

Climate Change Adaptation Report 2024

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Glossary

Abstraction	The process of taking water from a ground source
AMP	Asset Management Period – 5 year investment period used for our planning
CCRA	Climate change risk assessment- National Climate Change Risk Assessment for the UK
Connect 2050	Connect 2050 will mitigate the risks associated with moving the water from SRO's across our Central region.
Interdependencies	Interactions between interconnected human and physical systems that alters the nature and magnitude of the risk. May also be termed cascading risks, or cross-cutting risks.
l/p/d	Litres per person per day
LTDS	Our 2025-2050 Long Term Delivery Strategy, which sets out our ambitions and has helped shape our business plan.
Ofwat	The economic regulator of the water sector in England and Wales.
PCC	Per capita consumption – the amount of water typically used by one person in a day.
Physical risk	Risks related to the physical impacts of climate change.
PR24 Business Plan	Our 2025-2030 business plan for price review 2024 (PR24).
RCP	Representative Concentration Pathways - climate change scenarios to represent future greenhouse gas concentrations. RCP4.5 is equivalent to +2°C warming by 2100, with RCP8.5 equivalent to +4°C warming by 2100 relative to preindustrial levels.
SRO	Our WRMP considers a number of strategic solutions that could significantly increase future supply. The potential solutions are known as our Strategic Resource Options.
Transition risk	Risks related to the transition to a lower carbon or Net-Zero economy.
WRMP	Water Resource Management Plan – 50 year plan which water companies use to plan ahead and manage their water resources.
WINEP	Water industry national environment programme (WINEP) is a programme of actions we need to take to meet our statutory environmental obligations and non-statutory environmental requirements.








Purpose of the Report

We are a water-only supply company situated in the South East of England, supplying parts of Bedfordshire, Berkshire, Buckinghamshire, Essex, Hertfordshire, Surrey, and North West London. We also supply water to the Tendring peninsula in Essex and the Folkestone and Dover areas of Kent. We provide on average 937 million litres of drinking water to approximately 3.9 million people every day. Our supply area also includes 72,000 commercial customers. The communities we serve are shown in Figure 1-1.

Our region is designated by the Environment Agency (EA) as under serious water stress and is highly vulnerable to climate change. Meanwhile, our region is one of the most densely populated and economically active regions in the UK, with a fast-growing population, which together with housing growth is set to increase the demand for water in our region by 10% by 2050. Our region also hosts 10% of the world's rare, environmentally vulnerable chalk streams. Therefore, we need to reduce the amount of water we take from the environment to restore sustainable river flows and achieve our environmental ambition.

As the UK's largest water supply only company, we recognise the important role we play, not only in providing an essential service but also as stewards of the environment. We have therefore undertaken a risk-based review of the challenges posed by climate change to our business, both now and in the future.

In undertaking this risk-based review, we have sought to:

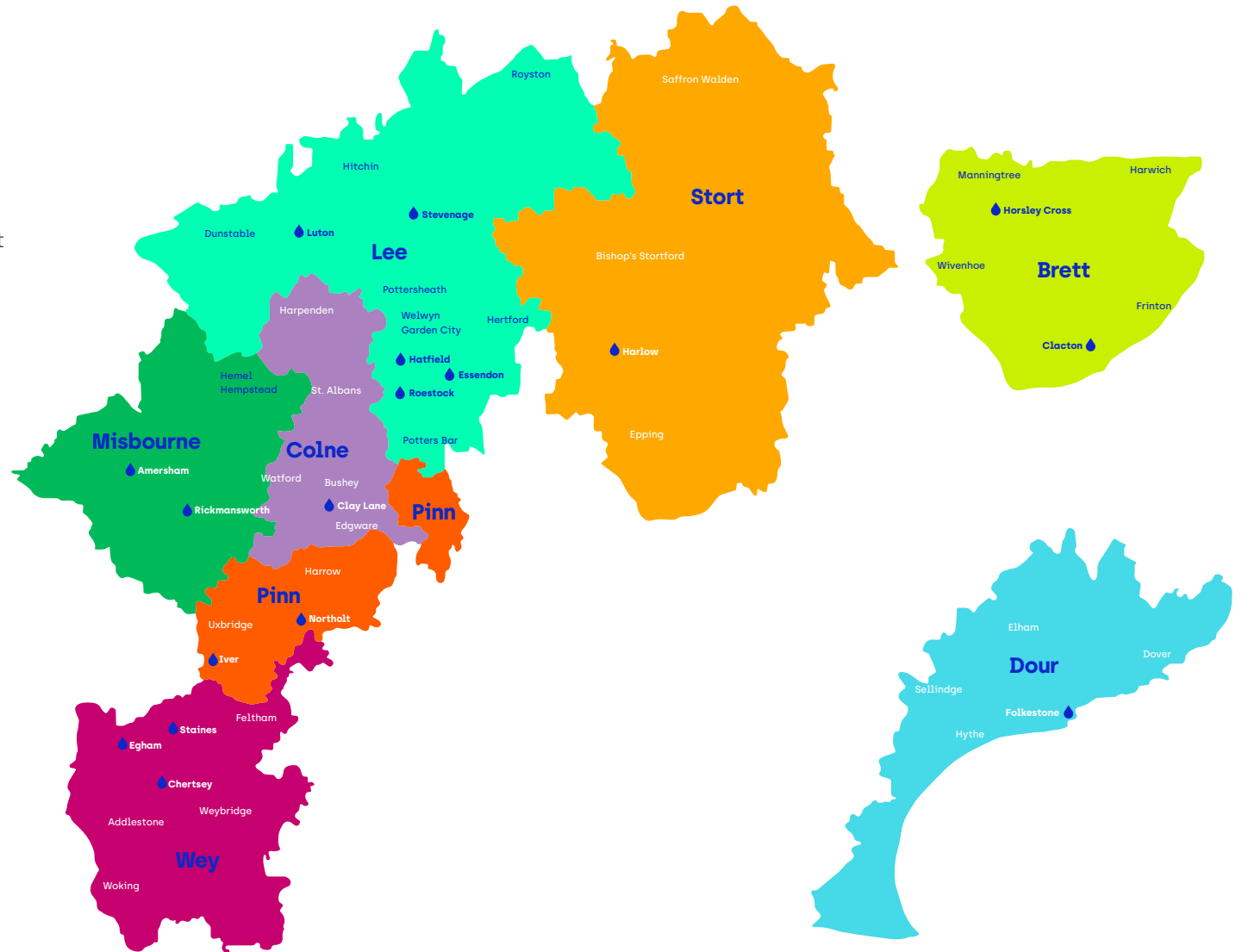
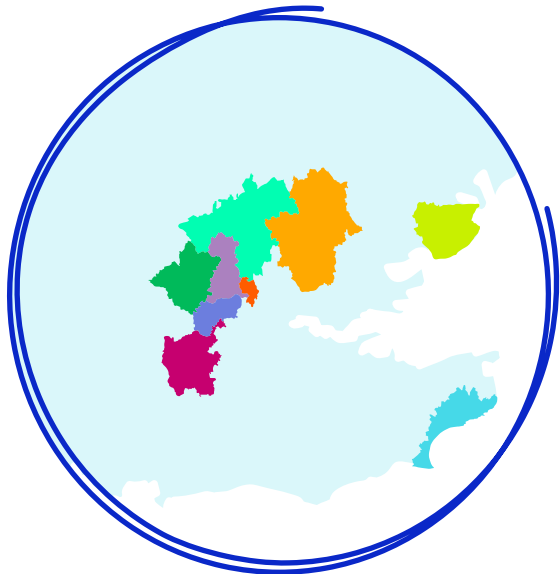
-  Identify current and future options to address climate risks.
-  Identify progress in our actions and commitments since the third round of reporting.
-  Ensure that plans are consistent with both a 2°C and a 4°C temperature rise.
-  Make clear the implications of any reduced investment on levels of resilience.
-  Identify any enablers and barriers to managing climate risks.



