place for all of our groundwater and surface water catchments	 high	 high	 medium
Catchment prioritisation will be informed by stakeholders and customers as part of WRMP24 and Business Plan 2024	 high	 high	 medium
Framework developed to ensure nature based solutions are implemented where possible (as part of a systematic hierarchy) in preference to engineered solutions	 medium	 medium	 low
Establish, quantify and publish factors/sectors impacting raw water quality in our catchments	 high	 medium	 medium
100% compliance with all environmental permits	 high	 medium	 medium
100% compliance with statutory reservoir safety requirements	 medium	 low	 low
100% conjunctive management of water resources	 high	 high	 medium

























**Key**  high impact  medium impact  low impact

**Table 3.1** Linking aspirational targets to wider environmental resilience continued

Aspirational target	 Resilient safe water, now and into the future	 Protection for climate change and environmental hazards	 Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency
Reduce waste and chemical use	 low	 low	 medium
Reduce power use – set targets per mega litre of water supplied for different types of water sources, from this set targets to reduce future power consumption	 low	 medium	 low
Quantify all company energy use, track performance and put in place plans to reduce total energy consumption	 low	 low	 medium
0% operational carbon emissions by 2030	 low	 medium	 low
Baseline and consistent accounting for carbon emissions from embedded carbon by 2023	 low	 medium	 low
WRMP24 – produce a plan which clearly sets out energy use for future Water Resource scenarios to enable stakeholders to understand environmental trade-offs. Energy use to feature as a key part of the Strategic Environmental Assessment	 low	 medium	 low
Natural capital and social capital evaluations driving all relevant business investment decisions by 2030	 high	 high	 high



















**Key**  high impact  medium impact  low impact

**Table 3.1** Linking aspirational targets to wider environmental resilience continued

Aspirational target	 <b>Resilient safe water, now and into the future</b>	 <b>Protection for climate change and environmental hazards</b>	 <b>Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency</b>
Resilience to a 1:500 drought by 2040	 medium	 high	 low
Resilience to a 1:1000 flooding by 2025	 low	 high	 low
Assess use of sustainable construction materials as part of wider capital assessment process	 low	 low	 medium
100% company sites managed to protect and enhance biodiversity by 2030	 low	 medium	 high
10% biodiversity net gain across our development work by 2030	 low	 low	 medium
Establish mechanisms for biodiversity net gain across all permitted development work by 2030	 low	 low	 medium
All catchment and innovation pilots to include biodiversity gain	 low	 low	 medium

**Key**  high impact  medium impact  low impact

**Table 3.1** Linking aspirational targets to wider environmental resilience continued

Aspirational target	 <b>Resilient safe water, now and into the future</b>	 <b>Protection for climate change and environmental hazards</b>	 <b>Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency</b>
Data driven INNS strategy set across company estate and linking to future resilience threats	 low	 medium	 medium
WRMP24 – no transfer of raw water between catchments where risk from INNS would be increased by 2025	 medium	 medium	 high
For all WRMP24 and development work to optimise projects during design phase to avoid irreplaceable habitats, protect and enhance priority habitats and species	 low	 medium	 medium
Avoidance and protection of archaeology during project design	 low	 low	 medium
<b>Key</b>  high impact  medium impact  low impact			



## How to get involved

We are committed to working in partnership with customers and key stakeholders who are also invested in developing a more resilient environment, and we welcome your participation in delivering our 25 Year Environment Plan.

We are holding a public consultation on our draft plan from 11 April to 6 May 2022. If you would like to take part, please complete the feedback form on our website.



Find out more: [southeastwater.co.uk/25YP](https://southeastwater.co.uk/25YP)

Here you will find a report detailing the co-creation process we went through to create this draft plan with our stakeholders, employees and customers. You can also read a non-technical summary of this document.

You can also sign up to receive updates as our plans progress, via the webpage above.



**Our aim is to leave our environment in better condition than when we found it. We hope that you'll join us in shaping what is one of the most important legacies of our time.**

The purpose of the consultation is to understand what the plan's strengths are, as well as any areas of improvement. We are also seeking offers of partnership and support to deliver this plan as part of this consultation.

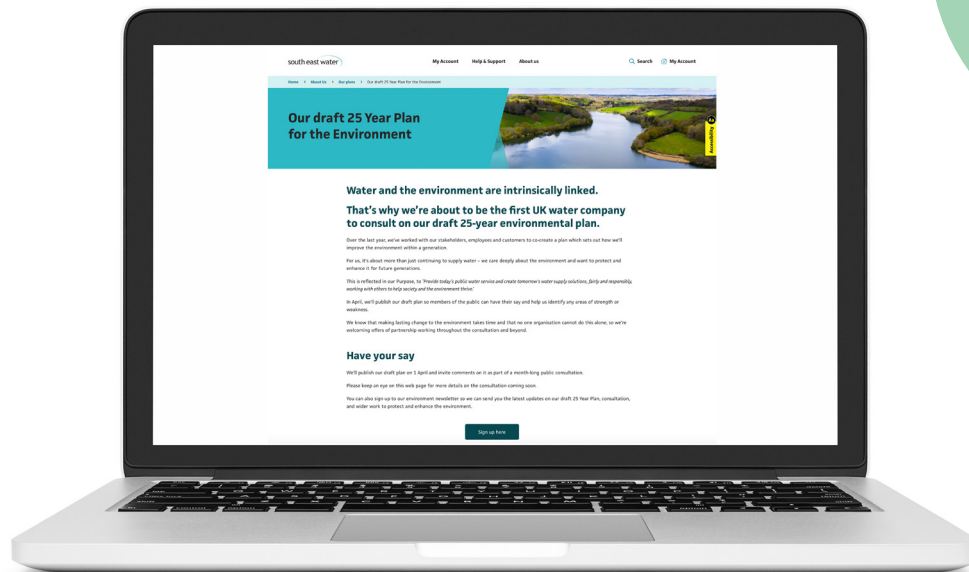
When the consultation has closed, we will document the responses received and how this influenced our final 25 Year Environment Plan. We will publish the final 25 Year Environment Plan on our website this summer.

But we won't stop there. This document will be continuously reviewed and updated, at least every five years.

Our research into our customers', employees' and stakeholders' environmental priorities will also continue as we develop future plans.

## Thank you for taking the time to read our draft 25 Year Environment Plan

The following section provides additional details, including an analysis of external and internal influences on the environment and how the objectives listed within the plan relate to our three overarching themes.



Find out more: [southeastwater.co.uk/25YP](https://southeastwater.co.uk/25YP)

**Don't forget to take part in our consultation before 6 May 2022. We look forward to sharing the revised plan with you this summer.**

## Annex A External influences over environmental resilience

Using our own research and intelligence, and insights from stakeholders, we have identified the following external influences on environmental resilience.

Table 1 is a Political, Economic, Social and Technological factors (PEST) analysis that summarises these key external issues relevant to our draft 25 Year Plan.

