



In this section you will find:

Our purpose and strategic priorities

Short, medium and long-term planning horizons

Our strategy for managing climate-related risks and opportunities and net zero transition plan

Our strategy for managing nature-related and other risks and opportunities

Our purpose

Why we are here

Providing great water for a stronger, greener and healthier North West

Our purpose highlights how environmental, social and governance (ESG) considerations are integral to everything we do.

As shown on pages 18 to 19, each step in our water cycle and every aspect of our activities is aligned with delivering our purpose, and this is what drives us to create value for all of our stakeholders.

Our strategic priorities

How we deliver our purpose

Improve our rivers

We are a sector leader in minimising pollution, and continue to protect bathing waters across the North West. River health in the UK has received a lot of public interest. The industrial legacy and high rainfall in our region means we have a bigger task than many to deliver the significant reduction in storm overflow activations required by the Environment Act 2021. This will form a significant component of our 2025–30 business plan, and we are accelerating investment with good progress already made.

➔ Read our [Better Rivers case study](#) on page 90

Provide a safe and great place to work

We invest in our colleagues' training and development, and maintain high levels of health, safety and wellbeing. We want to attract, develop and engage great talent across the organisation, we support and encourage a diverse and inclusive culture, and we want colleagues to be empowered to contribute to making things better. To facilitate this, we are launching new 'Call it out' and 'Tell me' initiatives, which enable everyone to raise topics directly with the CEO and receive a response within 48 hours.

➔ Read about our [performance for colleagues](#) on pages 96 to 102

Spend customers' money wisely

We continuously challenge ourselves to improve cost efficiency in a sustainable way, so we can keep customer bills as low as possible in the long term without compromising on service or resilience. We look to minimise whole-life cost and deliver the best value solutions, using Systems Thinking and innovation to find better ways of working, leveraging partnerships and driving value in our supply chain, capitalising on digital and automation opportunities, and removing areas of duplication or waste.

➔ Read about our [financial performance](#) on pages 112 to 119

Create a greener future

We are committed to protecting nature and biodiversity, and reducing water consumption. We have six carbon pledges underpinned by ambitious science-based targets and a net zero transition plan. We generate around a quarter of our energy from bioresources and through partners. We are looking at how we can make the best use of our land to deliver clean energy, be that through our pledges to create woodland and restore peatland, or increasing our renewable energy generation capacity.

➔ Read about our [net zero transition plan](#) on pages 45 to 47

Deliver great service for all our customers

Delivering great service means continually improving our ways of working, for example, improving water quality, minimising interruptions, leakage and sewer flooding, and supporting customers with affordability and vulnerability. Engagement helps us understand what matters most to customers and we act on their feedback. This can be seen in the way we redesigned our bills based on customer research, and the early investment we are making to improve customer and environmental performance faster.

➔ Read about our [performance for customers](#) on pages 96 to 103

Contribute to our communities

We work closely with communities across the North West and we want to ensure we are visible and trusted. We actively engage and make use of partnerships to drive value for communities, such as our participation in the Love Windermere initiative. With much to deliver in the years ahead, we have appointed regional stakeholder managers for each of the North West's five counties to help manage these relationships and ensure we can deliver our planned improvements with minimal disruption.

➔ Read about our [performance for communities](#) on pages 104 to 111

Our planning horizons

We plan for long, medium and short-term horizons to deliver our purpose in a sustainable way.

Our approach to planning

We take an integrated approach to everything we do. To help us create and prioritise our plans, we consider:

- what the material issues are, both in terms of the level of interest to stakeholders and the effect they may have on our ability to create value;
- our assessment of risks and opportunities;
- our environmental, social and governance (ESG) commitments, including our net zero transition plan; and
- how our plans will fit with our Systems Thinking approach.

➔ Read more about our [materiality matrix](#) on page 29, [our risk management](#) on page 60, and [our net zero transition plan](#) on page 45

We undertake planning for long, medium and short-term horizons.

Long-term planning looks out 25 years and more. This helps us identify what we need to do to manage risks and opportunities that may arise, building resilience to ensure we can provide our essential services to customers far into the future.

Medium-term planning covers how we will deliver the commitments of our final determination for the current regulatory period (AMP7), as well as our non-regulatory activities, and our plans for the next five-year period (AMP8), so this currently extends out to 2030.

Short-term planning, for the next financial year, enables us to monitor and measure progress against our longer-term targets. We retain flexibility in our one-year plans to meet our five-year targets in the most effective and efficient way as circumstances change.

Metrics and targets

We set targets across each of these planning horizons, with our shorter-term targets helping us to ensure we are on track to deliver our longer-term ones. The metrics we track include key risk indicators, enabling us to adapt our plans to meet changing conditions, and performance metrics to continuously assess how we are doing against our targets. We use a wide variety of performance metrics, both operational and financial. These help us to measure the value we are creating for all of our stakeholders, and we have selected three operational key performance indicators (KPIs) for E, S and G, as well as monitoring various other performance metrics of interest to these stakeholders.

➔ Read more about our [metrics and targets](#) on pages 76 to 83

Short term

We set annual targets for operational and financial performance, but retain flexibility in these plans to respond to challenges and ensure we are meeting our five-year goals in the most effective and efficient way possible.

Medium term

Our AMP7 determination sets targets for the 2020–25 period, and we are building our plan for 2025–30. Our long-term delivery strategy is embedded into our medium-term targets to help us work towards our long-term plans.

Long term

Our business is very long term by nature and we use adaptive planning, looking far into the future, to ensure we are resilient to risks that may arise and can continue to provide this essential service for the long term.



Our planning horizons continued

Our adaptive planning approach ensures we are able to respond to risks and opportunities that may arise in the short term or far into the future.



1 year

Short-term planning

We set annual, measurable targets, but retain flexibility to enable us to respond to challenges that may arise.

Short-term planning helps us work towards our medium and long-term goals and provides us with measurable targets so we can continually monitor and assess our progress.

Before the start of each financial year, which runs from 1 April to 31 March, we develop a business plan that is reviewed and approved by the board. This sets our annual targets to deliver further improvements in service delivery and efficiency, and help towards our longer-term goals.

Performance against these annual targets determines the bonus percentage that is awarded to executive directors and colleagues right through the organisation.

To avoid encouraging short-term decision-making and ensure management is focused on the long-term performance of the company, executive directors are also remunerated through a long-term incentive plan (LTP). This assesses three-year performance and includes return on regulated equity (RoRE), a basket of customer measures, and our carbon pledges.

➔ Read more about the **annual bonus and LTP** in our remuneration report on pages 170 to 203

Executive directors hold regular business review meetings with senior managers across the business to track progress against our annual targets.

It is vital that we retain flexibility within this short-term planning so we can adapt to meet challenges that may arise during each year, and deliver high-quality and resilient services to customers in the most effective and cost-efficient way possible.

This may involve bringing enhancements forward to deliver improvements for customers early, investing further into the business to maintain service, or delaying projects to occur later in the regulatory period to prioritise expenditure and focus

our time on dealing with unexpected challenges that arise.

The severe freeze-thaw we experienced this year demonstrates how we adapt our short-term plans to focus efforts on immediate challenges. Read more on page 48 about the actions we took to maintain services during this time, the impact on our activities, and how we are still managing the aftermath of this extreme weather event.

The challenges presented by COVID-19 in 2020 were another example that showed why this flexibility was crucial and how effectively we managed this significant and sudden change.



up to 2030

Medium-term planning

Aligned to the commitments in our AMP7 determination and our plans for AMP8.

The majority of the group's activities sit in our regulated water and wastewater business, so our medium-term planning mostly sets out how we will deliver against the commitments in our final determination from Ofwat for each five-year period, and our plans for the next one.

To ensure we deliver for all stakeholders, including customer preferences and environmental requirements, we align our plans to these priorities in line with key published methodologies.

Our medium-term plans are designed to help us work towards our long-term delivery strategy, build and maintain resilience, and fulfil our purpose.

We engage in extensive research to ensure our plans are robust and balanced, targeting the best overall outcomes for all our stakeholders.

Following scrutiny and challenge from Ofwat, we receive the final determination, which sets the price (in terms of total expenditure recovered through customer bills), service level, and incentive package that we must deliver over the five-year period. This includes an expected return to meet financing costs.

Adaptive planning is important in meeting our medium-term targets in the most effective and efficient way. During the current 2020–25 period we have adapted our total expenditure (totex) in two ways.

First, we accelerated our capital programme, with around £500 million of totex brought forward over the first three years, delivering improvements early and making a strong start to our plans.

Second, we extended our totex by £765 million to deliver customer and environmental improvements, accelerating delivery of the Environment Act 2021 and improving performance against customer outcome delivery incentives (ODIs).

Our strategy helps us create value for our stakeholders by delivering or outperforming the final determination. We publish an annual performance report (APR) in July of each year, which reports our performance in a format that is comparable across the sector. This includes Return on Regulated Equity (RoRE), which comprises the base allowed return and any out/underperformance.

➔ Our APR will be available at unitedutilities.com/corporate/about-us/performance/annual-performance-report

➔ Information on companies' regulatory performance can be found at discoverwater.co.uk



up to 2080

Long-term planning

We plan far into the future to ensure we can respond to risks and opportunities that may arise.

To maintain a reliable, high-quality service for customers long into the future, we need to anticipate and plan for things that may impact on our activities. This includes monitoring the age and health of our assets, keeping track of innovations and advancements in technology, and looking at current and predictive data from various sources to track key risk indicators (e.g. economic forecasts, expectations for population growth, climate and weather predictions, legal and regulatory consultations and changes).

We review this information as part of our long-term planning and risk management processes, through which we assess and manage opportunities and risks such as climate change, population growth, a more open, competitive market, water trading, more stringent environmental regulations, developments in technology, and combining affordable bills with a modern, responsive service.

Our website has a dedicated section where we examine key long-term challenges and how we will focus our resources and talents to meet them.

➔ Read about our **future plans** at unitedutilities.com/corporate/about-us/our-future-plans

You can find our long-term plans, such as:

- Water Resources Management Plan – setting out the investment needed to ensure we have sufficient water to continue supplying customers, taking into account the potential impacts of climate change, covering a 25-year period and considering consumption and climate forecasts out to 2080;
- Drought plan – setting out the actions we will take to manage drought risk, updated every five years; and
- Adaptation report – setting out the current and future predicted impacts of climate change on the business and our proposals for adapting to a changing climate.