During this round of reporting we have focused on demonstrating our adaptation progress through measurable performance indicators as part of our robust adaptation monitoring plan. We have also included risks from transitioning to a climate resilient, Net-Zero economy. Our transition risks exhibit strong interdependencies with our physical risks, and vitally demonstrate the need for cross-sectoral collaboration, together with regulator and government support.

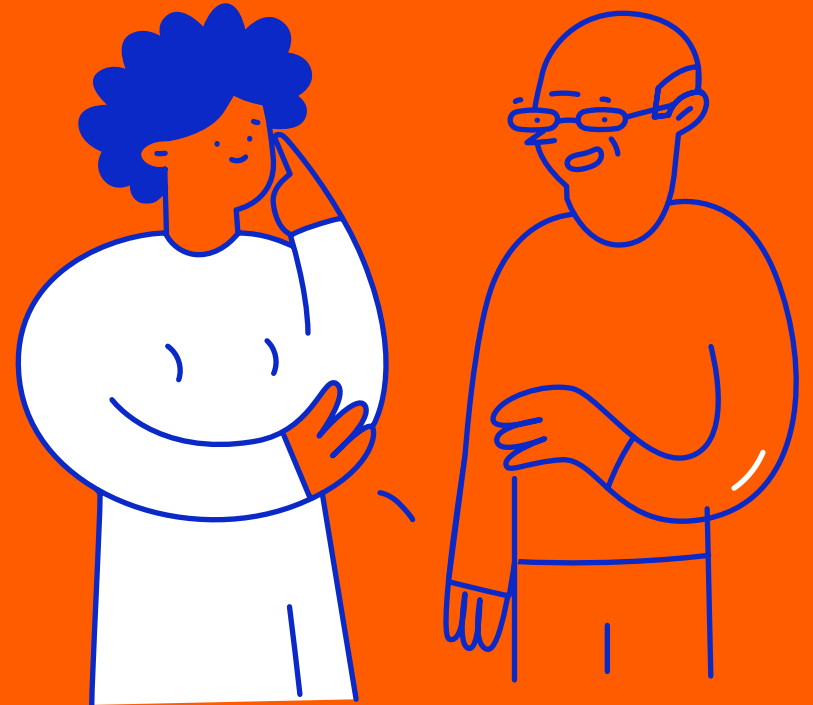
The insights from this report will support government understanding of the climate risks and adaptation actions being taken in important infrastructure, and will contribute to the UK's Climate Change Risk Assessment (CCRA) and the National Adaptation Programme (NAP).

Figure 1-1 – Our water resource regions 



Chapter 1

Risk assessment



Risk assessment methods

Physical risks

Our assessment identified several climate related physical risks which were scored based on the likelihood and consequence of the risk occurring in 2050 and 2075 under different warming scenarios.

We have scored each risk five times:

- 01 The present-day [2025] risk score.
- 02 The risk score in 2050 under a central [+2°C] warming scenario, if we take no further action.
- 03 The risk score in 2075 under a central [+2°C] warming scenario, if we take no further action.
- 04 The risk score in 2075 under a high [+4°C] warming scenario, if we take no further action.
- 05 The target risk score in 2050, considering our planned actions and commitments within our 2025-2030 [PR24 Business Plan](#), our 2025-2050 [LTDS](#) and our 2025-2075 [WRMP2024](#).

Transition risks

In addition to our headline physical risks, we have also assessed transition risks due to the strong interdependencies that exist between our physical and transition risks, and the potentially significant impacts that we could face as we transition to a climate resilient, Net-Zero economy. However, there is a lower certainty in how transitional risks will impact us far into the future as the nature of the risks depend on the wider global transition to a zero-carbon economy. Therefore this report assesses transition risk by considering three scoring scenarios with a maximum time horizon of 2030, which aligns with the upper end of the time period considered by our PR24 Business plan:

- 01 Present-day conditions.
- 02 The risk in 2030's, with no further mitigating actions.
- 03 2030's world, with enhanced mitigating actions.

For more information on all the climate related risks we assessed and the interdependencies, please see our main [Climate Change Adaptation Report 2024](#).