**Table 1:** Summary of the key findings of our PEST analysis related to current and future environmental resilience

### Political/Regulatory factors

Brexit and unknown levels of potential legislation reform – new Environment Bill, Environment Net Gain, statutory targets and new Environmental Regulator.

New Office for Environmental Protection and Environmental Bill and associated environmental principles.

COP26 climate summit in November 2021 and increasing focus on current and future impacts of climate change. Government net zero by 2050 roadmap.

Defra's 25 Year Plan – Government-led direction of travel.

Water industry strategic environmental requirements (WISER) 2021, Defra's Strategic Position Statement to Ofwat (2021), WINEP (2021 principles draft), Ofwat PR24 draft guidance (all setting future environmental expectations of industry).

Defra's Environmental Land Management (ELM) scheme with potential to reform agricultural practices.

DWI – indicating source/catchment management should be prioritised to deliver cleaner water.

Local Authorities are under pressure to increase housing provision.

Ofwat – reducing the impacts of our abstractions to provide long-term resilience.

Some environmental issues have higher political importance than others.

Emerging factors: Nature Recovery Networks, Carbon and biodiversity offsetting, Environment Net Gain, CaBa chalk streams strategy, Planning Reform and updates to EIA (impact to development schemes).

Environmental framework fragmented and political 'hot topics' and often short term/ 5 year driven.

### Economic factors

Supporting economic growth from our services and building encouragement for investment.

Affordability of treating difficult and emerging issues such as Invasive Non-Native Species (INNS), plastics and other chemicals.

Affordability of increasing catchment management and source development demands.

Affordability of the closure of abstractions, replacement/creation of new resources and creation of new infrastructure to operate abstractions in a more sustainable/climate change adaptive manner.

Value of water and acceptability as a finite resource – perception of bills when compared to other utilities and value to change customer behaviour when using water.

Water companies, and the environment, is attractive to investors.

The UK water industry has committed to become Net Zero by 2030 (for operational carbon).

Regulators expect our Business Plan to offer the best long-term value for money.

Natural Capital Accounting approach becoming more common.

**Table 1:** Summary of the key findings of our PEST analysis related to current and future environmental resilience continued**Social factors**

Greater societal expectations of our environmental role and what we should deliver is reflected in our customer research findings, but often combined with a limited understanding of where drinking water comes from and how it is delivered.

Expectations of public, government and third parties to work in partnerships to deliver our services, environmental requirements and management of catchment areas.

‘Topic based’ and ‘in vogue’ environmental issues which can have a short term focus and do not integrate wider environmental impacts/issues.

Beliefs relating to levels of wastage and control of third-party abstractions within our catchment areas.

Climate change and global biodiversity crisis.

Environmental problems not linked to behaviour for example water use and impact to chalk streams.

**Technological factors**

Development of more efficient and effective treatment processes to tackle current increasing and emerging requirements (nitrates, pesticide chemicals, plastics, etc).

Greater use of technology (GIS, drones, modelling) to predict areas of focus in catchment areas and within networks.

Innovation driven by links with industry and academia with potential for regulated incentives.

Greater use of scientific data to drive understanding and innovation.

# Annex B Internal factors relating to environmental resilience

This SWOT analysis recognises our business’ strengths and weaknesses, plus the opportunities and threats we face.

**Table:** Summary of the key outcome of our SWOT analysis

Strengths	Weakness
<p>Large, in house Environment Team with wide ranging expertise, providing governance and managing environmental risk across all business activities.</p> <p>Wide ranging legislation and Regulator support to deliver improved environmental resilience.</p> <p>Strong environmental management and data recording.</p> <p>We have a wide range of Outcome Delivery Incentives (ODIs) which drive performance.</p> <p>Ownership and long-term proactive management of large areas of landholding - protecting water quality, enhancing biodiversity and opportunities for carbon offsetting.</p> <p>Proactive surface and groundwater catchment management programmes.</p> <p>Well established partnerships, innovation and collaborative working.</p> <p>Good environmental record and base line data records for abstractions and drought management.</p> <p>Environment firmly embedded in business decisions with team reporting to the CEO.</p>	<p>Our new innovative catchment management behaviour change regime is still in development and there is a deficiency of suitable data or modelling to assess abstractions sustainability.</p> <p>As a business we currently need a lot of energy and produce waste in performing our core function.</p> <p>Waste is an area where we need to improve our understanding as a potential future risk.</p> <p>Discharge consents and general waste management are areas requiring further focus/investment.</p> <p>Wider stakeholders less aware of our environmental work and tend to focus on leakage due to media coverage about the industry performance and local experience.</p> <p>Water resource management/network linkage and storage to enable groundwater to be rested and sources operated conjunctively.</p> <p>No groundwater quantity/quality models for our supply area.</p>

**Table:** Summary of the key outcome of our SWOT analysis continued**Opportunity**

Build on our environmental reputation and performance by developing catchment biodiversity and wider environmental management regimes, enhancing our work in partnerships and fostering stronger relationships.

Ability to develop new infrastructure and address deficiencies and losses on our own sites, at our abstractions and within the network via modelling and technology advances.

Innovation within several key topics ranging from catchment management to behavioural water use; both internally and by challenging industry.

Opportunity to trial innovation in catchment management and biodiversity through Payments for Ecosystem Services.

Defra's new Environmental Land Management scheme may present opportunities to increase raw water quantity/quality.

Chance to develop in house environmental team and skill set to meet increasing demands.

Increasing amount of environmental advocates amongst customers and stakeholders.

The environment, and our business, continues to be attractive to investors.

**Threat**

Operating in an area of high economic growth and increasing development, with rich biodiversity, cultural heritage and protected landscapes.

Environment Act, 2021 associated statutory targets and remit of the new Office for Environmental Protection creates uncertainty.

Increased/decreased regulation following Brexit.

Climate change with potential for reduced influence but increase impact.

Potential land use changes and agricultural reform – detrimental to raw water quality.

Inability to influence key local/national decisions.

Abstraction reform creating uncertainty in water availability and potential for increased pressure on the environment. Abstraction/discharge parameters getting tighter.

EA annual environmental performance monitoring and further categorisation of leaks as categorised pollution incidents.

Demand on environmental skilled personnel.

Far reaching and increasing breadth of environmental delivery – what is our role in providing environmental resilience?

High water demand from hot weather and COVID-19 impact.

Fragmented environmental policy.

Local Planning Authorities and approach to EIA/planning consents.

Carbon and biodiversity offsetting for wider work.

Risk – more of our supply area becomes offsets for biodiversity/carbon making it more difficult to link infrastructure together.

Impact of others on water availability and water quality could in turn pose a risk to the availability of our raw product.



## Annex C Indicative goals and targets

This section sets out the outcomes and key objectives for our plan using high, medium and low scoring to show how each objective would support each of our priority themes. It also includes tables that set out our performance targets for 2025, 2030, 2040 and beyond.