Our long-term delivery strategy out to 2050 is embedded into our plans for AMP8, and we are developing a Drainage and Wastewater Management Plan – examining the risks around flooding, pollution, storm overflows, and wastewater treatment over a 25-year period – that will be published in 2024.

We use whole-life cost modelling and maintain a robust financing structure to ensure we can invest efficiently to meet our long-term plans. Our training and development, graduate and apprenticeship programmes, and work with schools to encourage STEM careers, all helps to ensure we retain the skills we need in the North West to continue delivering these plans.



TCFD Climate strategy: How climate-related risks and opportunities impact the organisation's businesses, strategy and financial planning.

Summary

- Twin track approach of adaptation and mitigation to address climate change and manage both physical and transitional risks in a sustainable and resilient way.
- Further developed our strengths in long-term and adaptive planning to manage uncertainties and ensure a low regrets approach.
- Built relationships with key suppliers to reduce environmental impact by sharing best practice and collaborating on how to reduce GHGs and improve resilience.
- Assessed the carbon impact of our DWMP, WRMP and PR24 plan to minimise impact while enhancing environmental and social value and resilience.

Most material climate-related risks – risk score⁽¹⁾ of 9+ in our 2021 adaptation report

We already experience the impacts of climate change with increasingly frequent or more extreme cold snaps and heatwaves and changes to rainfall.

TCFD risk type	Climate trend	Leading to	Horizon			Resulting in...		
			ST	MT	LT			
Physical – acute	Cold snaps	Reduced effectiveness of biological processes in wastewater treatment	●	●	●	Pollution events		
		Leaks and thus increased volumes of calls	●	●	●	Pressure on our emergency response		
	Extreme events	Increasing frequency and duration of loss of power within a treatment process	●	●	●	Service disruption		
Physical – acute	Heatwaves	Causing work environments to become intolerable	●	●	●	Risk to health, safety and wellbeing		
		Resulting in increased reservoir misuse	●	●	●	Risk to health, safety and wellbeing		
Physical – chronic	Increased rainfall	Sewer capacity exceeded	●	●	●	Sewer flooding, pollution incidents, customer impact		
		Flooded assets	●	●	●	Service disruption and asset damage		
		Restrictions on ability to recycle biosolids to land	●	●	●	Adverse effect on supply and demand of biosolids to agriculture		
		More storm overflow activations	●	●	●	Pollution and perception of pollution of rivers and bathing waters		
		Runoff polluting water sources	●	●	●	Water quality deterioration		
		Increased soil movement causing pipe systems to move leading to fractures	●	●	●	Service disruption and asset damage		
		More runoff from agricultural land	●	●	●	Raised nutrient loads in water sources		
		Increased use of rising mains	●	●	●	Supply interruptions and energy use		
		Decreasing raw water quality	●	●	●	Impact to treatment and costs		
		Floods, accidents and landslips	●	●	●	Disruption to transport and supply lines		
		Physical – chronic	Hotter, drier summers	More severe and frequent moorland/forestry fires	●	●	●	Water demand and quality stresses, risk to catchment health
				Promotion of cyanobacteria and actinomycetes growth	●	●	●	Taste and odour compound formation
				More NW tourism and access of UU land	●	●	●	Increased risk of damage to land and catchments
Physical – chronic	Lower average summer rainfall	Reducing water resources	●	●	●	Supply interruptions		
		Shock load from first flush when it rains	●	●	●	Pollution		
		Blockages in the sewage system	●	●	●	Sewer flooding and pollution		
		Political pressure regarding water use priorities	●	●	●	Supply interruptions and impact to reputation		
Physical – chronic	Rising sea levels	Coastal flooding	●	●	●	Asset failures		
Transitional	Moving to a net zero economy	Decarbonisation of the UK electricity grid	●	●	●	More intermittent power generation		
		The need to adopt new technologies driven by a change in legislation and standard practice	●	●	●	Change in operational processes and capabilities		
		Legislation, taxation, and decarbonisation targets	●	●	●	Higher energy costs and greater regulatory duties		
		Changes in social expectations	●	●	●	Demand for further progress		
		Water use change including increased abstraction by other catchment users	●	●	●	Pressure on water resources		

(1) Risk score is the product of score (between 1 and 5) for likelihood and consequence.

Key: ● Low <8 ● Medium 8 to 12 ● High 12+

Climate-related risks and opportunities impacts

Climate risks and opportunities are assessed using the same planning horizons, materiality and risk assessment as other matters. As our assets typically have long, even very long, lifespans, our planning horizons look longer into the future, in some cases as far as 2080.

Our services being intrinsically linked to the natural environment, it is not surprising that many of our most material climate risks are physical risks. The weather directly and indirectly constrains our ability to deliver our services which is why climate change will exacerbate the impact of existing challenges such as sewer flooding, asset flooding and asset deterioration.

The North West region has 28 per cent more rainfall than the average for England and Wales. This, together with our significantly higher proportion of combined sewers, puts more pressure on our sewerage and treatment infrastructure, and in

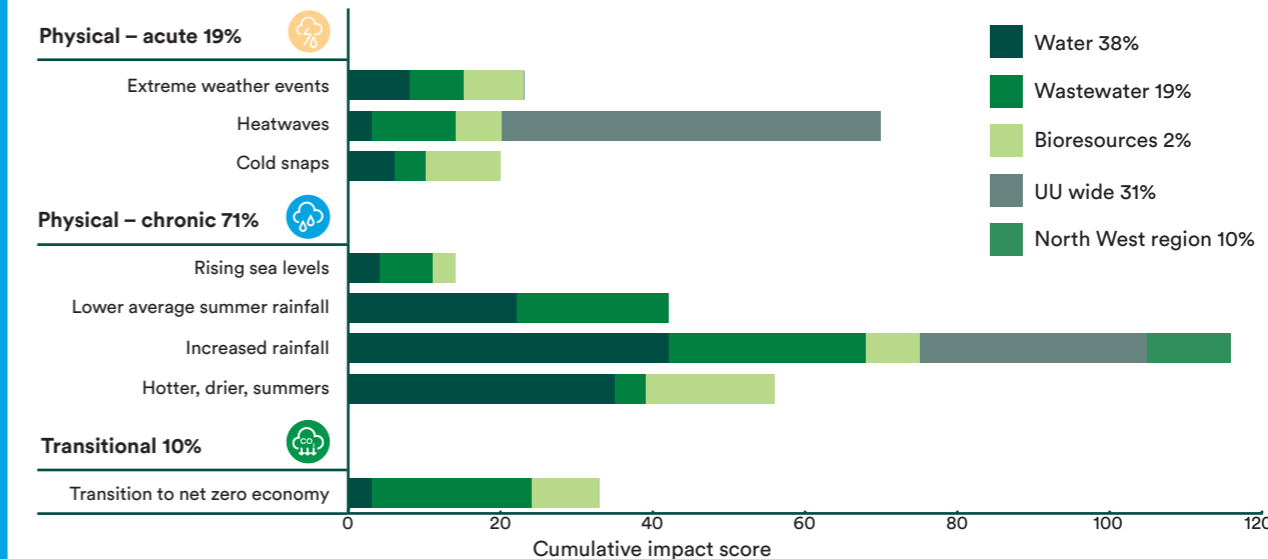
turn creates greater risk from sewer flooding and/or activations of storm overflows.

We have quantified the impacts of the physical climate risks (see 2021 Adaptation progress report) using the highly respected and relevant Met Office UK Climate Projections 2018 (UKCP18). For our assessment we chose the Met Office climate projections for the representative concentration pathway, RCP 6.0, which has an emissions peak occurring in 2080 and an expected 3.0–3.5°C increase in global mean temperatures from pre-industrial levels. We chose this as it is widely recognised to be the most likely pathway that supports effective planning.

To assess the magnitude of the transitional risks we have adopted a more qualitative approach though for risk assessment and mitigation planning we have used the carbon values (£ per tCO₂e) for use in policy appraisal, provided by the UK Government (BEIS).

Climate-related risks by business area and region and TCFD risk category – from 2021 adaptation report

The chart below shows the cumulative impact/consequence scores of the assessment of climate-related risks in the 2021 adaptation progress report. These risks are also those that have been considered in the preparation of the financial statements, see page 241. Percentages are of the total cumulative score for the business area and region or TCFD risk category.



Addressing the impact of climate change in our planning

Predicting the effects of climate change is multifaceted and complex. There is considerable uncertainty about how our processes, people and infrastructure will respond to the challenges of both climate and demographic changes. We address the challenge of uncertainty by using adaptive planning to shape our plans for the long term (25+ years) while remembering our short-term needs and financial and regulatory constraints. An adaptive approach allows us to prepare for the future without knowing the exact scale and impact that climate change poses on our services. This means we can be agile as climate science and technology advance, as legislation develops and our customer and stakeholder expectations evolve.

Our public Water Resources Management Plan (WRMP) and Drainage and Wastewater Management Plan (DWMP) address this multidimensional challenge by using detailed and extensive models to test how resilient our services would be against a wide range of possible future demands from population growth and movement, economic trends and patterns of water use. Understanding these potential impacts allows us to adapt our plans to improve performance and resilience across key topic areas such as water supply, leakage, sewer flooding and pollution.

Our ability to pre-empt compound physical impacts to our system, and have various recovery tactics, is increasingly vital in effective climate change adaptation. We are addressing how to plan for when multiple different extreme weather events occur in a short time frame. An example of such a cascade effect is the dry and hot summer of 2022 being followed by a winter with freeze-thaw challenges.

To address compound issues, we stress test our WRMP by building weather scenarios that combine together pairs of worst examples of weather that have happened in the past, for instance, a dry winter like 1984 being followed by a 1995/96 style summer. We then model how our current assets and systems would cope.

As well as combining impacts in our modelling, we are also attempting to deliver compound benefits in our controls by designing interventions that have multiple benefits. For instance, sustainable drainage systems (SuDS) to slow down or divert rainwater runoff both reduce the risk of sewer flooding and optimise wastewater treatment capacity and also provide an opportunity to deliver wider social value in the community and local environment.