Figure 1-2 - Risk scoring matrix (green = low risk; red = very high risk)

		Impact				
		1. Insignificant	2. Minor	3. Moderate	4. Major	5. Critical
Likelihood	5. Almost Certain	5	10	15	20	25
	4. Probable	4	8	12	16	20
	3. Possible	3	6	9	12	15
	2. Unlikely	2	4	6	8	10
	1. Remote	1	2	3	4	5

Chapter 2

Our physical risks



Our headline physical risks

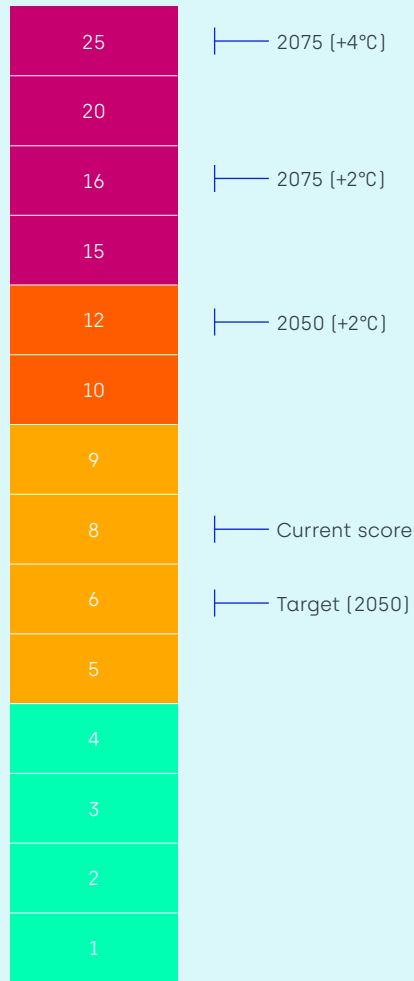
Our risk assessment identified six headline physical risks across three primary climate-related themes: climate risks to water availability and supply, climate risks to asset resilience, and climate risks to water quality.

However, strong interdependencies exist across these themes, therefore the actions we take to manage our risks will provide co-benefits across multiple risks spanning different themes. Moreover, we experience interdependencies with external parties and third party infrastructure. Therefore, this assessment builds upon the narratives of these interdependencies within our headline risks and required solutions for interconnected systems, rather than assessing interdependencies as separate risks, as reported in our third adaptation report in 2021. This demonstrates the holistic approach we must take to increase our resilience to climate change.

Our headline risks		Our Water		Our Network		Our Environment
Water Supply	<p>R1 Increase in demand due to higher temperature</p> <hr/> <p>R2 Reduced availability of ground and surface water due to drought</p> <hr/> <p>R3 Increase in competition for and price of raw water imports</p>	<p>Our surface and groundwater sources are essential for our water supply, especially at times of droughts and extreme temperatures. By using water more efficiently we can improve our resilience to drought and other extreme weather events.</p>	<p>A well-maintained network ensures increased resilience at times of water scarcity.</p>	<p>We must protect our environment to ensure our groundwater and surface water sources are sustainable for the future. By carefully managing and diversifying where our we source our water, we can increase our resilience to drought and improve the environment.</p>		
Asset Resilience	<p>R4 Equipment and asset failure due to extreme weather events</p> <hr/> <p>R5 Outage due to flooding of assets</p>	<p>Our water supply relies on a resilient supply system, with flexibility to respond to extreme weather events.</p>	<p>Asset resilience affects the flexibility and resilience of the wider supply system. By investigating flood risk and investing in flood defences we can be better prepared for extreme events.</p>	<p>Nature provides valuable solutions and natural buffers to extreme weather events.</p>		
Water Quality	<p>R6 Changes to raw water quality</p>	<p>Water quality affects our available water for supply and at the same time reduced availability of ground and surface water due to drought can result in deteriorating water quality.</p>	<p>Asset resilience affects our water treatment capacity and therefore our water supply.</p>	<p>The way we manage our environment affects the quality of water that enters our surface and groundwater sources. By working with farmers and land managers we can improve raw water quality and deliver wider benefits.</p>		

Climate risks to water availability and supply

R1



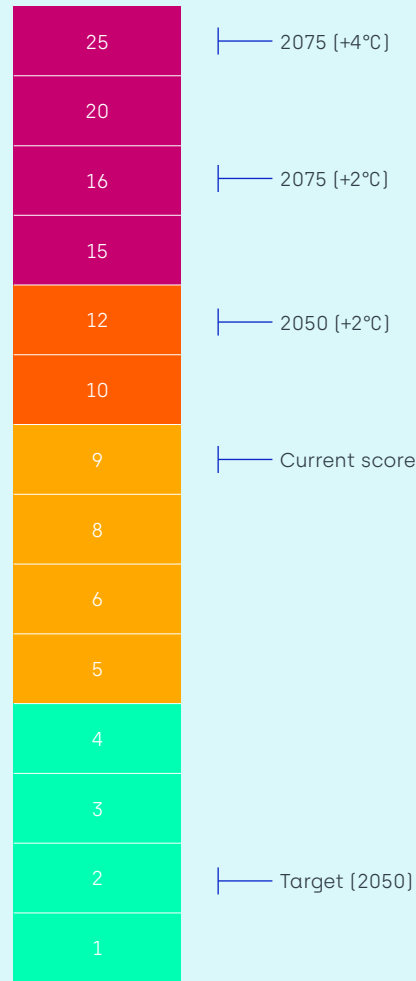
Risk 1

Increase in demand due to higher temperatures

Climate change will lead to higher average temperatures throughout the year, particularly during the summer, with more frequent, longer and hotter heatwaves. For us, this means an increase in demand for water, particularly peak demand in summer. Under future climate scenarios, we expect that extreme temperatures will have significant impacts on the water demand pressure across our system.

Without taking the necessary actions, the likelihood that future heatwaves will have major impacts on our network is almost certain, with interruptions to supply presenting a threat to our reputation and customer satisfaction.

R2



Risk 2

Reduced availability of ground and surface water due to drought

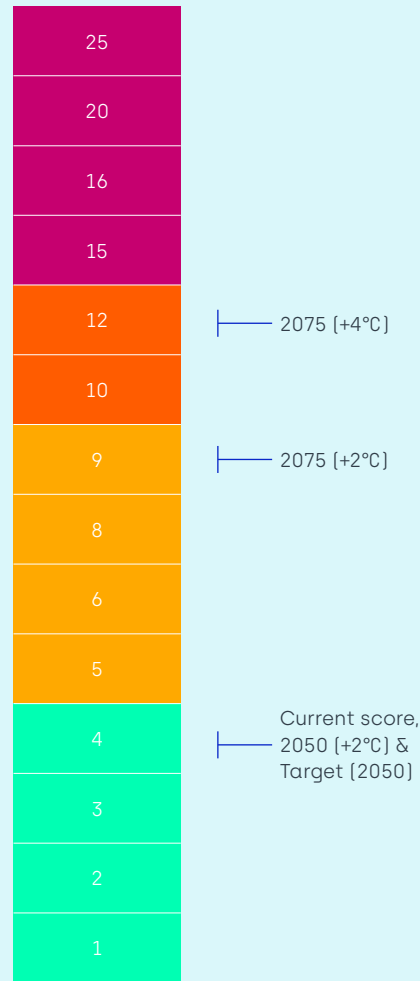
On average we supply around 950 million litres of water a day. We depend greatly on groundwater sources, which currently make up 65% of our total supply, and are at risk from lower annual rainfall levels.