### 3.2 Resilient safe water, now and into the future



Provision of resilient and safe water requires work in a number of key focus areas. Through our co-creation work it has been possible to set this out through topic specific outcomes with linked key objectives. These are shown in Table 5.2, further narrative detailing the outcomes are set out in section 5.3.1.

#### 3.2.1 Key outcomes required to deliver resilient safe water now and into the future.

##### Outcome 1 - Resilient water resources

1. *Reducing demand for water/water footprint* – reducing our demand for water alongside demand from household and business customers. Working with local planning authorities, house builders, agriculture and industry to reduce future water use/need.
2. *Sustainable abstraction* - Establishing/understanding the current and future sustainable level of water abstraction for our abstractions and for wider abstraction in the catchments that we operate in. Clear understanding of hydrogeology of all sources to ensure they are sustainable, can buffer customer demand and enable the environment to be resilient to climate change.
3. *Sustainable resource mix* - Ensuring we have the right mix and storage of water sources in each water resource zone to support wider environmental resilience and ensure we are adaptable to current and future climate change with resource operation linked to geology, geomorphology and hydro ecology.
4. *Effective rainfall* - replenishment of resources – understand our surface and groundwater catchments to ensure we can monitor, track and work in partnership to understand changes in recharge resulting from land use change and climatic variation.

Clear understanding of ALL abstraction (licensed and unlicensed) in catchments and how this could impact current and future water resource resilience.

Ensuring new abstractions are more environmentally sustainable than the abstractions that they replace.

Establish, where appropriate, catchment water balances to understand how catchments should be operated for high and low flows. Linking findings to how catchments could be managed/adapted to deliver ecological resilience.

## Outcome 2 - Resilient raw water quality

1. *Raw water quality driving decision making* – raw water quality is considered in line with water availability to enable a holistic view of new resource development.

Surface and groundwater quality understood, threats identified and emerging trends quantified.

Impact of nutrient enrichment to water resources understood with future impacts of climate change identified.

2. *Avoid raw water deterioration* – Ensure raw water quality trends and impacts are understood for all water resource zones. Utilisation of data to inform emerging issues and to provide evidence to engage polluting sectors and stakeholders who can work together with us to improve raw water quality and provide wider environmental resilience.

Impact of climate change on salinity on resources understood.

Emerging chemicals of concern – working with partners and the wider sector to understand emerging risks and develop plans to rectify before they become a problem.

## Outcome 3 - Resilient infrastructure

### *Resilient infrastructure*

Ensure South East Water's infrastructure is resilient to enable resources to be managed sustainably ensuring there is capacity to operate resources to enable systems to rest for environmental benefit – enough raw water storage, additional treated water storage, strategic networks, generation of energy on site.

Understand impact of wastewater discharges on raw water quality and quantity and resilience.

Understand impact of highways discharges on raw water quality and quantity and resilience.

Understand impact of agricultural discharges on raw water quality and quantity and resilience.

## Outcome 4 - Resilient operator

Sustainable abstraction (quality and quantity) now and in the long-term.

Management of current water stocks sustainably - Quantification and understanding of all abstractors, geology of catchments and utilisation of data and groundwater models to guide current and future abstraction management.










Management resources conjunctively - creating headroom to provide resilience to climatic variation and customer demands allowing flex to ensure environmental resilience is maintained– setting out how we maintain and build infrastructure to support this.

Understand impacts of raw water quality decline on power, chemical use and waste disposal.

Impact of changes to catchment land use understood and monitored – to enable risks to be managed, to track change and enable interventions/nature-based solutions to be delivered where appropriate.


Legal compliance and adapting to new legislative requirements.




**Table 5.2** Key Objectives and linkage to wider strategic environmental themes – resilient safe water, now and into the future

Resilient safe water, now and into the future	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Resilient water resources	2. Long-term strategic monitoring programme, that is tailored to answer questions/gaps we may have now and future challenges – monitoring should include hydrometrics, ecology etc	 high	 high	 high
		2. Regional groundwater models linked to eco-hydrology models for all our supply area	 high	 high	 high
		4. Monitor effective rainfall and groundwater catchment land use, tracking trends to ensure land use supports sustainable replenishment of resources	 high	 high	 high
		1. Future water use – work with local planning authorities and housing developers to reduce future demand for water	 high	 high	 medium
		1. Future water use – work with non-household customers to establish opportunities to reduce current and future demand for water	 high	 high	 medium
		2. Conjunctive use model development to enable sustainable abstraction and wider environmental resilience	 high	 high	 medium
		2. Agreement of sustainable abstraction volumes for all abstractions	 high	 high	 low
		3. Create optimal mix of water resources for each operational zone	 high	 high	 low
<b>Key</b> 1 = reduce water demand   2 = sustainable abstraction   3 = sustainable resource mix   4 = effective rainfall  high impact  medium impact  low impact					


57

**Table 5.2** Key Objectives and linkage to wider strategic environmental themes – resilient safe water, now and into the future continued

Resilient safe water, now and into the future	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Resilient water resources continued	1. Understand other factors impacting on Water Framework Directive (WFD) status or deterioration other than abstraction and how they might be overcome via adaptive management/nature-based solutions	medium	medium	high
		2. Scenario testing using models and live data to establish future impact to water availability and management of abstractions	medium	high	medium
		2,3. Water Resources Management Plan develops connectivity and storage between zones and wider region to enable increased water zonal management and storage	high	medium	low
		1. Other abstractor – targets to investigate/understand their water use/quantity/impact on catchment resilience	medium	medium	medium
		2. Ensuring abstraction licences are compliant with specific restrictions and current legislation	medium	medium	medium
		1. Set challenging leakage targets to reduce company water footprint	medium	low	low
		1. Set challenging Per Capita Consumption targets to reduce customers water footprint	medium	low	low

**Key** 1 = reduce water demand 2 = sustainable abstraction 3 = sustainable resource mix 4 = effective rainfall  
 high impact  medium impact  low impact























**Table 5.2** Key Objectives and linkage to wider strategic environmental themes – resilient safe water, now and into the future continued

Resilient safe water, now and into the future	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Resilient raw water quality	1. Groundwater model development for raw water quality, quantity and to drive sustainable operation and risk management	high	high	medium
		2. Investigate raw water declines to establish cause and to map out	high	high	medium
		2. Delivery of full scale catchment intervention to reverse raw water quality declines	high	high	medium
		1. Map land use change and regularly forecast future threats to raw water quality	high	medium	low
		2. Scenario testing through models to establish raw water quality impacts from climate change, land use change etc	medium	medium	medium
		1. Ensure drinking water safety plans and source protection zones are accurate, reflect recent data and regularly updated	medium	medium	low
		2. Delivery of catchment pilots to test potential to reverse raw water quality declines	medium	medium	low
		2. Monitor and evaluate emerging chemicals of concern	medium	low	low

**Key** 1 = reduce water demand 2 = sustainable abstraction


high impact medium impact low impact

**Table 5.2** Key Objectives and linkage to wider strategic environmental themes – resilient safe water, now and into the future continued