TCFD Climate strategy continued

Using scenario analysis to test resilience

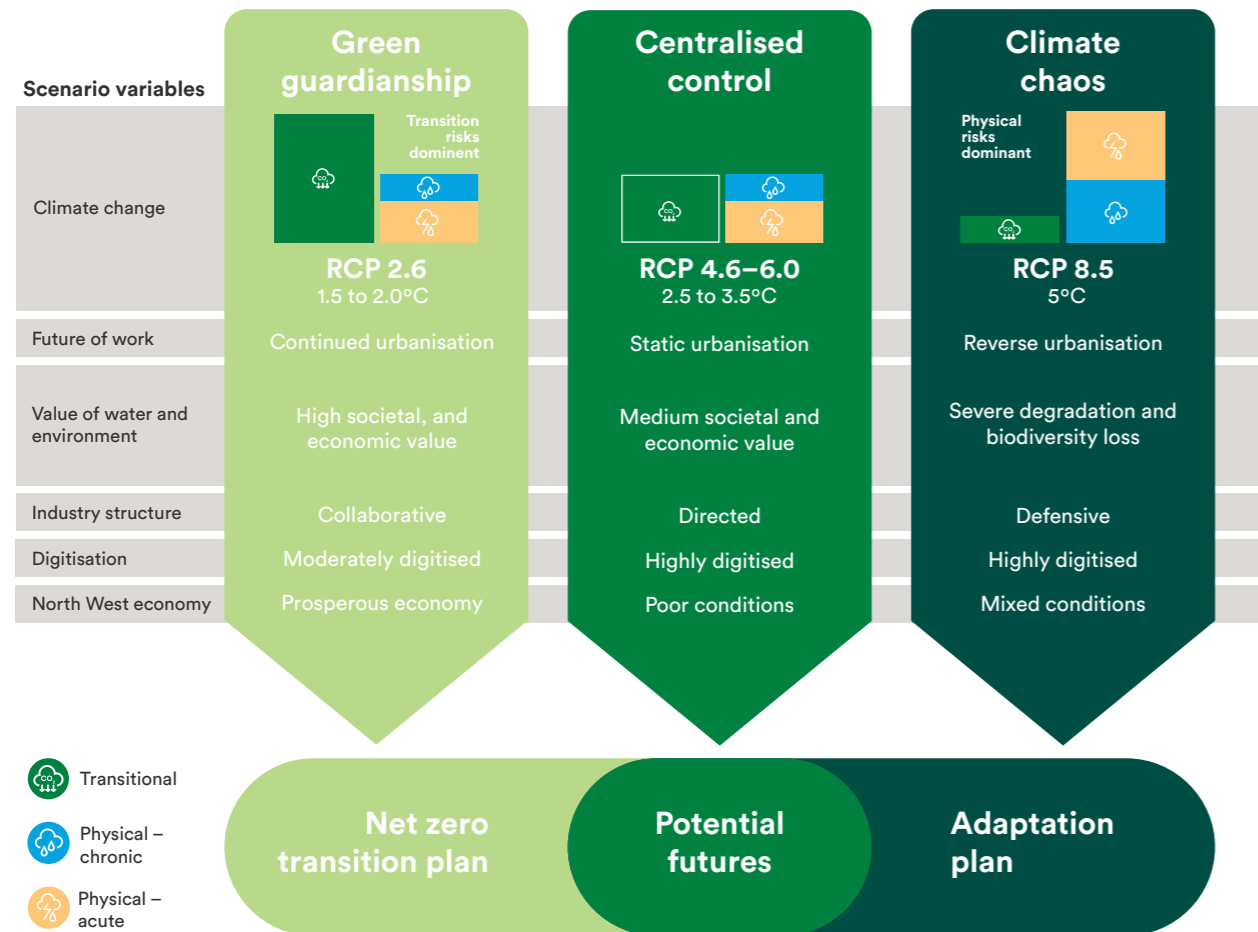
In developing our long-term strategic plans, and seeking customer feedback on those plans, we have used potential scenarios of the future encompassing wide ranges of environmental, regulatory, technological and societal possibilities. To simplify the interaction of multiple factors while retaining an expansive scale of uncertainty about the future, the three company-wide alternative scenarios for 2050 have different values or descriptions for the most relevant factors such as the water industry structure, the North West economy, water value to customers and climate change. These scenarios are named 'green guardianship', 'centralised control' and 'climate chaos'.

mitigated by society in each case. This in turn gives the relative climate risks in each scenario. In the extreme climate scenario of 'climate chaos' the physical risks are substantial and provide a worst case from which to base our adaptation planning. At the other extreme, 'green guardianship', the challenges of providing water and wastewater services in the North West are determined primarily by transitional risks. For instance, the risk from an electricity supply from a UK grid that is based on low-carbon but intermittent power generation and therefore is more vulnerable to power outages.

These imagined future scenarios have brought challenges and ambitions into sharp focus and encouraged reconsideration of the relative priorities in our business plans. For example, our latest plans now include even greater focus on further reducing water use and preventing storm overflow activations and flooding.

The scenarios recognise climate change as one of the most critical factors and use RCPs 2.6, 4.5 and 8.5 (GHG concentration pathways adopted by the Intergovernmental Panel for Climate Change) to describe how well climate change has been

Climate and societal scenarios



Future focus

- Publish more details behind our net zero transition plan.
- Continue to improve our assessment of climate-related risks and opportunities.
- Embed low-carbon and climate-adjustable approaches in our long-term delivery strategies and PR24 business plans.

Read our adaptation progress report on our website at unitedutilities.com/corporate/responsibility/environment/climate-change/

Read our net zero transition plan on pages 45 to 47

TCFD Our net zero transition plan

Our net zero transition plan

Our transition plan to contribute to, and prepare for, a rapid global transition towards a low-emission economy is based on our established climate change mitigation strategy. This has four pillars: vision and visibility; ambition and commitment; demonstrating action; and beyond here and now. Between them, these pillars define our principles, priorities and approach.

Vision and visibility

Demonstrating integrity and leadership in carbon reporting and disclosure.

Vision and visibility are the foundations of our climate change mitigation strategy and thus our net zero transition plan. We have a strong track record of sustainability reporting, having disclosed our GHG emissions for nearly 20 years. We are committed to reporting in the most open and transparent way possible, aiming to be recognised as among the best in the UK. We have responded to the CDP climate change questionnaire since 2010 and use this as our benchmark of leadership. We were proud that our 2022 response was rated as A-, putting us in the leadership category.

We publish our GHG emissions and underlying energy use in our annual report as required under the Companies Act 2006 and follow the 2019 UK Government Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance. Our reporting is supported by robust governance and accountability mechanisms. Since 2007, our greenhouse gas inventory has undergone independent, third-party verification by Achilles Group, confirming our reporting is compliant with the international carbon reporting standard (ISO 14064) and certified as compliant with the CarbonReduce programme.

We are dedicated to understanding how every aspect of our operations contributes to our emissions. Our vision is to ensure we consider the climate in all our operational and strategic decision-making and to influence strategy and behaviours by including in remuneration schemes and carbon pricing in our six capital value framework.



Ambition and commitment

Playing our part to mitigate climate change and lower our greenhouse gas emissions to help make the North West a better place to live now and in the future.

An important element of our approach is to demonstrate our ambition and encourage others to contribute by making public commitments. In 2020 we made six carbon pledges as part of our commitment to tackling climate change and we are making good progress. See page 92 for more details.

Central to our pledges was to set science-based targets for all emission scopes. United Utilities is proud to be the first UK water company to have targets approved by the Science Based Targets initiative (SBTi), a collaboration that defines and promotes global best practice in science-based target setting. SBTi assessed and verified our four science-based targets in July 2021 and commended our ambitious 1.5°C aligned scope 1 and 2 target.

Our four targets are:

- SBT1** – 42 per cent reduction of scope 1 and 2 emissions by 2030 from a 2020 base year;
- SBT2** – increase annual sourcing of renewable electricity to 100 per cent;
- SBT3** – 66 per cent of suppliers by emissions within scope 3 capital goods will have science-based targets by 2025; and
- SBT4** – 25 per cent reduction of scope 3 emissions (other categories) by 2030 from a 2020 base year.

These near-term targets are intended to deliver an emissions reduction pathway consistent with the 1.5° ambition of the Paris Agreement. The SBTi Net Zero Standard was launched late 2021 and we will validate our long-term net zero ambition to this standard when we revise and revalidate our near-term targets in advance of 2025.

Demonstrating action

Reducing our environmental impacts through delivery of transformation strategies and culture change.

Our action plan to achieve the long-term ambition of 'net zero by 2050' (in line with the UK Government) is set out on the next page with the hierarchy below. We are already working on, and delivering on, actions in all themes to:

- **reduce** through the efficient use of resources;
- **replace** processes and resources with more sustainable alternatives;
- **remove** GHGs from the atmosphere;
- **collaborate** to tackle emissions in the supply chain; and
- **innovate** to address current technological or market gaps.

Our priority in the medium term will be to reduce our emissions through these actions before we purchase any credits to offset the residual emissions to net zero.



TCFD Net zero transition plan

GHG emissions scopes

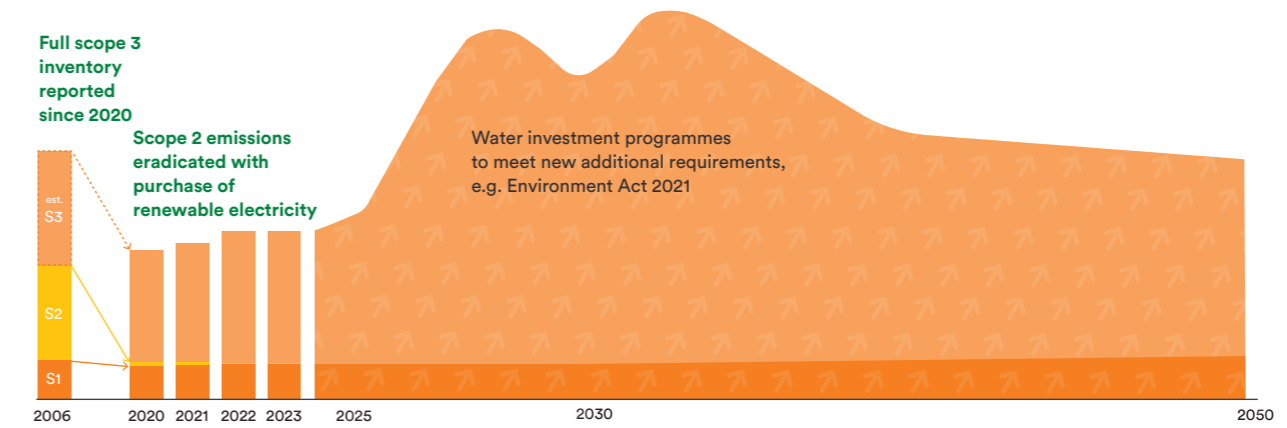
Our net zero transition plan addresses all three emissions scopes.