Groundwater sources are at risk from more frequent and longer droughts and warmer temperatures earlier in the calendar year, shortening the recharge season. Increasing rainfall intensity [shorter, sharp extreme rainfall events] also increases runoff and reduces groundwater recharge, further posing water quality risks to our surface water sources. Prolonged periods of low rainfall over the summer months also put our surface water sources at risk.

Combined with our environmental ambition to reduce abstractions, changing precipitation patterns will affect our surface and groundwater assets. Without action, this will impact our ability to meet customers' water supply needs under future climate change scenarios.



R3



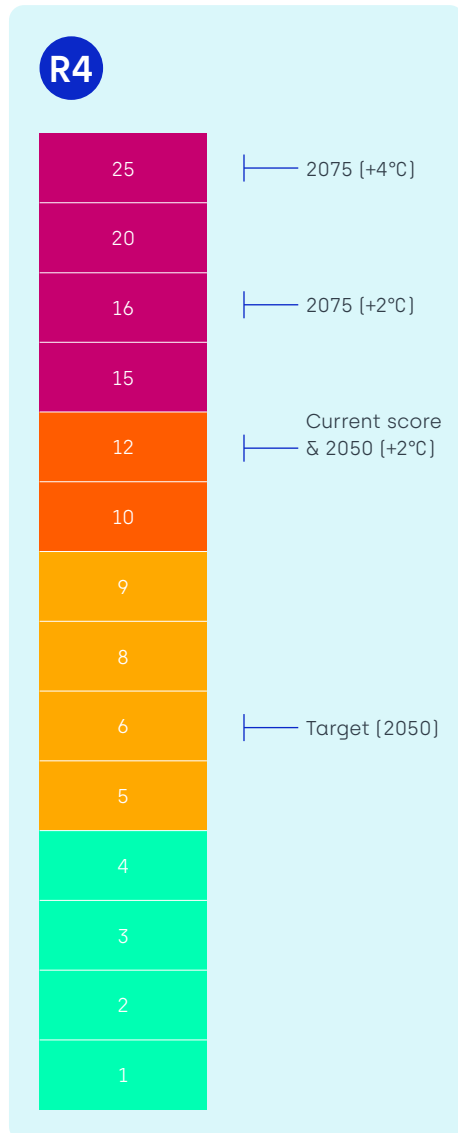
Risk 3

Increase in competition for and price of raw water imports

Currently, we import to and export water from other companies through bulk transfer agreements and emergency connections. However, the climate change and transition risks we face to our water supply will also affect neighbouring water companies with whom we trade both raw (untreated) and potable (treated) water every day.

To facilitate our ambition to remove less water from the environment our reliance on inter-company transfers will increase significantly over the coming decade. While our water transfer schemes make us more resilient, they also come with associated risks. Without taking the necessary actions, the price we pay for water imports will likely increase, alongside the requirement for companies to consider higher cost and higher carbon solutions.