Resilient safe water, now and into the future	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Resilient infrastructure	Development of infrastructure to enable resources to be rested and for additional water storage	 high	 high	 high
		Understand network constraints which could be a barrier to conjunctive use and how barriers could be overcome, establish plans to reconcile	 high	 medium	 low
		Higher rate of mains repair and replacement	 medium	 medium	 low
		Leakage targets – customer properties	 medium	 low	 low
		Leakage targets – non-household customers	 medium	 low	 low
		Leakage targets – our infrastructure	 low	 low	 medium
<b>Key</b>  high impact  medium impact  low impact					



**Table 5.2** Key Objectives and linkage to wider strategic environmental themes – resilient safe water, now and into the future continued

Resilient safe water, now and into the future	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Resilient operator	Compliance with abstraction licences, resources operated sustainably and where possible conjunctively	medium	medium	medium
		Set challenging targets for process water losses	medium	medium	low
		Fish and eel screen compliance	medium	low	medium
		Discharge licence compliance	medium	low	low
		Baseline for chemical use understood and targets set to reduce	low	low	medium
		Baseline for waste production established for water treatment works and targets set to reduce	low	low	medium
		Plans developed for water treatment works Invasive Non-Native Species control, management and sites monitored	low	low	medium
		On site biodiversity plans developed, followed and monitored	low	low	medium

**Key**  high impact  medium impact  low impact



### 3.3 Protection for climate change and environmental hazards

Protection for climate change and associated environmental hazards requires work in a number of key focus areas. Through our co-creation work it has been possible to set this out through topic specific outcomes with linked key objectives. These are shown in Table 5.3, further narrative detailing the outcomes is set out in section 5.4.1.

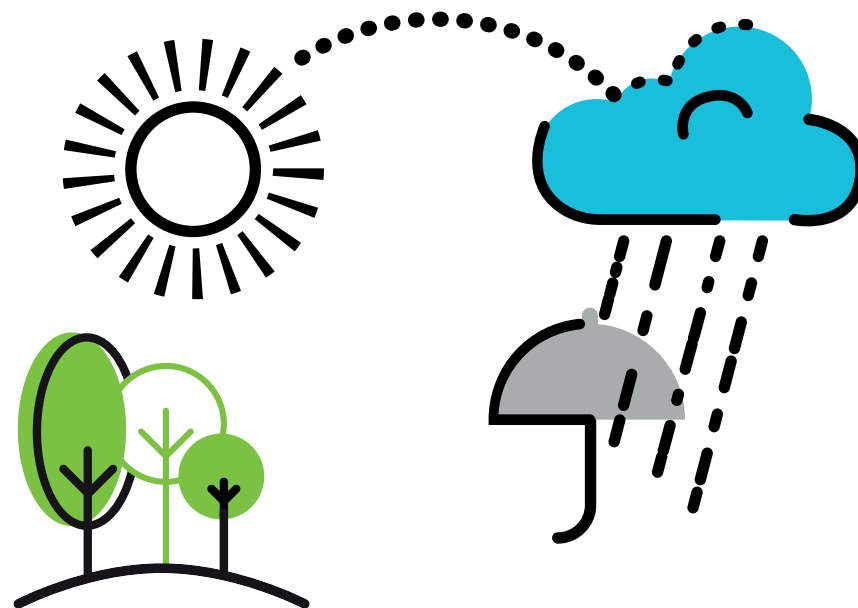
#### 3.3.1 Key outcomes required to deliver protection for climate change and environmental hazards.

##### Outcome 1 - Climate change resilience























- Ensuring we mitigate and adapt to climate change
- ensuring our business decisions reflect long-term climate change predictions.

##### Outcome 2 - Protection against environmental hazards

















- Ensure we monitor the impact of changes to catchment land use
- explore the use of nature-based solution to provide wider drought and flood resilience
- ensure effective recharge of aquifers
- ensure source protection zones are fit for purpose and adapt to reflect emerging risks
- positive water infrastructure – new water infrastructure designed to have a positive impact on the environment and communities whilst providing long-term resilience to drought and flooding
- access to assets providing wider health and wellbeing opportunities.



**Table 5.3** Key Objectives and linkage to wider strategic environmental themes – Protection for climate change and environmental hazards

Protection for climate change and environmental hazards			Support resilient safe water	Support climate change	Support waste, nature, heritage
	Outcomes	Key objectives			
	Climate change resilience - ensuring we mitigate and adapt to climate change. Making sure our business decisions reflect long-term climate change predictions	Natural capital accounting and evaluation to drive the right long-term investment decisions	 medium	 medium	 high
		Offsetting carbon footprint – Land use as a way of providing increased recharge and improve water quality and locking in carbon	 medium	 medium	 medium
		Future carbon footprint - Link with resilient raw water – ensure that future resource mix also accounts for not increasing energy use	 medium	 medium	 medium
		Reducing carbon footprint - Fleet and transport	 low	 medium	 low
		Reducing carbon footprint - Energy usage/energy efficiency on operational sites	 low	 medium	 low
		Improved monitoring climate change and closer working through sharing of data with key partners	 low	 medium	 low
<b>Key</b>  high impact  medium impact  low impact					

**Table 5.3** Key Objectives and linkage to wider strategic environmental themes – Protection for climate change and environmental hazards continued

Protection for climate change and environmental hazards	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Protection and management of environmental hazards	Resilience to a 1:500 drought	 high	 medium	 medium
		Resilient raw water investigations (in WINEP) – resilient catchments for raw water quality and quantity could provide drought and flood resilience	 medium	 medium	 medium
		Adaptive management of surface waters could provide drought and flood resilience	 medium	 medium	 medium
		Resilience to a 1:100 flooding	 low	 medium	 low
<b>Key</b>  high impact  medium impact  low impact					



### 3.4 Sustainable business, enhancing nature and heritage, reducing waste and source efficiency

Sustainable business, enhancing nature and heritage, reducing waste and source efficiency requires work in a number of key focus areas. Through our co-creation work it has been possible to set this out through topic specific outcomes with linked key objectives. These are shown in Table 5.4, further narrative detailing the outcomes are set out in section 5.5.1.

#### 3.4.1 Key outcomes required to deliver sustainable business Sustainable business, enhancing nature and heritage, reducing waste and source efficiency

##### Outcome 1 - Operating efficiently, understanding waste streams and setting targets

- Sustainably manage and reduce emissions to air from operations
- establish baseline for all derived waste and plans to reduce
- establish baseline for all chemical use link to water quality and set plans to reduce chemical use.

##### Outcome 2 - Sustainable business, customers, contractors and stakeholders

- Highlight how South East Water will work with other abstractors, businesses and retailer to reduce their waste and demand for water
- promote water footprint approach both outside and inside company. Embedding water footprint in all activities and working in partnership to innovate
- incentivise departments/contractors/supply chain/partners to minimise waste at the outset through project design and delivery.