<p>Scope 1 – emissions from activities we own or control</p> <p>Wastewater and sludge processes cause approximately 70 per cent of our scope 1 emissions as the gases released, nitrous oxide (N₂O) and methane (CH₄), have much greater global warming potentials than carbon dioxide (CO₂). Our process emissions are currently estimated as a direct function of the population whose wastewater we treat. This means that, even if we achieve a 100 per cent green fleet and eradicate all fossil fuel use, along with the global water industry we still have the gigantic challenge of process emissions to tackle.</p>	<p>Scope 2 – emissions from electricity and heat purchased</p> <p>Our scope 2 emissions have reduced since we began to measure them in 2005/06 from 360 ktCO₂e to 261 ktCO₂e (location-based) and 0 ktCO₂e (market-based). This is a combination of the ongoing decarbonisation of the UK grid, maintaining our energy requirements in the face of substantial growth and policy to buy REGO backed renewable electricity supplies.</p> <p>We have ambitions to substantially increase our self generation and energy resilience by using our land for development of renewables and other clean technologies.</p>	<p>Scope 3 – emissions from our value chain</p> <p>Scope 3 emissions are proportional to our business activities. This means if our infrastructure development activity increases, for instance as a result of a prescribed environmental programme as is expected for AMPs 8 and 9, then our emissions will also substantially increase. This increase could be mitigated by the use of nature-based solutions and low-carbon material replacements, but it is by no means certain these technologies and processes will be market ready in time.</p>
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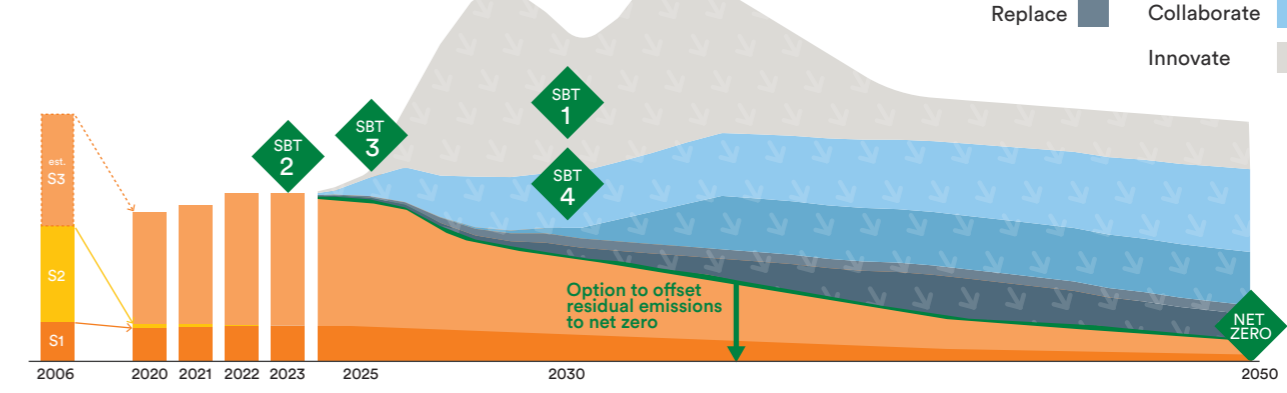
Action plan	Short term including recent progress	Medium term	Long term
Reduce through the efficient use of resources	<ul style="list-style-type: none"> Colleague campaign 'Use Less, Save More' Achieved ambitious targets for percentage of waste to beneficial reuse 	<ul style="list-style-type: none"> Optimise wastewater processes for GHG Careful delivery of environment improvement programmes 	<ul style="list-style-type: none"> Continual search for efficiency opportunities
Replace processes and resources with more sustainable alternatives	<ul style="list-style-type: none"> Renewable electricity sourcing Substantial renewable energy generation capacity and capability 60%+ sludge processing by low GHG advanced digestion 	<ul style="list-style-type: none"> Grow further renewables capabilities and capacity Bioresources planning and investment to increase sludge processing capacity Electric vehicles rollout and trials for HGVs 	<ul style="list-style-type: none"> Replace fossil fuels with alternatives e.g. hydrogen Nutrient recovery initiatives Continual stretch for sustainability informed by latest innovations
Remove GHGs from the atmosphere	<ul style="list-style-type: none"> Woodland creation – planning and first planting schemes Peatland restoration – schemes started 	<ul style="list-style-type: none"> 550ha woodland creation 1000ha peatland restoration 	<ul style="list-style-type: none"> Growing benefits from created woodlands Carbon capture, use and storage
Collaborate to tackle emissions in the supply chain	<ul style="list-style-type: none"> Comprehensive scope 3 reporting Encourage SBTs for capital delivery partners 	<ul style="list-style-type: none"> Inform national approach to water environmental improvements Enriched sustainability criteria for suppliers Quantify emissions using product/activity data 	<ul style="list-style-type: none"> Collaborate to decarbonise our infrastructure programmes and wider supply chain
Innovate to address current technological or market gaps	<ul style="list-style-type: none"> Carbon categories in United Utilities Innovation Labs CEO challenge improvement projects on carbon 	<ul style="list-style-type: none"> Low-carbon capital delivery options e.g. nature-based solutions and low-carbon concrete Process emissions monitoring Nutrient recovery research 	<ul style="list-style-type: none"> Transformation in water and wastewater processing e.g. nature-based solutions Opportunities for circular economy Eradicate use of remaining fossil fuels

Actions in green text directly link to our six carbon pledges

Our emissions challenge – large growth pressures from environmental obligations



Our route to net zero – adopting a science-based approach



Our plan to net zero is a science-based approach focused on reducing emissions as the first priority whilst growing our programmes that store carbon, such as peatland restoration and woodland creation, and working with our supply chain to share and develop sustainable development practice. We may purchase credits in the medium to long term to offset residual emissions and achieve net zero.

We will go beyond emissions reductions and include sustainable use of natural resources and increased application of the waste hierarchy and the principles of a circular economy in our processes and physical infrastructure.

We will also enable, encourage and reward action to protect and enhance the natural environment and promote the value of ecosystem services across our business and supply chain.

Beyond here and now

Innovating across our processes, technology and culture
We are not only concerned with things we can do now to reduce our reportable emissions. Our strategy pillar of 'beyond here and now' allows us to reflect on the challenge to influence emissions regardless of whether those emissions are part of our inventory. To deliver our net zero transition plan we will be innovative, challenge standards and drive climate change mitigation by understanding and joining in relevant research to develop new technologies and practices. For instance, we are investigating what operational interventions we can make that will reduce process emissions.

opportunity to test their solutions to our business challenges in a live environment. The programme is designed to 'look for ideas where others aren't looking' – in other sectors, other countries and with suppliers that are often small, start-up businesses, just starting on their idea development or business growth journey.

We will continue to explore opportunities to innovate across processes, technology, standards and culture and we will lead by example and deliver outcomes in partnership whilst we inform and influence future developments affecting the environment.

Read more about [innovation at United Utilities](https://www.unitedutilities.com/corporate/about-us/innovation), including how we are using innovative solutions to tackle the sustainability challenges we face, at [unitedutilities.com/corporate/about-us/innovation](https://www.unitedutilities.com/corporate/about-us/innovation)

We have recently launched our fifth Innovation Lab, a 12-week programme that provides successful applicants with the



“

Key lessons learned from previous incidents meant we entered the 2022 freeze-thaw with improved capabilities as a result.”

TCFD Climate case study

Resilience in the face of an already changing climate

With the trend of more extreme weather events set to continue, we must plan, adapt and prepare, to strengthen our operational resilience.

In December 2022 we experienced a severe cold snap, when air temperatures fell below freezing and remained at or below freezing for ten days, reaching a low of -12°C on 15 December, before rising rapidly to 14°C by 19 December. This was a more sustained freeze and more rapid thaw than other recent freeze-thaw events in 2009, 2010 or 2018, and tested our preparedness, response and service recovery.

Freeze-thaw incidents present several challenges which can threaten to disrupt the service we provide to customers, such as frozen pipework on our mains and in customer properties, increased leakage following the thaw and subsequent increases in water demand.

We use Met Office data to assess the risks of weather-related events occurring and to act as an early warning system to trigger preparations for such an event. This approach identified, on 5 December, the risk of a weather-related event occurring and led to detailed preparatory work, including:

- encouraging customers to prepare their homes, with our 'Prepare, Insulate, Protect, Easy' awareness campaign;
- undertaking winter checks on targeted key assets on our system where we expected the impact to be greatest; and
- establishing a key task team, using our incident management procedure, to provide central co-ordination during events.

The immediate impact of the freeze-thaw was significant. A total of 22,464 customers were off supply for more than 12 hours, with the largest proportion of them in the Lancaster and Morecambe area. We very much regret the short-term service interruption some customers experienced, but because of our proactive management of the situation we were able to mitigate the impact to some extent. For example, ahead of and during the loss of supply we were able to provide clear information to local stakeholders, ensure that there were adequate bottled water supplies in the area and take steps to protect vulnerable customers through our Priority Services offering.

Within 48 hours of the thaw commencing, demand for water rose to 20 per cent above normal December levels and reached a peak of 2,200 megalitres per day, significantly higher than the peak following the 2018 'Beast from the East'. This was largely due to water being lost through leakage, both from elevated leakage on our own network and significant bursts on customer pipework and plumbing. Our teams and partners worked around the clock to fix damaged pipes, and we deployed our water tankers to target sensitive non-household customers such as schools, hospitals and prisons.

Management of the incident continued over the Christmas period to ensure that issues were fully resolved until the incident was formally closed on 3 January 2023. Overall, we consider that key lessons learned from previous incidents meant we entered the 2022 freeze-thaw with improved capabilities as a result.

Read more about the financial impacts of the incident on pages 99 and 112

TNFD

How nature influences our approach

Protecting and enhancing the natural environment is key to the 'greener' aspect of our purpose. Maintaining compliance and meeting regulatory requirements helps us to maintain the environment, and we enhance it by driving performance improvements, adopting best asset management practices, and investing in nature-based and other environmental solutions. Our environmental policy is underpinned by a framework of strategies and long-term plans in response to nature-related risks and opportunities. Some of these are statutory requirements, like our Water Resources Management Plan, and are reviewed every five years through the price review process.

How we consider nature-related risks, opportunities, dependencies and impacts within our business strategy and planning

Our long-term planning activity considers the uncertainty associated with complex issues such as climate change, population growth, technology and abstraction reduction needs.

Planning for the long term allows us to deliver further environmental and social value. For example, prioritising sustainable drainage and monitoring impacts before investing in more traditional assets, or carrying out modelling and investigations to ensure solutions are best value. This gives us confidence that our investment plans are highly efficient.