Climate risks to asset resilience



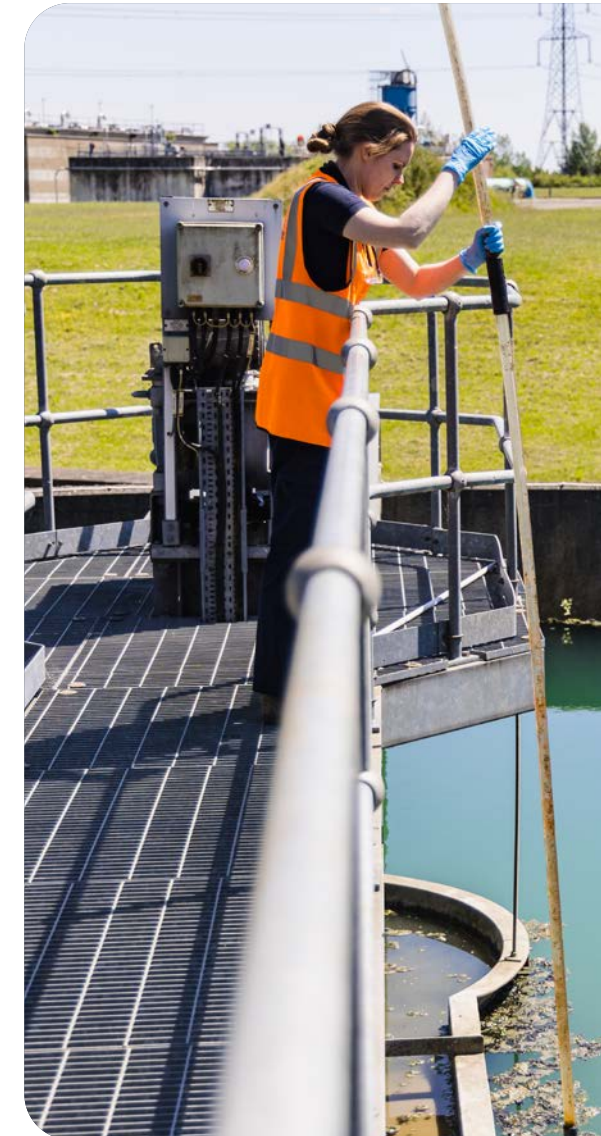
Risk 4

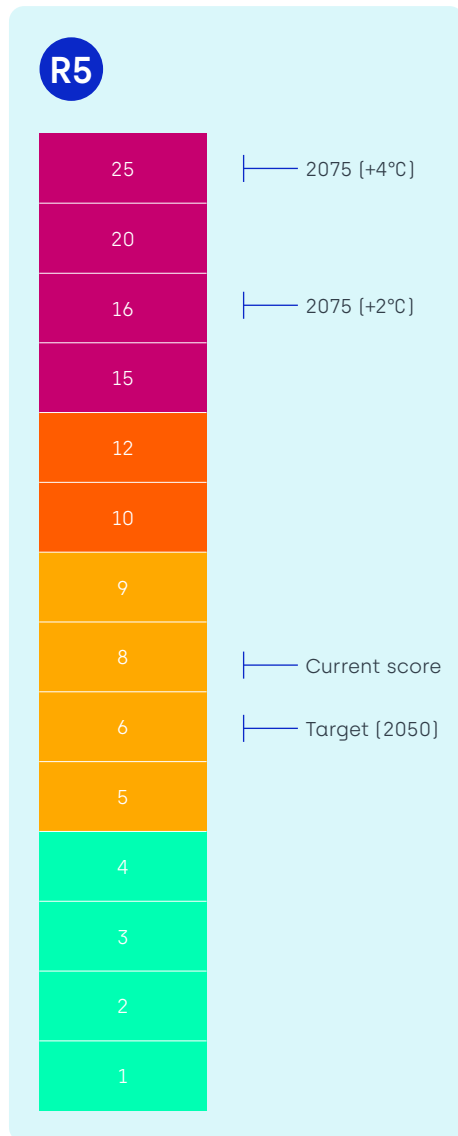
Equipment and asset failure due to extreme weather events

Climate change will lead to more frequent and more intense extreme weather events, including extreme rainfall events, heatwaves and storms. The assets and equipment that underpin the service we deliver to customers are exposed to a range of direct risks associated with these extreme weather events, including:

- Storms and high winds cause loss of external power supply, leading to temporary shutdown of sites, potentially leading to supply interruption for customers
- Overheating of mechanical and electrical equipment during heatwaves.
- Peak demand during heatwave periods increases the risk of asset failure.
- Inundation of assets and equipment by floodwater leading to damage or contamination [see Risk 5].

Many of our assets are interdependent with other infrastructure systems, such as energy and communications, as well as supply chains for inputs such as chemicals, which are themselves exposed to risks from climate change. As our climate becomes more unpredictable and extreme weather events become more common, we expect that the consequences that these events will have on our assets and infrastructure will become more severe.





Risk 5

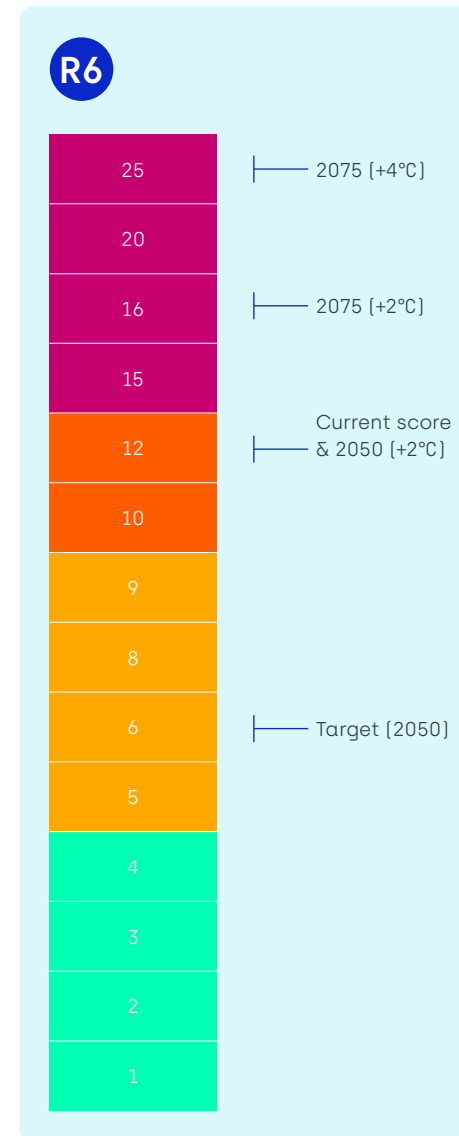
Outage due to flooding of assets

Supplying our customers high quality drinking water relies on a network of sites and assets, including water treatment works, pumping stations, booster stations and depots. Several of our sites are already at risk of flooding from a range of sources – rivers, the sea, groundwater and surface water.

Floodwaters can cause damage directly to equipment and assets at our sites, such as scour damage to pipes due to high flows, but it can also prevent staff from accessing sites. This can affect our ability to put in place emergency responses or make emergency repairs, potentially increasing the length of disruption to services. Flooding of our sites also has the potential to cause operational outages or impact water quality, which could interrupt supply to customers.

Changing rainfall patterns, more extreme rainfall events and sea level rise as a result of climate change will exacerbate these risks, as well as potentially putting more sites at risk of flooding.