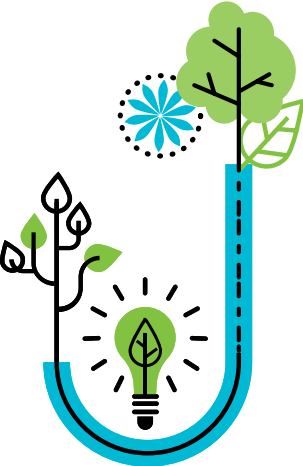
##### Outcome 2 - Enhancing biodiversity and management of Invasive Non-Native Species (INNS)

- Biodiversity net gain strategy set for company estate and off site works
- INNS strategy set across company estate and linking to future resilience threats.

##### Outcome 3 – Protecting heritage

- Design project to avoid environmental harm where possible
- avoidance of ancient woodland and irreplaceable habitats during project design
- avoidance and protection of archaeology through project design.

**Table 5.4** Key Objectives and linkage to wider strategic environmental themes – Sustainable business, enhancing nature and heritage, reducing waste and source efficiency

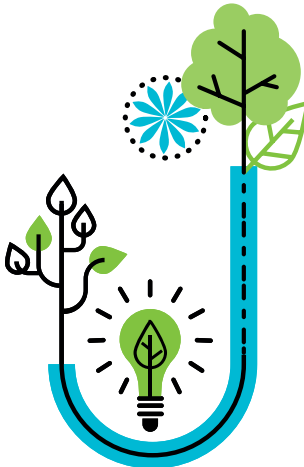





Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Operating efficiently, understanding waste streams and setting targets	Quantify chemical use per megalitre of water delivered, set targets to reduced chemical use	medium	low	medium
		Monitoring plan for emissions to air	low	medium	low
		Sustainably manage and reduce emissions to air from operations	low	medium	low
		Carbon neutrality – net zero emissions for both emissions and embedded carbon	low	medium	low
		Quantify all company energy use, track performance and put in place plans to reduce total energy consumption	low	medium	low
		Quantify all company waste streams and set targets to reduce waste	low	low	medium
	Sustainable business, customers, contractors and stakeholders	Facilitation of circular economy activities	low	low	high
		Work with other abstractors, businesses and retailer to reduce their waste and demand for water	medium	medium	medium

**Table 5.4** Key Objectives and linkage to wider strategic environmental themes – Sustainable business, enhancing nature and heritage, reducing waste and source efficiency continued

















Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Operating efficiently, understanding waste streams and setting targets continued	Resilient customer enabling customers to play their part in reducing waste	 medium	 medium	 low
		Commitment to greening new above ground buildings especially reservoirs	 low	 medium	 medium
		Reducing customers water use Per Capita Consumption (PCC)	 medium	 low	 low
		Reducing customer side leakage	 medium	 low	 low
		Incentivise contractors/supply chain/partners to minimise waste at the outset through project design and delivery	 low	 medium	 low
		Incentivise departments/contractors/supply chain/partners to minimise waste at the outset through project design and delivery	 low	 low	 low
		Procurement rules to reduce and track waste	 low	 low	 low
		Use of materials from sustainable sources	 low	 low	 low




**Table 5.4** Key Objectives and linkage to wider strategic environmental themes – Sustainable business, enhancing nature and heritage, reducing waste and source efficiency continued

Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency	Outcomes	Key objectives	Support resilient safe water	Support climate change	Support waste, nature, heritage
	Enhancing biodiversity and management of Invasive Non-Native Species continued	Proactively manage and monitor to produce a net gain in biodiversity and wildlife through active conservation work. Five-year site management plans will be produced	 low	 low	 high
		Prevent movement of Invasive Non-Native Species (INNS) via inter-catchment raw water transfers	 medium	 medium	 medium
		Development of INNS policy to include implementation of biosecurity facility provision and INNS training	 medium	 medium	 medium
		Management of INNS on development projects	 medium	 medium	 medium
		Assessment of future development to minimise the risk of transfer of INNS	 medium	 medium	 medium
		Hectares managed to control/remove INNS	 medium	 low	 medium
		Utilisation of amended Defra Biodiversity metric	 low	 low	 medium
		Biodiversity net gain of 10% on projects needing development consents	 low	 low	 medium
<b>Key</b>  high impact  medium impact  low impact					

**Table 5.4** Key Objectives and linkage to wider strategic environmental themes – Sustainable business, enhancing nature and heritage, reducing waste and source efficiency continued

Sustainable business - enhancing nature and heritage, reducing waste and resource efficiency				Support resilient safe water	Support climate change	Support waste, nature, heritage
	Outcomes	Key objectives				
	Enhancing biodiversity and management of Invasive Non-Native Species continued	Working with others to deliver wider biodiversity net gain		 low	 low	 medium
		Management of company owned Site of Special Scientific Interest (SSSIs)/ European sites to enhance biodiversity		 low	 low	 medium
		Conserve and enhance SSSIs/European sites to enhance biodiversity		 low	 low	 medium
		Protection of priority habitats and species		 low	 low	 medium
		Biodiversity net gain on permitted development projects		 low	 low	 low
	Protecting heritage	Avoidance of ancient woodland and irreplaceable habitats during project design		 medium	 medium	 high
		Design project to avoid environmental harm where possible		 low	 medium	 medium
		Avoidance and protection of archaeology through project design		 low	 low	 medium

**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals


Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient water resources</b> 	75.1 Ml/d*	Water Resources Management Plan 2024 (WRMP24) to reassess leakage targets	51.2 Ml/d* by 2045 45 Ml/d* by 2080	<b>1.</b> Set challenging leakage targets to reduce company water footprint
	139 l/h/d** Water harvesting/grey water pilot with a housing developer to quantify the lowest Per Capita Consumption (PCC) that could be achieved in sustainable homes	WRMP24 – key principle to set challenging PCC targets. Housing pilots to set future targets and principles	118 l/h/d** by 2045 90 l/h/d** by 2080	<b>1.</b> Set challenging PCC target to reduce customers water footprint
	Engage with 20% of abstractors on rivers Cuckmere and Little Stour to understand water use and opportunities, this is our 'other abstractor Outcome Delivery Incentive (ODI)' Review the benefits of 'other abstractor ODI' and test potential roll-out through Water Industry National Environment Plan 2024 (WINEP24) Deliver 2 x pilots with large water users to establish savings which could be achieved via non-household customers.	Further engagement in key catchments – through WINEP/ Water Resource South East (WRSE)/WRMP Set out priority catchments for water use/leakage engagement with non-household abstractors – through WINEP/WRSE/WRMP	Deliver other abstractor work in partnership across all catchments where it can provide a benefit – through WINEP/WRSE/WRMP	<b>1.</b> Other abstractor – targets to investigate/ understand their water use/quantity/impact on catchment resilience