Our Catchment Systems Thinking (CaST) approach enables project decisions to be made in the context of the catchment, or system, in which they are situated. This encourages goals to be set in a collaborative way, maximising the benefits that can be achieved and delivering ecosystem resilience through improvements to water quality, flood risk reduction, access to green space, nature recovery, and carbon sequestration.

An example of how we adapt to nature-related risks

Much of the land that we own is designated as Sites of Special Scientific Interest (SSSI), which indicates the importance of the habitat for biodiversity. 94 per cent of SSSIs on our land now meet favourable or unfavourable recovering condition status, in part because we pioneered the use of nature-based solutions to address raw water quality when we started our SCaMP programme in 2005. We recognise our role as a steward of our land and make decisions based on the benefits and impacts our operations have on the natural environment.

Resilience of our strategy

Adaptive planning allows us to test a range of future scenarios to account for uncertainty and sets out how we might adapt programmes in the future to meet long-term ambitions under different circumstances. Through scenario testing, we have been able to prioritise low regrets activities in the short term, preparing ourselves for future needs without investing unnecessarily or prematurely but taking action where it is clearly necessary and good value.

Innovation is embedded in our approach to solving environmental challenges. By understanding and engaging in relevant research we can integrate new technologies and practices to drive environmental enhancements.

Progress this year

- Launched the public consultation on our draft Water Resources Management Plan

Future focus

- Finalise our business plan for 2025–30 with details on how this will improve the natural environment

OTHER

Risks and opportunities of material interest that influence our approach

Cyber security

Our cyber security strategy is largely focused on the security requirements within the Cyber Assessment Framework created by the National Cyber Security Centre (NCSC). This outlines 39 security controls that are required to achieve an industry standard of compliance. These are driven from an EU-defined maturity scale of best practice that is reflected across all European operators of essential services. We have had a strong, dedicated programme of work in place for four years aimed at meeting and maintaining compliance, and have met regular expectations at all times.

Our longer-term strategy and investment plan aims to bolster our broader security posture by focusing significant effort on people, process and technology.

We maintain a good relationship with the NCSC through our dedicated contacts and ensure we have up-to-date visibility of developing and long-term threats at all times, which helps shape our approach to security.

Financial risk management

We have robust financial risk management policies, targets and thresholds for liquidity risk, credit risk, market risk (inflation, interest rate, electricity price and currency) and capital risk. The strategies and limits set out within these policies are designed to avoid excessive volatility and risk, align with the regulatory model in which we operate, maintain strong credit ratings and deliver efficient financing. Read more on pages 265 and 272.

Affordability and vulnerability

Our approach is based on delivering industry-leading affordability and vulnerability support to customers with a wide range of affordability schemes and over 290,000 customers signed up to Priority Services. We use a variety of methods to help customers access the best schemes for them, including our door-to-door affordability visits. We pioneer cross-sector collaborative approaches through our affordability summits and the Hardship Hub platform we developed to help debt advisers access all the help that is available across multiple sectors in one place.

Health, safety and wellbeing

Our aim is that no one will be harmed while working for us or on our behalf, and we actively work to support and improve the wellbeing of our colleagues, for example through our Home Safe and Well programme.

Responsible supply chain

Our United Supply Chain (USC) strategy encourages collaborative and responsible ways of working with our supply chain. Through regular engagement and positive collaboration, we will mitigate risk, improve assurance and create value.

Equity, diversity and inclusion

Our equity, diversity and inclusion plan sets out our strategy and targets, focused on inclusive leadership, encouraging openness, improving our policies, raising awareness, and increasing the use of support networks. Read more on pages 54 to 55.



In this section you will find:

Our culture and core values

How the organisation is governed by the board and its principal committees

Governance of key risks and opportunities, including nature and climate-related disclosures, and our commitment to equity, diversity and inclusion

How we engage with stakeholders and consider their views in decision-making, including our Section 172(1) Statement

Core values

Our core values demonstrate the way we work, and we want to ensure these are clear and easy for all our colleagues to apply to every situation. We have redefined our core values to reflect the things we believe are most important to help us deliver our purpose of providing great water for a stronger, greener and healthier North West.

Do the right thing

First and foremost, as a responsible business, we want our people to always focus on doing the right thing.

This means always putting safety first, delivering for the benefit of our stakeholders, championing fairness, acting with courage and speaking up if they come across anything that doesn't feel right.

This is vital for building and maintaining trust with the public and our stakeholders, and for delivering our purpose: doing the right thing for the natural environment helps us to create a greener North West; doing the right thing for customers, communities, colleagues and suppliers helps us to build a stronger and healthier North West.

Our culture and core values

Culture

Our culture drives the interactions we have with our stakeholders, and our commitment to responsible business and sustainability is reflected in the way we measure and report the value we create as a business. Metrics are monitored and targets set for the greener, stronger and healthier ambitions within our purpose, closely aligned to ESG.

➔ Read more about **the value we create** on pages 76 to 79 and **our performance** on pages 84 to 111

When assessing culture, we look at four categories – our core values, our purpose, our strategic priorities, and our people. We monitor a number of key metrics relating to our people, such as engagement, health and wellbeing, diversity, and development.

➔ Read more about **our culture and how the board monitors this throughout the year** on page 135

Our culture is underpinned by three core values, which cascade down the business from the board to every one of our colleagues, guiding how we expect our people to behave in a way that drives a high performance and innovative culture.

Make it happen

We are focused on supporting each other and working as a team to make things happen, taking accountability and putting progress over perfection. We want to celebrate successes, for individuals and for the company, and learn when we don't get things right first time.

This can already be seen across the business, for example:

- Enabling and fostering new ways of working through our Innovation Lab process.
- Being able to act quickly and capitalise on pockets of efficient financing opportunity.
- Our decisions to accelerate investment where we can deliver improvements for customers and the environment faster.

Be better

Ultimately, everything we do is about improving things and creating a better tomorrow for everyone. We want to be better as a company, and this means encouraging our colleagues to live this value as well.

We want our people to be curious, ambitious, and solution-focused, seeking out new and innovative ways to deliver our services more efficiently and effectively.

We want to ensure we are learning from the best people that are available to us, which is why we embrace equity, diversity and inclusion, collaboration and partnership opportunities, innovation and best practice ideas from other companies, other industries, and the wider world.

Remuneration linked to sustainability performance

Part of being a responsible business and delivering our purpose involves making sure our executive, and colleagues, are remunerated in line with our performance for a number of stakeholders, measuring against sustainability metrics rather than purely financial performance.

Bonus measures drive remuneration for all colleagues, and the executive are also remunerated against longer-term performance targets through the Long Term Plan (LTP).

Bonus and LTP remuneration are both linked to service and delivery for customers and the environment, as well as financial targets. This includes customer satisfaction, customer outcome delivery incentives (ODIs), carbon measures, and effective and efficient delivery of our capital programme.

➔ Read more about **our bonus and LTP** in the remuneration report on pages 170 to 203

We are a purpose-led organisation and our strategy, which is set and governed by the board and its committees, helps us deliver our purpose and create sustainable value for all of our stakeholders.

Governance structure

Our governance structure is set out in the diagram below and more information can be found on page 130, including the roles of each committee in ensuring progress against our six strategic priorities.

The board retains overall responsibility, but delegates certain roles and responsibilities to its principal board committees, allowing them to probe deeply and develop a more detailed understanding. The main responsibilities of board committees can be found in the corporate governance report on pages 126 to 207, and these pages include our reporting against the UK Corporate Governance Code. We operate our business in line with the management standards to which we maintain certification, including quality (ISO 9001), environment (ISO 14001), asset management (ISO 55001), health and safety (ISO 45001), and customer vulnerability services (ISO 22458).

The board committees report back to the board on what was discussed at their meetings, decisions taken, and, where appropriate, make recommendations on matters requiring board approval.

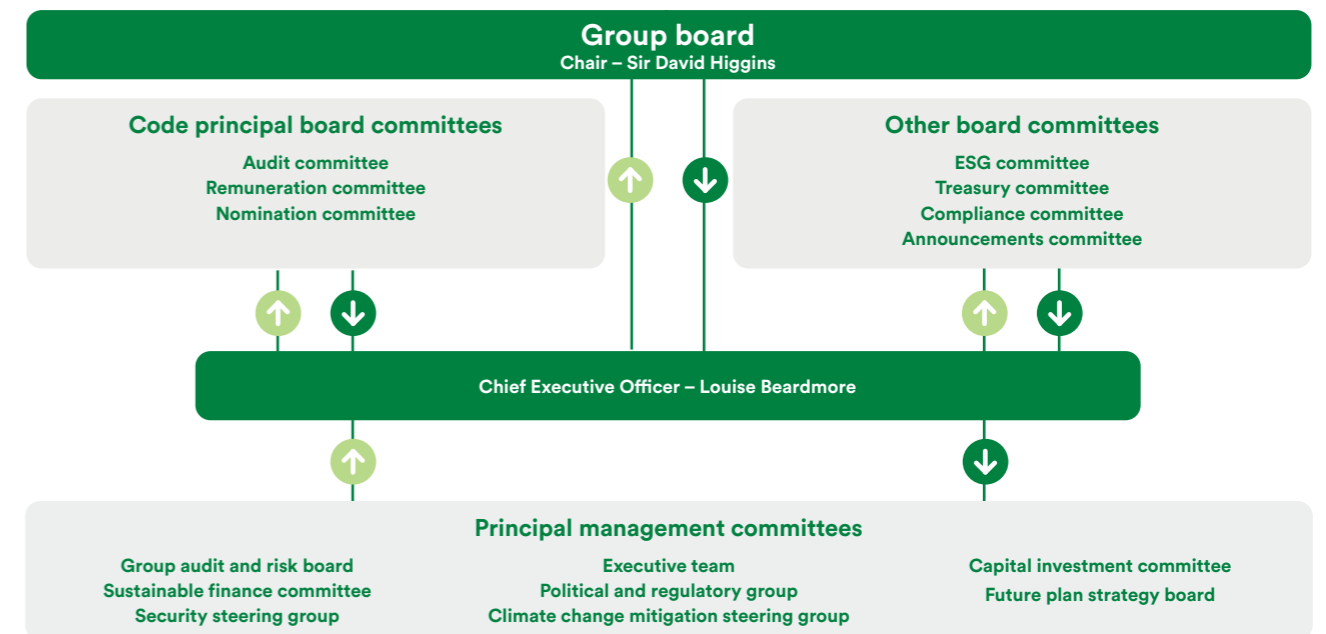
The executive team, comprised of senior managers that report directly into the Chief Executive, is responsible for implementing our strategy and for the day-to-day running of the business and other operational matters. It holds two scheduled meetings each month, one focusing on day-to-day performance and the other focusing on matters of a strategic nature, along with weekly informal 'scrums'.