Climate risks to water quality



Risk 6

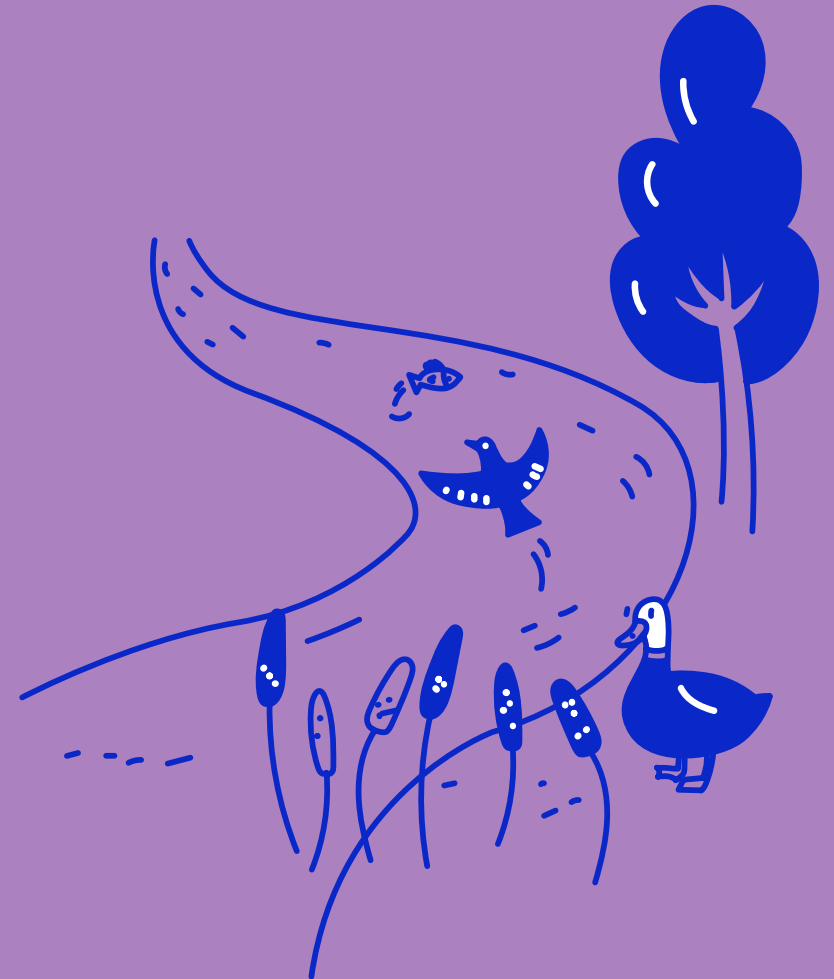
Changes to raw water quality

We take water from the environment and treat it to meet drinking water quality standards, before supplying our customers. The treatment requirements for our sources are influenced by the quality of the raw water we abstract.

Changes in rainfall and temperature patterns could affect raw water quality of both groundwater and surface water sources. Without taking the necessary actions, we believe there is a significant increase in risk to the quality of our drinking water supplies, with more critical legal or regulatory implications which would present a threat to our reputation and customer satisfaction.

Chapter 3

Our transition risks



Our headline transition risks


A summary of our key transition risks is shown in Table 4-1.

We have included transition risks as part of our round four ARP due to the strong interdependencies that exist between our physical and transition risks, and the potentially significant impacts that we could face as we transition to a climate resilient, Net-Zero economy.

As our sustainability reporting matures, we will increasingly align with requirements for climate-related financial disclosures, improve our knowledge and quantification of impacts and enhance our resilience through robust, evidence-based adaptation planning. For example, by the next adaptation reporting round, we will have completed a detailed assessment of transitional risks to develop our understanding of measures that can be implemented to adapt to or mitigate them.

The following sections detail the nature of each transitional risk, the impact indicators used, and the interdependencies with other transitional and physical risks.

Table 6-1 - Summary of preliminary assessment of transition risks and risk scoring

Transition Risk Category	Risk ID	Risk	Risk Scoring Scenario		
			2025 [current]	2030 [unmitigated]	2030 [targeted]
Market 	T1	Increased costs of energy and materials due to climate change and the Net-Zero transition	12	20	9
Policy and regulation 	T2	Regulatory system not enabling sufficient investment for Net-Zero transition and climate adaptation	20	20	12
	T3	Changes in the policy and regulatory requirements for water companies related to climate change, Net-Zero, and more stringent environmental regulations	12	20	12
Technology 	T4	Capacity and readiness of technology, Affinity Water's people, resources, and supply chain to deliver Net-Zero and climate adaptation	15	15	9
Reputation 	T5	Negative public / stakeholder perception of Affinity Water due to underperformance in management of the environment and/or Net-Zero	12	15	6
	T6	Customer affordability and fairness concerns due to costs to decarbonise and adapt to climate change	9	12	6

Market risks

Transition Risk 1

Increased costs of energy and materials due to climate change and the Net-Zero transition

As the UK transitions to a Net-Zero economy there will be an increase in demand for renewable energy and increased competition for low carbon materials and technology. The cost of electricity to treat and distribute water across our network represents a significant proportion of our expenditure, therefore we need to increase our resilience to energy prices. While our solar generation and intelligent purchasing of electricity have largely mitigated recent high energy prices, rising energy costs have still had an effect on our business.



Policy and regulation risks

Transition Risk 2

Regulatory system not enabling sufficient investment for Net-Zero transition and climate adaptation

We risk not being able to deliver our 2030 Net-Zero target if there are insufficient expenditure allowances required to substantially reduce our carbon footprint. In addition, expenditure allowances through the price review process may not keep pace with the investment needed to proactively adapt to climate change or conform to increasing environmental legislation and the increasing costs of materials. Subsequently, we may have to increase our bills to customers and suffer negative reputational impacts if expenditure allowance needed is insufficient to adapt to climate change.



Transition Risk 3

Changes in the policy and regulatory requirements for water companies related to climate change, Net-Zero, and more stringent environmental regulations

We have many initiatives to ensure our business is sustainable in the long-term, as set out in our business plan 2025-2030. They include meeting our environmental ambitions and targets for reducing carbon emissions, increasing our resilience to climate change, and complying with water sector regulations. We could face challenges when balancing and prioritising these multiple initiatives as we execute our long-term delivery strategy, especially due to the dynamic and evolving nature of regulations across these objectives. We are committed to mitigating this risk, however, it may not be possible to prioritise all our initiatives at the same time.

Technology risks

Transition Risk 4

Capacity and readiness of technology, our people, resources, and supply chain to deliver Net-Zero and climate adaptation

There is a risk that skills, technology, resources and infrastructure are not available or ready to enable our transition to Net-Zero operational emissions by 2030. Our customers and operations could be impacted by increased expenditure focused on building capacity across company and supply chains and we could suffer costs on investing in technology that may not be fit for purpose. We are facing increased costs to access the renewable technologies skills market, as well as the increased cost of wholesale materials. As a result, this could increase costs for customers therefore negatively impacting our reputation.

Reputation risks

Transition Risk 5

Negative public / stakeholder perception of Affinity Water due to underperformance in management of the environment and/or Net-Zero

There are high expectations for the water industry to transition to Net-Zero by 2030, the world's first sector-wide commitment of its kind. Therefore, customer dissatisfaction with the speed or pathway for our transition to Net-Zero, further to interruptions to our supply, which may be perceived as a lack of climate resilience by our customers, will impact our reputation.

Transition Risk 6

Customer affordability and fairness concerns due to costs to decarbonise and adapt to climate change

Our domestic customers consider affordability is amongst their top priorities. There are uncertainties relating to the cost of climate change and large investment is needed to adapt to climate change and complete the transition to Net-Zero. Our reputation may be negatively impacted if customers are dissatisfied with service affordability, and there is the potential that penalties may be imposed if we fail to adequately support our most vulnerable customers.



Chapter 4

Managing our physical risks



Taking care of water

By using water more efficiently we can improve our resilience to drought and other extreme weather events.