\*megalitres per day

\*\*litres per household per day

**Key** 1 = reduce water demand  
 2 = sustainable abstraction  
 3 = sustainable resource mix  
 4 = effective rainfall

**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient water resources</b> continued 	1 x pilot with housing developer to establish potential for rainwater harvesting, dual water systems and to quantify PCC level and additional cost to provision of new housing stock  In WRMP24 and WRSE establish key areas where further pilots could be delivered from 2025 onwards	To be developed through WRSE/WRMP24	To be developed through WRSE/WRMP	<b>1.</b> Future water use – work with Local Planning Authorities and housing developers to reduce future demand for water
	Through WRMP24 and WINEP24 work establish non household customer sectors and through engagement establish a priority list for future pilot projects to establish how current and future demand for water could be reduced	To be developed through WRSE/WRMP24	To be developed through WRSE/WRMP	<b>1.</b> Future water use – work with non household customers to establish opportunities to reduce current and future demand for water

**Key** 1 = reduce water demand  
 2 = sustainable abstraction  
 3 = sustainable resource mix  
 4 = effective rainfall

Table 6.1 Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<div><div><div>Resilient water resources continued</div><div></div></div></div>	<p>Groundwater model development for North and East Kent – covering geology and water dependent ecology</p> <p>WINEP24 – establish where further ground and surface water models are required</p> <p>Ensure catchment data is used to updates models, establish ‘open data’ to allow wider sharing of data</p> <p>Update water resource operation in line with model outputs. WRMP24 process utilised to fill any gaps in water availability</p>	<p>Deliver WINEP24 ground and surface water models</p> <p>Ensure models are updated using catchment data</p> <p>Water Industry National Environment Plan 2029 – water resource model development for whole supply area</p>	<p>Full coverage of all supply zones with up-to-date ground and surface water models using live data</p>	<p><b>2.</b> Scenario testing using models and live data to establish future impact to water availability and management of abstractions</p>

**Key** 1 = reduce water demand  
2 = sustainable abstraction  
3 = sustainable resource mix  
4 = effective rainfall


**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient water resources</b> continued	<p>Groundwater model development for North and East Kent – covering geology and water dependent ecology</p> <p>WINEP24 – establish where further ground and surface water models are required</p> <p>Ensure catchment data updates models</p> <p>Update water resource operation in line with model outputs. WRMP24 process utilised to fill any gaps in water availability</p> <p>WRMP24 – key objective to examine investments required to enable chalk groundwater sources to be conjunctively operated i.e. resting sources and operating with surface water abstractions for wider environmental benefit. Outline storage and connectivity required to enable this to happen</p> <p>WINEP24 – development of conjunctive use models</p>	<p>Deliver WINEP24 ground and surface water models</p> <p>Ensure models are updated using catchment data</p> <p>WINEP29 – water resource model development for whole supply area</p> <p>WRSE/WRMP to set out conjunctive use plans and outline which sources and when they will be delivered</p> <p>WINEP – development further conjunctive use modelling linked to restoring sustainable abstraction and climate change adaptation work</p>	<p>Full coverage of all supply zones with up-to-date ground and surface water models using live data</p> <p>Where appropriate, operate sources conjunctively across supply area</p>	<p><b>2.</b> Conjunctive use model development to enable sustainable abstraction and wider environmental resilience</p>



**Key** 1 = reduce water demand  
 2 = sustainable abstraction  
 3 = sustainable resource mix  
 4 = effective rainfall


**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient water resources</b> continued 	Set out current cross-company monitoring, establish gaps and agree way forward through WINEP24	Establish data share/open data process – to enable data to be collected via partners	–	<b>2.</b> Long-term strategic monitoring programme, that is tailored to answer questions/gaps we may have now and future challenges – monitoring should include geology, hydrometrics, ecology etc
	Delivery of 10 Restoring Sustainable Abstraction schemes	–	–	
	Set sustainable abstraction level for all abstractions			<b>2.</b> Agreement of sustainable abstraction volumes for all abstractions
	Do not 'grow' abstractions without full sustainability appraisal			
	Covered earlier in conjunctive use model section of table	Covered earlier in conjunctive use model section of table	Covered earlier in conjunctive use model section of table	<b>2.</b> Regional groundwater models linked to eco-hydrology models for all of our supply area

**Key** 1 = reduce water demand  
 2 = sustainable abstraction  
 3 = sustainable resource mix  
 4 = effective rainfall




**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient water resources</b> continued 	Agree programme of work with Environment Agency to move abstraction licences to environmental permits	–	–	<b>2.</b> Ensuring abstraction licences are compliant with specific restrictions and current legislation
	WRMP24 – key principle to develop programme with to set out a roadmap for the infrastructure required to improve zonal water storage and connectivity.	Delivery of infrastructure roadmap schemes	Delivery of infrastructure roadmap schemes	<b>2+3.</b> WRMP develops connectivity and storage between zones and wider region to enable increased water zonal management and storage
	WRMP24 – set out programme of work required to provide improved connectivity and storage. Key projects and deadlines for delivery			
	WRMP24 – key objective to set out optimal resource mix required in each resource zone WRMP24 – set out schemes which fulfil this key objective and programme of delivery	Deliver WRMP24 schemes and monitor progress	Deliver WRMP24 schemes and monitor progress	<b>3.</b> Create optimal mix of water resources for each operational zone


**Key** 1 = reduce water demand  
 2 = sustainable abstraction  
 3 = sustainable resource mix  
 4 = effective rainfall

**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient water resources</b> continued 	<p>Through WRMP24 and WINEP24 work establish non-household customer sectors and through engagement establish a priority list for future pilot projects to establish how current and future demand for water can be reduced</p> <p>Current gap – establish scope and consider how this could be developed though WINEP24</p>	<p>To be developed through WRSE/WRMP24</p> <p>Current gap – establish scope and consider how this could be developed though WINEP24</p>	<p>To be developed through WRSE/WRMP24</p> <p>Current gap – establish scope and consider how this could be developed though WINEP24</p>	<p><b>2.</b> Understand other factors impacting on Water Framework Directive status or deterioration other than abstraction and how they might be overcome via adaptive management/nature based solutions</p> <p><b>3+4.</b> Monitor effective rainfall and groundwater catchment land use, tracking trends to ensure land use supports sustainable replenishment of resources</p>


**Key** 1 = reduce water demand  
 2 = sustainable abstraction  
 3 = sustainable resource mix  
 4 = effective rainfall

**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued


Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient raw water quality</b> 	Covered in conjunctive use section	Covered in conjunctive use section	Covered in conjunctive use section	<b>1.</b> Groundwater model development for raw water quality, quantity and to drive sustainable water resource operation and risk management
	<p>Current gap – establish scope and consider how this could be developed though WINEP24. Use WINEP24 to set out a priority list mapping and monitoring catchments at greatest risk first</p> <p>28 groundwater Water Industry National Environment Plan 2020 (WINEP20) schemes delivered, data used to update source protection zones and drinking water safety plans</p> <p>WINEP24 – set out programme for updating all source protection zones</p>	<p>Current gap – establish scope and consider how this could be developed though WINEP24</p> <p>Delivery of future WINEP programmes</p> <p>Monitoring of data in source protection zones and update where necessary</p>	<p>Current gap – establish scope and consider how this could be developed though WINEP24</p> <p>–</p>	<b>1.</b> Map land use change and regularly forecast future threats to raw water quality  <b>1.</b> Ensure drinking water safety plans and source protection zones are accurate, reflect recent data and are regularly updated