Through the principal management committees, senior managers discuss the needs of the business, raise issues, identify and delegate appropriate actions, monitor progress of key performance measures, and ensure any lessons learnt are implemented. The Chief Executive provides a report, covering financial and operational performance, to the board at every scheduled meeting.

There are then further layers of focus at management and business unit level, all of which feeds up through the committees and, ultimately, to the board through this structure. For example, pages 52 and 60 describes how these layers operate in relation to risk management.

➔ Read more in our **corporate governance report** on pages 122 to 207, including individual reports of board committees

Governance structure of the board and its committees and the principal management committees



Key inform and implement oversight and challenge



Governance and reporting process for risk management

The board ensures its oversight of risk remains effective, and in compliance with the UK Corporate Governance Code, through a number of established reporting routes. The board receives a comprehensive update on our risk profile every six months, including the nature and extent of risk exposure of the most significant event-based risks, relative to the inherent principal risks and new and emerging risks. In addition, specific risk topics are reported to the board to support decision-making, enabling it to:

- decide on an acceptable level of risk, relative to risk appetite and tolerance, to deliver on the group's strategy;
- ensure appropriate controls and mitigation are in place, and test the appropriateness of plans;
- report externally on the long-term viability of the company in an informed manner; and

- monitor and review the effectiveness of risk management procedures and internal control systems.

Risk-specific governance and steering groups manage individual risks. The operational risk and resilience board provides oversight of asset and operational process, risk and resilience capability, contributes to the business risk assessment process and escalates risks and issues to the group audit and risk board (GARB). The executive-led GARB focuses on: the adequacy, effectiveness and performance of governance processes; risk management and internal control; monitoring compliance and assurance activities; identification of emerging themes and trends; and resilience across the group. Supported by company secretariat and the corporate audit teams, the audit committee reviews the effectiveness of risk management and internal controls before these are agreed by the board.



Governance around climate-related risks and opportunities

Summary

- The board and its committees have oversight and scrutiny of climate change matters, including tracking delivery of our carbon pledges, science-based targets, and review of the climate-related risks.
- Climate-related governance is fully integrated within board and management committee responsibilities, supported by our director-led climate change mitigation steering group and cross business working groups.
- Carbon measures are included within the executive remuneration framework and are key components of the environmental performance metrics.
- Public disclosures are complemented through conversations with investors and participation in climate-related indices and assessments. Leadership ratings in both climate change (A-) and supplier engagement (A) for CDP 2022.

Board oversight of climate-related risks and opportunities

The climate and natural environment are critical to our purpose to provide great water, therefore climate matters are monitored closely by our board and the principle committees as a core part of their duties and agenda. The role of the board of directors is to set, review and guide the strategy of the group ensuring the long-term success of United Utilities for customers, investors and wider stakeholders. Climate-related issues play a significant role in determining what is sustainable and responsible for the environment and customers.

The board provides oversight of climate-related matters in the business through our business model, where we:

- consult and plan for short, medium and long-term horizon;
- deliver the outcomes set out in our regulatory contract;
- create long-term value for a range of stakeholders; and
- review and measure our progress.

Our CEO, Louise Beardmore, has responsibility to manage the group's business and to implement the strategy and policies approved by the board and has accountability to the board for climate matters. Louise, as new CEO, is an active and vocal champion with respect to environmental topics and initiatives and she passionately promotes the need for both pace and scale of action to adapt and mitigate climate change.

This year, climate change matters have been discussed by the audit committee in its review of carbon commitments risk and the introduction of the enhanced audit and assurance framework. The remuneration committee covered climate through endorsing continuing the link between long-term incentive outcomes and the delivery of carbon pledges.

Considerations in respect of the impact of climate change risk on the measurement basis of the assets and liabilities of the group are included within the notes to the financial statements (Accounting Policy note, page 241).

Management role

The CEO has ultimate responsibility for the group's preparedness for adapting to climate change and driving our mitigation strategy and does so through chairing all relevant management committees. Our CFO, Phil Aspin, has executive responsibility for risk management and has made climate change and ESG core to the business. The executive management team, through its groups and committees (see structure on page 130), is tasked with assessing and managing the climate-related risks and opportunities and enacting the mitigating actions, for example by ensuring the company has the necessary financial resources and skilled people are in place to achieve its climate-related objectives.

The high value we place on climate and the environment is seen by the fact that most of our board and management committees contribute to our 'create a greener future' strategic priority. This illustrates that climate-related matters influence both day-to-day and strategic decision-making and behaviours, for instance, how we respond to the high costs of energy by focusing on efficiency and maximising use of our self-generated electricity and introducing climate-related criteria into supplier selection evaluations.

Future focus

- Continued communication and engagement programme with all stakeholder groups.
- Deploy whole-life carbon costing using an internal carbon price aligned to government carbon values.

➔ See how **climate-related matters are considered within our governance structure** on page 130

➔ Read more about **our committees including how often they meet and ESG skills** on pages 134 and 144



Governance around nature-related dependencies, impacts, risks and opportunities

Board and committee oversight

The board provides oversight of nature-related issues through six-monthly updates on performance. Matters are regularly reviewed at the ESG committee such as our progress against our Better Rivers plans.

Management role

Our interactions with the natural environment are broad and complex. Overall accountability rests with the executive team, who are responsible for day-to-day compliance with the legal and regulatory requirements as set out in our environmental policy. The environmental advisory group is a management group with a remit to ensure the delivery of the environmental policy commitments, including nature-related strategies (e.g. land, catchment, clean air, plastics, waste, water quality, water resources, and natural capital).

Governance over these strategies is through cross-departmental working groups comprised of subject matter experts and decision-makers to drive implementation. Governance around investment in nature-related risks and opportunities is applied as part of our Internal Control Manual.

Progress this year

- Enhanced our approach to nature-related reporting using the beta release of the TNFD framework guidance.

Future focus

- Communication and engagement across the organisation on the increased interest in nature-related disclosures and reporting.



Governance around other risks and opportunities of material interest

Cyber security

The board is responsible for the oversight of cyber security and updates are provided to the board at each of its scheduled meetings, with a presentation given by the chief security officer twice a year. The executive team is updated on performance on a monthly basis.

The security steering group (SSG) meets monthly to consider changes to digital and physical security risks and mitigating actions, and to review any incidents. Members of the committee include the company secretary, who has responsibility for security matters and is in attendance at all board meetings, the chief security officer, and representatives from each business unit. The SSG reports security metrics on a quarterly basis to the group audit and risk board, and six-monthly to the board. As it is one of our top ten principal risks, an update on cyber security is provided every six months to the board. The chief security officer reports to the company secretary and, along with the information security team, works closely with the digital services team.

Our information security policies and compliance are aligned to ISO 27001. As a provider of essential services for UK Critical National Infrastructure, we are governed by The Network and Information Systems Regulations, which came into force in 2018 and focuses on cyber security compliance. We are making good progress with our programme of work to comply with these regulations. We are required to comply with the Security and Emergency Measures Direction (SEMD) to maintain plans to provide a supply of water at all times, and this includes security components. A SEMD report is submitted annually to the Drinking Water Inspectorate (DWI) and this is subject to independent attestation prior to submission.

Financial risk management

The board delegates authorities to the treasury committee, which reviews its policies in relation to key financial risks on at least an annual basis, or following any major changes in treasury operations and/or financial market conditions.

As well as managing our exposure to these key financial risks, these policies help us maintain compliance with relevant financial covenants in our borrowings, including interest cover and gearing metrics, and help us to maintain our credit ratings.

Day-to-day responsibility for operational compliance with the treasury policies and the targets set therein rests with the group treasurer. An operational compliance report is provided monthly to the treasury committee, detailing our performance against these policies and highlighting the level of risk against the appropriate risk limits in place, with more detailed management information provided quarterly.

Affordability and vulnerability

The customer services management team has responsibility for the delivery of our affordability and vulnerability schemes, including our certification to ISO 22458 for our Priority Services scheme. The schemes are continuously monitored and performance is reported to the executive performance meeting and the board on a monthly basis. Affordability and vulnerability are reviewed by the board twice a year.

Health, safety and wellbeing

Health, safety and wellbeing matters, including policies and our accreditation to ISO 45001, are managed through the health, safety and wellbeing team and reported monthly to the executive performance meeting. Health, safety and wellbeing is reported to the board every month, with a detailed review twice a year.

Responsible supply chain

The commercial performance team has responsibility for the delivery of our United Supply Chain (USC) programme. Supplier sign ups to our Responsible Sourcing Principles are reported on a monthly basis, alongside other commercial measures, through the executive performance meeting and on to the board.



Governance around other continued

Equity, diversity and inclusion

We need fantastic people to help us deliver great service to all our customers. We want our workforce to reflect the local communities we serve, with all colleagues feeling welcomed, valued and included, regardless of their gender, age, race, disability, sexuality or social background.

Our award-winning 'We are Better Together' campaign aims to drive a diverse and inclusive workforce. We are proud of how far we have come and in our latest internal engagement survey 89 per cent of colleagues said that United Utilities supports diversity and inclusion in the workplace – scoring higher than both the UK norm and Utilities norm benchmarks and recognising our drive to be an inclusive workplace of choice.

Our people director sponsors the overall equity, diversity and inclusion plan, which sets out our bold, long-term targets to be achieved by 2030, and tracks its progress with the executive team.

We have been recognised as one of the top 15 FTSE company performers when it comes to women in leadership, having exceeded the 40 per cent target for Women on Boards and Women Leaders set by the FTSE 100 Women Leaders Review, tracking at 44.4 per cent and 43.1 per cent respectively. We have been included once again in the Bloomberg LP Gender-Equality Index, which tracks the performance of public companies committed to transparency in gender-data reporting. We are one of 484 companies across 45 countries and regions committed to more equal and inclusive workplaces.

At the 2022 Water Industry Awards, we were Highly Commended for our approach to recruiting a diverse apprenticeship cohort in the Diversity & Inclusion Initiative of the Year. We were also winner of the Inclusive Culture Initiative Award for our 'We Are Better Together' campaign at the 2022 Inclusive Companies Awards, recognising our remarkable efforts and commitment to harness and strengthen a diverse workforce.