Reducing customer-side demand

Since our third round of reporting, we have invested in an extensive Demand Management programme. This has reduced the amount of water used by each person per day (known as per capita consumption or PCC) to 151.7 l/p/d, which is a 1.5% decrease from 2019/20. As part of our Draft Determination (DD) Representation, by 2030 we aim to reduce PCC by 12.9% compared to our 2019-20 baseline. These targets require strict implementation, monitoring and the establishment of specific teams to start the metering programme. We also want to increase our influence within the planning system to ensure that new developments are as water efficient as possible. This is vitally important in our region where significant new development is planned against a backdrop of existing water stress.

Water meters are a great way to help make you more aware of how much water you use and put you in control of your bill, as you can save money if you use less water.

Save Our Streams campaign

We have also been helping customers to better understand how much water they are using and to understand why reducing their water wastage is important. In 2023, we launched the next phase of our award-winning behaviour change programme - Save Our Streams (SOS), which aims to help customers use water wisely, save money, and support the local environment. SOS aims to help our customers understand the link between local rivers, streams, and their own water use. We used humour to help our customers understand why reducing their water wastage is important and give them practical advice on how to do so.

Over 320,000 customers have engaged in SOS, and hundreds of thousands more households who have seen the campaign have started their water-saving journey. The measured impact of this campaign to date is a saving of the equivalent of two Olympic sized swimming pools of water per day.

320,000

customers directly engaged
with Save Our Streams

Increasing our drought resilience

Considering the drought risk to our supply-demand balance, we have also made commitments to increase our resilience against extreme drought events. We are currently taking steps to ensure we will be resilient to greater than a 1 in 200-year drought event without the need for drought permits beyond 2024. In our WRMP24 we have also set out how we will be resilient to 1 in 500-year events after 2040.

Strategic Resource Options (SROs)

In our WRMP24 we have set out a number of priority Strategic Resource Options which are now being developed under AMP8 (2025-2030). These include the South-East Strategic Reservoir Option (SESRO), the Grand Union Canal (GUC) and the Thames to Affinity Transfer (T2AT). The GUC scheme will secure 50Ml/d by 2031/32 and 100Ml/d following the completion of the scheme.



Taking care of the environment

By carefully managing and diversifying where we source our water, we can increase our resilience to drought and improve our environment. By working with farmers and land managers we can improve raw water quality and deliver wider benefits.

River improvement schemes and catchment management

We have a number of ongoing river restoration, river improvement and habitat enhancement projects which are aimed at addressing drought risk to supply-demand balance and impacts on water quality. Delivered in combination with the Revitalising Chalk Rivers (RCR) programme, Resilient Chalk Catchments (RCC) is our land management focused programme of Catchment and Nature Based Solutions Scheme (C&NbS). Our Catchment Team, working alongside other organisations such as Catchment Sensitive Farming, the Wildlife Trusts, other water companies and the agricultural supply chain, works with farmers and other land managers to promote good land management practices that benefits water quality, water resources and the wider environment, including chalk streams.

Reducing the need for unsustainable abstractions

We are proactively reducing our reliance on sensitive groundwater sources by reducing abstraction from our existing sources, and through managing abstraction during periods of drought. Our WRMP models the impact of climate change on water resources and help us to identify what action we need to take to increase our resilience. As part of our current WRMP we identified an opportunity to invest in 'Supply 2040' and 'Connect 2050'. 'Supply 2040' is a project which allows us to transfer surplus water in our Central region to areas where there is a deficit. 'Connect 2050' is a programme of strategic network development that aims to incorporate new sources of water into the existing water network through transfers from areas of surplus to areas where there is a deficit. As part of our New Drought Plan, we are also taking actions to reduce the amount of water that we need to move around the network at times of peak demand, through changes in network pressure.

Water Industry National Environment Programmes (WINEP)

Through ramping up our catchment management scheme roll-out, improving our existing schemes and by committing to sustainable abstraction practices and delivering on our WINEP investigations programme we aim to lower the likelihood of our network being impacted by significant changes in water quality. We have

also set ourselves ambitious targets to continue and improve our monitoring, investigation and evaluation procedures to mitigate and adapt to the impacts that climate change will have on our ground and surface water sources. We will continue our on-site pesticide monitoring, including our WINEP Pesticides scheme, carry out regular water quality investigations across all our sites, and intensify our saline intrusion monitoring in light on the increased saline intrusion risk in our Southeast region. Lastly, we are also looking into innovative methods of tracking water quality risks, including the use of satellite imagery and remote sensing to track land use change as we have identified strong correlations between land use changes and pollution sources.



Taking care of our network

By investigating flood risk, and investing in flood defences, we can be better prepared for extreme events.

Reducing the risk of flooding

Following our latest region-wide flood risk assessment (FRA) in 2014, we have focused investment in flood defences at critical sites at most risk of flooding and plan to invest in additional flood protection over the next five years. We have invested in temporary flood defences, including flood gates and demountable barriers which can be deployed to reduce the risk of flood water ingress and damage to assets. In the future we will be updating our FRA to take account of the latest understanding of climate change. Additionally, our previous FRA focused on flood risk from rivers, but we know that it is important that any update to our FRA also considers risk from all sources of flooding – rivers, the sea, heavy rainfall and groundwater. In line with this, over the next 25 years, our core plan will focus on enhancing 17 fluvial, 71 pluvial, and 5 groundwater flood-prone sites, along with modernising flood risk assessments and regional strategies, to achieve resilience to a 1 in 100-year fluvial and pluvial flooding events as well as 1 in 30-year groundwater flooding events. We are also exploring our natural flood management options, including the use of Nature-based Solutions (NbS) to protect our network from flooding and sea level rise.

Reducing the risk of extreme weather

Upgrading our pipework improves our resilience to drought and reduces the chances of pipe-bursts occurring. By 2023/24 we had reduced our leakage by 18.3% and we are on course to reach our leakage reduction target of 31% by 2030. We have a proactive approach to replacing our underground assets based on age, condition, and burst history. In the first year of AMP7 (2020-2025) we replaced 13.6 km of pipes, while also achieving our leakage reduction targets for 2022/23. It is likely that we, along with the rest of the industry, will need to increase the rate at which we replace our water network pipes to make these challenging levels of leakage reduction possible. Our leakage reduction ambition is very challenging and will mean we need to find and adopt innovative approaches in network leakage control and customer supply pipe leakage reduction. As part of these efforts we are also planning to roll out our 'Calming Programme' which includes [1] a critical valve & smart metering programme, [2] a watchkeeper programme and [3] enhanced pressure management programme.