**Key 1** = raw water quality drive decision making  
**2** = avoid raw water deterioration


**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient raw water quality</b> continued 	WINEP20 - Deliver 7 groundwater catchment pilots and 6 surface water catchment pilots	Delivery of future WINEP programmes	–	<b>2.</b> Delivery of catchment pilots to test potential to reverse raw water quality declines
	WINEP24 – develop long-term catchment delivery programme			
	Covered by conjunctive use objectives	–	–	<b>2.</b> Scenario testing through models to establish raw water quality impacts from climate change, land use change etc
	Covered by delivery of catchment pilot section	–	–	<b>2.</b> Investigate raw water declines to establish cause and to map out <b>2.</b> Delivery of full scale catchment intervention to reverse raw water quality declines
	Covered by delivery of catchment pilot section	–	–	<b>2.</b> Monitor and evaluate emerging chemicals of concern
<b>Key 1</b> = raw water quality drive decision making <b>2</b> = avoid raw water deterioration				


**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient infrastructure</b> 	WRMP24 – set resilient infrastructure as a key objective (see WRMP develops connectivity section)	–	–	Understand network constraints which could be a barrier to conjunctive use/resting of groundwater sources and how barriers could be overcome, establish plans to reconcile
	See above and conjunctive use section	–	–	Development of infrastructure to enable resources to be rested and for additional water storage
	75.1 Ml/d*	WRMP24 to reassess leakage targets	51.2 Ml/d* by 2045 45 Ml/d* by 2080	Leakage targets – our infrastructure
	Test as part of WRMP24 – establish what the likely targets would be, programme of works and support through willingness to pay	–	–	Leakage targets – customer properties
*megalitres per day				

**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued


Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient infrastructure</b> continued 	Test as part of WRMP24 – establish what the likely targets would be, programme of works and support through willingness to pay  This links with the other abstractor work earlier on in the table – as this will help to establish the amount of water that could be saved	–	–	Leakage targets – non-household customers
	–	192 per 1000 km of network	–	Higher rate of mains repair and replacement
<b>Resilient operator</b>	100% compliance with discharge licences	–	–	Discharge licence compliance
	Current gap - Test as part of WRMP24 – establish what this target should be and how it could be reported	Current gap – develop through WRMP	Current gap – develop through WRMP	Set challenging targets for process water losses
	Compliant screening of abstractions	Compliant screening of abstractions	Compliant screening of abstractions	Fish and eel screen compliance

**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued


Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient operator continued</b> 	Current gap – baselines are available, but there is a need to establish the kilograms of chemical use per megalitre treated. Purpose to start to establish a link between decline in raw water quality and use of chemicals	To be developed	To be developed	Baseline for chemical use understood and targets set to reduce
	–	–	–	Baseline for waste production established for water treatment works and targets set to reduce
	Zero breaches of abstraction licences	Zero breaches of abstraction licences	Zero breaches of abstraction licences	Compliance with abstraction licences, resources operated sustainably and where possible conjunctively




**Table 6.1** Resilient safe water, now and into the future - Key objectives, targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Resilient operator continued</b> 	<p>Deliver 1 x Investigation for biosecurity of invasive Non-Native species (INNS) pathways (WINEP20)</p> <p>Biosecurity facility provision and training across company and contractors</p> <p>Produce a company-wide INNS plan (WINEP20)</p> <p>Cessation of raw water transfer from Darwell to Hazards Green by 2025</p> <p>Monitoring for key INNS species and data share through catchment partnerships and INNS secretariat</p> <p>WINEP24 establish key priorities related to INNS for delivery from 2025 onwards</p> <p>WRMP24 – key principle, new schemes do not create a new INNS pathway</p> <p>Management of company sites – INNS management forms part of biodiversity net gain work</p>	<p>Delivery of company wider INNS plan</p> <p>Monitoring for Non-Native species</p> <p>Delivery of WINEP24 – INNS</p>	–	Plans developed for water treatment works INNS control, management and sites monitored
	1460 hectares company land managed for biodiversity (67% of company landholding)	80% of company estate managed for biodiversity	90% of company estate managed for biodiversity	On site biodiversity plans developed, followed and monitored

**Table 6.2** Protection for climate change and environmental hazards – Key objectives, draft targets and goals


Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Climate change resilience - ensuring we mitigate and adapt to climate change. Making sure our business decisions reflect long-term climate change predictions</b>	Scope 1 – 1301 tCO <sub>2</sub> e* Scope 3 – 3098 tCO <sub>2</sub> e*	Scope 1 – 243 tCO <sub>2</sub> e* Scope 3 – 643 tCO <sub>2</sub> e*	Target of zero	Reducing carbon footprint – Fleet and transport  Scope 1 – our direct emissions Scope 3 – our contractors emissions
	 <p>We have switched to green grid power purchase agreements</p> <p>Regardless of energy solution the objective is to ensure optimum energy is consumed – specifically new investment will follow a “do nothing, optimise energy, self-generate” approach. We are currently overhauling our reporting to robustly report our kWh/Ml** efficiency across all energy consuming assets to ensure:</p> <p>1) efficient sites are used first; and 2) inefficient assets are highlighted for future intervention</p>	<p>We aim by 2030 to have ~15-20% of our energy requirement provided by onsite renewable technology, thus releasing further grid green energy to other UK customers</p>	–	Reducing carbon footprint – Energy usage/energy efficiency on operational sites
*tonnes of carbon dioxide equivalent **kilowatt hours per megalitre				

**Table 6.2** Protection for climate change and environmental hazards – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Climate change resilience - ensuring we mitigate and adapt to climate change. Making sure our business decisions reflect long-term climate change predictions</b> continued	Creation of carbon roadmap – principle to be net-zero by 2030 for operational carbon	Offsetting our carbon footprint remains our final intervention to achieve net zero by 2030, following all other feasible activities being exhausted  Between 2020 and 2030 we are aiming to reduce our carbon footprint by 94%, with majority being achieved via switching to green energy products	The forecast remaining ~2700 tCO <sub>2</sub> e* is expected to be offset – i.e. we will use create natural solutions to mitigate our remaining footprint	Offsetting carbon footprint – Land use as a way of providing increased recharge and improve water quality and locking in carbon
	 WRMP24 – key principle during development of plan to enable stakeholders to understand energy demand of resource options	WRMP key principle	WRMP key principle	Future carbon footprint – Link with resilient raw water – ensure that future resource mix also accounts for not increasing energy use
	Climate change adaptation report 2021  Clear link between 25 year environment plan, WRMP24 with climate change adaption report outlining future progress	Climate change adaptation report sets out progress and emerging risks with clear links to 25 year environment plan	–	Improved monitoring for climate change and closer working through sharing of data with key partners