We are proud to have been ranked 11th in the Inclusive Companies Top 50 UK Employers list, reinforcing our pledge to take action on diversity and inclusion and recognising our commitment to creating a more equal and inclusive workplace. For the second year running, we are the highest ranking water company in this respected, cross-sector inclusion index.

We have improved our position in the Financial Times Inclusive Leaders Index 2023, which assesses companies' success in promoting diversity aspects, such as gender, age, ethnicity, disability and sexual orientation, in their workforce. We were placed 89th out of 850 companies across Europe, and are the only UK utilities company in the top 100.

Ethnicity

We continue to collect information to build on our diversity data. The percentage of colleagues who choose not to disclose their ethnic origin continues to decrease, currently at 8.2 per cent. The proportion of our colleagues who identify as from an ethnic background stands at 2.7 per cent.

We've committed to supporting the '10,000 Black Interns' programme over the next five years. During the year, we welcomed 23 students onto placements. The programme included 'lunch and learn' sessions with our directors, team-building activities with the local Army Reserves, and a CV and interview skills workshop with specialist recruitment providers.

It was a huge success, with 56 per cent of those who were ready for employment being offered a role with us. 54 per cent of interns from the programme are female, and 60 per cent of interns we offered a role to are female.

Following the success of our first 'Stepping Up' programme in 2021, specifically designed for colleagues from an ethnic minority background, we ran a second cohort for a group of ten colleagues. Over the past two years we've supported 20 people, and 35 per cent of these are female. The programme has provided participants with opportunities to network with senior leaders, sponsors and mentors, and to develop personal and leadership skills to help them fast track their careers with us. Since completing the programme, 50 per cent of participants have already secured a new role and over 40 per cent now manage a team.

Gender

Our workforce profile remains at 65 per cent male and 35 per cent female. We recognise the need to attract diverse and talented individuals with an interest in science, technology, engineering and maths (STEM) and have a focused approach to improving the gender diversity of our workforce.

To inspire young people from a wide range of backgrounds into STEM-related careers, we continue to run our award-winning 'Engineering Masterclass' competition with secondary schools from the local area – some of which have a high number of pupils from deprived and disadvantaged backgrounds. This year, over 80 students took part and 63 per cent of them were female. Following the masterclass, 95 per cent of students said they were extremely interested in pursuing a STEM-related career and 100 per cent said they would recommend the session and now have a better understanding of engineering at United Utilities.

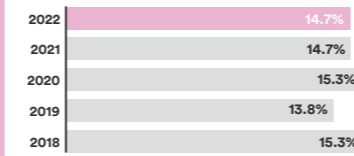
We continue to promote and support strong female role models at all levels of our organisation. Louise Beardmore's appointment as CEO means the percentage of women serving on our board has increased to 44 per cent, while females now make up 50 per cent of our executive leadership team. We offer targeted support for future female talent through our Female Leadership Pipeline and Aspiring Manager Programme, which have been designed to support colleagues into leadership positions. Sixty-seven per cent of colleagues currently on our Aspiring Manager Programme are female. Overall, 42 per cent of our graduates are female and 30 per cent of our apprentices are female.

In the last 12 months, we have welcomed 32 graduates on our schemes and 61 apprentices have also joined us on operational, service and future-facing digital and environmental schemes. Of our new intake, 41 per cent of graduates are female and 35 per cent of apprentices are female, compared to the UK average of 24 per cent for females in STEM roles.

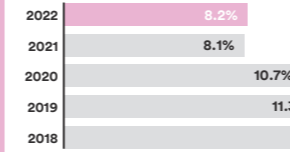
We are pleased that 91 per cent of our current female workforce would recommend us as an employer and 94 per cent say that we support diversity and inclusion in the workplace.

We remain committed to closing the gender pay gap in our organisation. At 14.7 per cent, our median gender pay gap is less than the national average and less than the gap in similar STEM-industry organisations. We are confident that the work we are doing to attract, support and develop women, to build a 'pipeline' of female talent, will bring long-term improvements in our gender pay gap.

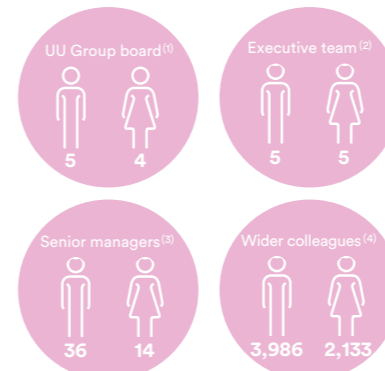
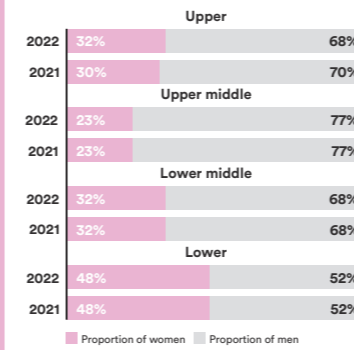
Our median gender pay gap over time



Our mean gender pay gap over time



Percentage of women and men overall and in each quartile of the pay range (figures for 2022 and 2021)



- (1) Group board as at 31 March 2023. Includes Steve Mogford.
- (2) Executive team excludes CEO, CEO designate and CFO, who are included in group board figures.
- (3) As at 31 March 2023, there were six male and three female colleagues appointed as statutory directors of subsidiary group companies but who do not fulfil the Companies Act 2006 definition of 'senior managers'.
- (4) Wider colleagues as at 31 March 2023.

Colleague networks

We are committed to providing a supportive and inclusive working environment for all of our colleagues and we recognise that leaders have a clear role when it comes to championing equity, diversity and inclusion. Our leadership team has taken an active part in sponsoring each of our colleague networks, which support colleagues within under-represented communities and focus on educating, raising awareness and celebrating key events – such as Black History Month, International Women's Day and National Autism Week.

Through our networks we have hosted live Q&A sessions with external speakers, including one in partnership with Northern Power Women, and established monthly cafés around the topics of hearing loss, neurodiversity and menopause. We introduced menopause training that everyone in the company can access, and we continued to roll out our 'Pride in the workplace' training, designed to help break down barriers and improve confidence to talk about LGBT+ in the workplace.

We are a Disability Confident employer and we are one of over 20,000 UK employers to have signed up to the Government scheme.

We held our inaugural 'Better Together Inclusion Awards', to recognise individual colleagues and teams for their hard work and commitments towards making United Utilities a more inclusive workplace, and to celebrate the achievements of those colleagues going the extra mile in our wider communities.

Attracting local diverse talent

We've been raising the profile of our commitment to promoting STEM-related careers. During National Apprenticeship Week, our apprentices and early careers team mentored students from University Technical College Warrington, attended four different schools and colleges and hosted the Engineering Masterclass final, with over 80 students from schools in the local area.

We welcomed 600 aspiring apprentices and parents to our first ever apprenticeship open evening and delivered a series of apprenticeship accelerator sessions for students from under-represented communities across the North West. The sessions aim to help students accelerate their careers – focusing on apprenticeships and improving employability prospects and skills.

Our 'Tap into your Future' virtual work experience programme has offered young people in years 11 to 13 an exclusive insight into our business and our fantastic early careers opportunities. The sessions targeted under-represented communities across the North West and attracted over 500 students. A hundred per cent of attendees rate United Utilities as a diverse and inclusive employer, and 76 per cent said they were extremely interested in applying for an apprenticeship after completing the programme.

In the last 12 months, we have created over

£695k

of social/local economic value (TOMS Social Value Portal)

44%

of our group board is female

50%

of our executive team is female



Engaging with our stakeholders

We actively engage with stakeholders to build and maintain trust and ensure we create long-term value for all. Strong, constructive relationships help us understand what matters most to them. The following pages detail how we engage with stakeholders who influence what we do and benefit from the value we create (in dark blue), and those who just influence what we do (in grey), across a range of ESG issues. Our materiality matrix on page 29 details stakeholder priorities and how these affect our ability to create value.

Our stakeholder relationships are subject to robust governance to ensure stakeholder insights are taken into account in decision-making at executive and board level. The board's ESG committee has stakeholder engagement and reputation as one of its standing agenda items, and the chair of the independent customer challenge group (YourVoice) attends board meetings to provide its perspective. Our Section 172(1) Statement on pages 58 to 59 provides examples of some of the ways stakeholder views have influenced key board decisions during the year.

<h3>Colleagues</h3> <p>Our colleagues are the face of the company and we could not deliver our services without them, so maintaining productive relationships built on trust is vital to delivering our purpose. Colleagues know our business better than anyone, with a diverse range of views and experience, making them well placed to help us identify new ways of working and opportunities for improvement.</p> <p>How we engage</p> <ul style="list-style-type: none"> Annual opinion survey enabling confidential feedback Regular manager one-to-one meetings providing two-way engagement Colleague Voice panel providing a link to the board Monthly trade union forums <p>Top three material issues</p> <ul style="list-style-type: none"> Colleague engagement Diverse and skilled workforce Health, safety and wellbeing 	<h3>Communities</h3> <p>Our work puts us at the heart of local communities, places where customers and colleagues live and work. We want to support them to be stronger and increase understanding of the impact and contribution our work has on everyday life. We balance decisions based on often competing stakeholder interests and look to develop collaborative and partnership solutions where feasible.</p> <p>How we engage</p> <ul style="list-style-type: none"> Face-to-face meetings with local and parish councils to discuss projects Online portals for large capital projects to get the views of communities where we are working Facilitated workshops with partners to scope out solutions Public events across the region to promote sustainable uses <p>Top three material issues</p> <ul style="list-style-type: none"> Land management, access and recreation Supporting communities Trust, transparency and legitimacy
<h3>Customers</h3> <p>To deliver value for customers, we need to understand their short-term issues, and longer-term expectations of us as their water company. As expectations change, we need to evolve our services to ensure we meet them. We actively seek feedback on what customers think about us so we can make our services better and address the issues that matter.</p> <p>How we engage</p> <ul style="list-style-type: none"> Contacts through our operational call centre and social media channels Visits to customer properties to resolve issues. Direct customer research on our service provision Face-to-face engagement with groups representing vulnerable customers, such as MIND <p>Top three material issues</p> <ul style="list-style-type: none"> Drinking water quality Customer service and operational performance Affordability and vulnerability 	<h3>Environment</h3> <p>We depend on the environment and have a key role in protecting and enhancing it across the North West. We engage with interested groups such as environmental regulators, non-governmental organisations, campaigners and local communities to find the best ways to tackle environmental issues, like climate change and land management. Working together is often the best way to find the right solution.</p> <p>How we engage</p> <ul style="list-style-type: none"> Meetings with national and regional environmental regulators, such as the Environment Agency Customer research to shape our investment plans Events such as our Environmental AGM Partnerships where we have common interests <p>Top three material issues</p> <ul style="list-style-type: none"> Storm overflows Climate change Water resources and leakage