13.6km

of pipes replaced in the first year of AMP7

Affinity's Resilience Tool

Since our third round of reporting, we have also rolled out Affinity's Resilience Tool (ART). ART evaluates the operational resilience of our assets and systems at both the Asset/Site level and the System/Network level and determines the nature and extent to which these may impact service outcomes. It assesses resilience against various hazards that may arise in different scenarios. By providing a standardised framework, the tool enables us to measure and compare resilience across all assets and regions consistently, leading to better informed decision-making.

Improving asset maintenance and increasing storage capacity

In dealing with drought risk to supply-demand balance and increased demand due to high temperatures, we have identified one of the Thames Water reservoirs as a reliable emergency storage for existing strategic works. We will be investing an additional £31.3m for inspection, maintenance, and asset improvements on a risk-based frequency.

31.3m

invested for inspection, maintenance, and asset improvements

Chapter 5

Managing our transition risks



Managing our headline **transition** risks

By better understanding our customer priorities, engaging with regulators, and ensuring a resilient and low-carbon supply chain, we can better mitigate the impacts of transitioning to Net-Zero and climate resilient economy.

Engagement to balance priorities

We will continue horizon scanning to keep sight of any emerging regulations and engagement with our customers, stakeholders and regulators to encourage strong discussion with clear resolutions on any policy which misaligns with ongoing business strategy. Our engagement with Water UK continues to highlight the need for local solutions to environmental policies. We will submit any potential future regulatory conflicts and best approach solutions to the Regulatory Alliance for Progressing Infrastructure Development [RAPID]. In the future, we will complete public value assessments as part of decision-making to balance trade-offs of different agendas in the regulatory framework.

Making the case for investment

We are continuing our engagement with regulators, customers and stakeholders to raise awareness of how policy changes must be supported by sufficient investment to be achievable. Further, we are actively horizon scanning for opportunities to achieve Net-Zero goals under available regulatory funding mechanisms. We plan to integrate carbon and capital assessments into our decision-making frameworks to make the case for investment in best value, low-carbon solutions, further integrating climate change impacts and considerations into all our business cases going forward.

Our energy strategy

To reduce the impact of the wholesale price of energy on our costs, we have developed an ambitious energy strategy across three pillars:

1. Reduce consumption through efficiency:

Our PR24 business plan has over 80 schemes delivering energy efficiency totalling over £2 million in energy savings per year.

2. Develop self-generation capacity:

We have an ongoing solar programme which will continue throughout AMP7 [2020-2025], with our second phase that includes a further 28 sites also being under review for the next phase of delivery. In the future, we are considering alternative renewable energy sources and also looking at on-site battery storage as a resilience measure and offsetting cost at peak tariff times of day.

3. Manage residual risk via intelligent purchasing:

We are adapting our procurement strategies, including diversifying suppliers, increasing supply resilience, and developing a procurement code of ethics.





Supply chain collaboration

We have developed a procurement code of ethics, where collaboration across the supply chain will be encouraged and will increase the availability and capacity of resources and new technologies. Further, our innovative New Developments project has increased our understanding of the challenges faced by New Appointments and Variations (NAV) partners. We are engaging with Water UK, UK Water Industry Research (UKWIR) and Energy & Utility Skills network to raise awareness of potential skills shortfalls.

Long term planning supported by capital assessments

As part of our WRMP we used an adaptive pathways approach to assess our adaptation options, prioritising low-regret solutions such as NbS. We have begun to assess a range of NbS via natural capital evaluations to capture their benefits over a number of ecosystems in comparison to their cost.

Customer research and public relations campaigns

As part of PR24, we have undertaken the largest programme of customer research and engagement in our history to develop our plan. We have public relations campaigns currently underway which highlight our affirmative environmental action, such as Save our Streams and proactive catchment management to reduce potential flooding. We have developed our natural capital and biodiversity net gain assessment and continue to support community outreach and educational outreach focusing on the Save our Streams campaign.

Ensuring affordability

Delivering what our customers need and ensuring affordability for all is a key pillar of our strategy. We have engaged with our customers to understand their priorities for affordability and for us to provide help for customers struggling to pay. We have followed Ofwat's methodology for the affordability and acceptability testing of our plan. Subsequently, we have achieved a multilayer affordability strategy, taking action ourselves to ensure bills are as low as they can be, before asking our customers to take action.



Chapter 6

Concluding remarks



Conclusions

We have already made good progress against our climate adaptation actions set out in our previous round of adaptation reporting, which has seen our current physical risk scores decrease, in line with our previous targets following AMP7 [2020-2025].

However, without our continued actions to increase our resilience, and without further investment to mitigate the impacts of climate change, our risks will increase significantly in both likelihood and impact. Without further action, five of our headline physical risks spanning water supply, water quality and asset resilience are set to become almost certain, with critical impacts on our assets and operations by 2075 under a high warming scenario. However, we are confident that with sufficient investment to deliver our AMP8 [2025-2030] plans, and our long-term plans within our LTDS and WRMP24, our interventions can deliver target risk scores lower than what we are currently experiencing.

Overall, our transition risks have scored higher when considering the current scenario in comparison to physical risks. This is largely because physical risks have been considered in the past, therefore mitigation and adaptation actions have already taken place, while transitional risks have only been preliminarily evaluated. We plan to complete a more detailed assessment of transitional risk, where we will explore more granular performance monitoring metrics and targets for these risks. While our risk assessment indicates higher impacts associated with transition risks in the short term,

our physical risks pose much greater impacts to the services we deliver if left unchecked.

Increasing our resilience to our climate risks will not only require action from us, but also cross-sectoral collaboration, further engagement and cooperation with land owners, local planning, regulators, and our customers. We are committed to working with others to ensure we can deliver on our performance commitments for our customers, our environment, and our resilience. Currently, some of our greatest challenges are from balancing our environmental ambition with our Net-Zero target and our resilience to climate change. We must ensure that our decisions are well informed by research and monitoring, founded upon holistic long-term solutions, while ensuring efficient and affordable services in both the short and long term.



We are committed to working with others to ensure we can deliver on our performance commitments for our customers, our environment, and our resilience



Affinity Water