\*tonnes of carbon dioxide equivalent

**Table 6.2** Protection for climate change and environmental hazards – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Protection and management of environmental hazards</b> 	Natural capital evaluation of landholdings 2 x pilot natural capital evaluations related to water resource management/options of rivers Ouse and Great Stour Develop natural capital assessment tool to enable wider decision making for Business Plan 2024 Establish 'capitals' evaluation tools and associated long-term roadmap	To be developed	To be developed	Natural capital accounting and evaluation to drive the right long-term investment decisions
	1:200 year drought resilience WRMP24 – key principle to establish support for investment to establish 1:500 year drought resilience	To be developed as part of WRMP24	To be developed as part of WRMP24	Resilience to a 1:500 drought
	92 sites for 1:1000 year flood	To be developed as part of Business Plan 2024	To be developed as part of Business Plan 2024	Resilience to a 1:1000 flooding

**Table 6.2** Protection for climate change and environmental hazards – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Protection and management of environmental hazards</b> continued	Same objectives as those set for conjunctive use and drinking water safety plans	–	–	Resilient raw water investigations (in WINEP) – resilient catchments for raw water quality and quantity could provide drought and flood resilience
	 <p>Same objectives as shown in water resource conjunctive use section</p> <p>Deliver adaptive management/ nature based solution projects on rivers Darent, Little Stour, Itchel</p> <p>WINEP24 – set out nature based solutions and programme of delivery across 15 year time frame for key catchments</p>	<p>Priority catchments for adaptive management</p> <p>Great Stour</p> <p>Little Stour</p> <p>Darent</p> <p>River Ouse</p> <p>River Cuckmere</p>	–	Adaptive management of surface waters could provide drought and flood resilience

**Table 6.3** Sustainable Business – Key objectives, draft targets and goals

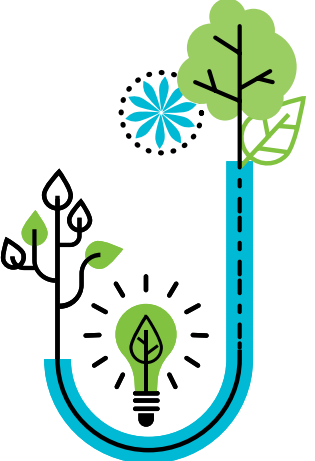
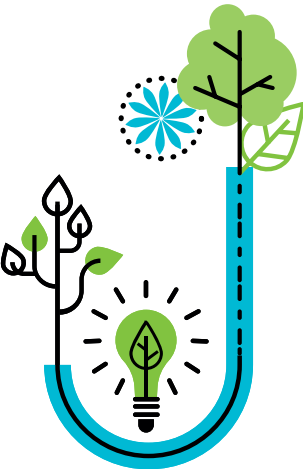
Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Operating efficiently, understanding waste streams and setting targets to address them</b> 	In development	–	–	Monitoring plan for emissions to air
	In development	–	–	Sustainably manage and reduce emissions to air from operations
	Scope 1 – 2924 tCO <sub>2</sub> e*	Scope 1 – 1850 tCO <sub>2</sub> e*	Target of net zero emissions	Carbon neutrality – net zero emission for both emissions and embedded carbon
	Scope 2 – 0 tCO <sub>2</sub> e*	Scope 2 – 0 tCO <sub>2</sub> e*		
	Scope 3 – 3335 tCO <sub>2</sub> e*	Scope 3 – 886 tCO <sub>2</sub> e*		
	In development	–	–	Quantify all company waste streams and set targets to reduce waste
	Gap – set out earlier in sustainable operation section	–	–	Quantify chemical use per mega litre of water delivered, set targets to reduce chemical use
*tonnes of carbon dioxide equivalent				

Table 6.3 Sustainable Business – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Sustainable business, customers, contractors and stakeholders</b> 	Set out earlier in water resource section (use same goals)	–	–	Reducing customers water use Per Capita Consumption
	Covered earlier (use same goals)	–	–	Reducing customer side leakage
	Covered earlier (use same goals)	–	–	Work with other abstractors, businesses and retailer to reduce their waste and demand for water
	Current gap – cover as part of pilot work	–	–	Resilient customer enabling customers to play their part in reducing waste
	Current gap – work with procurement team to establish a process to develop and deliver this	–	–	Incentivise departments/contractors/supply chain/partners to minimise waste at the outset through project design and delivery
	Current gap – work with procurement team to establish a process to develop and deliver this	–	–	Procurement rules to reduce and track waste
	Current gap – work with procurement team to establish a process to develop and deliver this	–	–	Incentivise contractors/supply chain/partners to minimise waste at the outset through project design and delivery



**Table 6.3** Sustainable Business – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Sustainable business, customers, contractors and stakeholders</b> continued 	Current gap – work with procurement team to establish a process to develop and deliver this	–	–	Use of materials from sustainable sources.
	Covered for sludge – wider work under development	–	–	Facilitation of circular economy activities
	Covered by introduction of 'capitals valuation'	–	–	Commitment to greening new above ground buildings especially reservoirs

Table 6.3 Sustainable Business – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Enhancing biodiversity and management of Invasive Non-Native Species</b> 	67% company sites managed to protect and enhance biodiversity	79% company sites managed to protect and enhance biodiversity	100% company sites managed to protect and enhance biodiversity	Biodiversity no net loss – company sites
	–	Biodiversity net gain of 10% on projects needing development consents Establish methodology for biodiversity net gain on permitted development work	Biodiversity net gain on permitted development projects	Biodiversity no net loss – work outside company sites
	Water Industry National Environment Plan 2024 – during development of catchment work establish mechanisms for biodiversity net gain	–	–	Working with others to deliver wider biodiversity net gain
	Conserve and enhance company owned Site of Special Scientific Interest/European sites to enhance biodiversity	–	–	Protection of priority habitats and species
	Invasive Non-Native Species (INNS) control policy produced Management protocols to control INNS on development projects Staff training	–	–	Development of INNS Policy to include implementation of biosecurity facility provision and INNS training

Table 6.3 Sustainable Business – Key objectives, draft targets and goals continued

Outcome	Performance Targets / Goals			Key objectives
	2025	2030 (Price Review 2024)	2040 onwards	
<b>Enhancing biodiversity and management of Invasive Non-Native Species</b> continued	Principle for Water Resources Management Plan of no inter-catchment raw water transfers	–	–	Assessment of future development to minimise the risk of transfer of INNS
	Delivery of Bewl-Darwell scheme	No inter-catchment raw water transfers which increase INNS risk	No inter-catchment raw water transfers which increase INNS risk	Prevent movement of INNS through current inter catchment raw water transfers
<b>Protecting heritage</b>	–	–	–	Design project to avoid environmental harm where possible
	–	–	–	Avoidance of ancient woodland and irreplaceable habitats during project design
	–	–	–	Avoidance and protection of archaeology through project design