United Utilities Group PLC Integrated Annual Report and Financial Statements for the year ended 31 March 2023

<h3>Investors</h3> <p>It is important that investors have confidence in the organisation and how it is managed. We provide regular updates to debt and equity investors and meet with many top investors to establish two-way dialogue about matters of interest to them. Increasingly, this includes environmental, social and governance (ESG) updates alongside financial and performance data.</p> <p>How we engage</p> <ul style="list-style-type: none"> Capital market days and investor roadshows Annual general meeting open to all shareholders Direct dialogue with relationship banks and credit agencies Participation in investor-led ESG ratings and indices <p>Top three material issues</p> <ul style="list-style-type: none"> Customer service and operational performance Financial risk management Corporate governance and business conduct 	<h3>Suppliers</h3> <p>We rely on suppliers to deliver our services. Good relationships help ensure projects are delivered on time, to good quality, at efficient costs. Awareness of issues in the supply chain means we can address them together and become more resilient. Supplier engagement can also help us identify and realise innovative approaches and solutions.</p> <p>How we engage</p> <ul style="list-style-type: none"> Directly through supplier relationship management process and United Supply Chain (USC) Setting challenges through our Innovation Lab Supplier databases such as Achilles, to assess market opportunities <p>Top three material issues</p> <ul style="list-style-type: none"> Trust, transparency and legitimacy North West regional economy Responsible supply chain
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<h3>Media</h3> <p>The media is influenced by stakeholders' interests, and in turn influences them through what it reports. Many people receive their information about us and our activities from traditional and/or social media, so it is important that coverage is fair, balanced and accurate. This requires effective two-way dialogue between the company and the media, and we provide media training to key senior managers to facilitate this.</p> <p>How we engage</p> <ul style="list-style-type: none"> 24/7 press office available to respond to media requests and publish content for direct media use Dedicated social media team covering multiple channels Active media and social monitoring focused on the company and sector <p>Top three material issues</p> <ul style="list-style-type: none"> Storm overflows Customer service and operational performance Trust, transparency and legitimacy 	<h3>Politicians</h3> <p>Politicians influence the long-term national water strategy and environmental priorities, matters that affect how all businesses operate, and champion issues raised by their constituents. Local government, elected representatives and devolved administrations provide insight into shared social, environmental, economic and governance issues across the North West.</p> <p>How we engage</p> <ul style="list-style-type: none"> Direct engagement with regional and national politicians across the spectrum, and working groups with devolved administrations and local authorities on common interests Direct engagement with parish councils linked to planning applications Responding to enquiries through our corporate affairs team <p>Top three material issues</p> <ul style="list-style-type: none"> Political and regulatory environment Customer service and operational performance Affordability and vulnerability
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<h3>Regulators</h3> <p>Through proactive, constructive engagement with economic, quality and environmental regulators, we understand requirements and deliver against commitments over specified time periods, aiming to meet or exceed the expectations they have of our business. We actively engage in events such as workshops and respond to consultations to contribute towards the policy and regulatory framework in which we operate, covering customer, economic, environmental, social and governance matters.</p> <p>How we engage</p> <ul style="list-style-type: none"> Regular meetings with all regulators on objectives and performance Responses to consultations and contributing to policy debates on how regulation could evolve 	<p>Top three material issues</p> <ul style="list-style-type: none"> Political and regulatory environment Customer service and operational performance Resilience
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We value the diverse perspectives that a broad range of stakeholders, representing different and often competing interests, can bring to our decision-making.

S172(1) Statement

Our key decisions during the year to 31 March 2023

Introduction

Throughout this integrated annual report, we provide examples of how the board has thought about the likely consequences of long-term decisions and how we:

- build relationships with stakeholders and balance their needs and expectations with those of the business;
- understand the importance of engaging with our colleagues;
- understand the impact of our operations on the communities in our region and the environment we depend upon;
- are mindful of the interactions we have with our regulators; and
- understand the importance of behaving responsibly and being consistent with the company's purpose, values and strategic priorities.

Statement by the directors in performance of their statutory duties in accordance with S172(1) Companies Act 2006

The board of directors of United Utilities Group PLC consider, both individually and together, that they have acted in the way they consider, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole and having regard (amongst other matters) to factors (a) to (f) s172 Companies Act 2006, in the decisions taken during the year ended 31 March 2023 including:

Our strategic priorities

- Improve our rivers
- Create a greener future
- Provide a safe and great place to work
- Deliver great service for all our customers
- Spend customers' money wisely
- Contribute to our communities

Cyber security

[Link to strategy](#)



The decision

To respond to calls from investors and company commentators on the board's oversight of cyber issues and security. Cyber risk ranked as a top ten risk at United Utilities and this has been the case since 2019. The board receives presentations from the chief security officer, who reports functionally to the company secretary, twice a year, providing the board with insight into mitigation activities employed by the group in response to the evolving threat of cyber and physical security attacks. The board is kept apprised of developments in this area, and, in particular, matters impacting the water and other utility sectors. During the year, the audit committee, as part of its responsibility for financial internal controls, received a presentation on the management and assurance of the IT controls environment and its contribution toward mitigation of cyber crime. The board spends time understanding the increasing threats to the group's cyber/digital security and overseeing management's actions to mitigate the risk of a serious cyber attack (see pages 53 and 69), with board members providing their experience of similar issues faced by other sectors to the board's discussions. Our Systems Thinking approach real-time digital monitoring capabilities have produced significant operational performance improvements, but adversely raised the risk of cyber attack, in a similar way to that of hybrid working.

How we engaged with stakeholders

Preparedness to mitigate cyber attacks is a topic investors are often keen to explore. As a provider of essential services for UK Critical National Infrastructure, the group is governed by The Network and Information Systems Regulations (NIS Regulations), which came into force in 2018 and focus on cyber security compliance; monitoring/enforcement of these regulations is within the remit of the DWI. The group is required to comply with the Security and Emergency Measures Direction (SEMD) which directs water undertakers to maintain plans to provide a supply of water at all times and includes security components. A SEMD report is submitted annually to DWI and is subject to independent attestation prior to the submission. Colleagues are encouraged and trained to be vigilant to phishing and cyber attacks and a variety of modern protective defence tools are employed to protect our systems and data.

The board's view

The group's information security policies and compliance are aligned to ISO 27001. Good progress is being made with the programme of work to comply with the NIS Regulations, although the evolving nature of the sector-specific profile defined by the DWI can be challenging.

The board is strongly averse to accepting cyber risk within the group's business strategy or operational activity. The approach to the protection of information and data held by the group about its assets and operations, customers and colleagues is aligned with the group's strategic priority of delivering great service for all customers and the board believes that this would be most likely to promote the long-term success of the company for the benefit of its members as a whole.

Better Rivers: Better North West

[Link to strategy](#)



The decision

Storm overflows help to minimise the risk of sewer flooding in periods of heavy rainfall by allowing heavily diluted wastewater to be released directly to the environment. The group committed to four pledges in its Better Rivers: Better North West programme to underpin a revival of rivers across the North West region. £230 million has been committed to deliver environmental improvements, supporting at least a one-third sustainable reduction in the number of activations recorded from our storm overflows by 2025 compared to the 2020 baseline, leading to 184 kilometres of improved waterways across the group's region. We have committed to accelerate these plans and get a head start on future requirements through £250 million of reinvestment funded from outperformance, to take action to improve river health across our region and make other environmental improvements.

How we engaged with stakeholders

Collaborative action will deliver the best results for our region, and an important step in the journey was the organisation and participation in the Future Rivers Forum in November 2022, which brought together representatives from environmental NGOs, businesses, local authorities and our regulators to focus on identifying new collaborations and collective actions to improve river health. Customers have told us we must report on the steps we are taking to improve river health. Our storm overflows report was published in December 2022, coinciding with the holding of the first Environmental AGM, which was attended by over 30 North West environmental leaders including representatives from local nature partnerships, wildlife trusts, rivers trusts, combined authorities and other environmental stakeholders. A new partnership was launched with farmers to work with the farming community to incentivise farming practices that reduce the impact to river health, share best practice and develop sustainable farming clusters.

The board's view

Storm overflow activations are a big area of focus for the whole industry as part of improving river health. Following keen interest from the public and government, and publication of the new Environment Act 2021, ambitious targets have been set for a progressive but substantial reduction in activation frequency across the country. The North West receives 28 per cent more average annual water runoff than other regions and the industrial legacy of our region means we have a much higher proportion of combined sewers, with 55 per cent of our network taking both waste and surface water, compared with the industry average of 33 per cent.

We were an early adopter of activation monitoring and have one of the largest installed bases in the sector, with 100 per cent coverage to be achieved by 2023. Our Better Rivers programme is delivering improvements that support our target of at least a 33 per cent reduction in activations by 2025, from a 2020 baseline. We have already made great headway, delivering a 39 per cent reduction so far. We are conscious that performance can be significantly influenced by weather and while we are extremely pleased with the progress delivered so far, we recognise that there is more we could do, both individually and as a sector. The Government has asked us to go faster, and we have responded by identifying additional investment that could be spent in AMP7 but would be fully recovered in AMP8. We are still early in the process of scoping and costing our environmental programme for AMP8, but as a result of these targets and other drivers coming out of the Environment Act, early indications point to an investment that could be significantly higher than the average level over the last two AMP periods. Given the size of this potential investment, we are in discussions with regulators about balancing the pace of investment in light of affordability and deliverability considerations, and the investment needed to meet these new environmental requirements is likely to run over successive AMP periods.

The board, in committing to playing its part in improving river health, believes this would be most likely to promote the long-term success of the company for the benefit of its members as a whole.

Water Industry National Environment Programme (WINEP)

[Link to strategy](#)



The decision

Approval of the 2025-30 WINEP that sets out how United Utilities intends to meet its obligations from environmental legislation and UK Government policy.

How we engaged with stakeholders

We have been working in collaboration with our regulators, Ofwat, the Environment Agency, Natural England and Defra, and our suppliers who are key to helping us deliver our programme.

The board's view

The company has taken all reasonable steps to deliver a high-quality WINEP programme that offers 'best value' as defined by the WINEP Options Development Guidance⁽¹⁾ as well as the Water Industry Strategic Environmental Requirements (WISER) based on a sound and robust evidence base.

In relation to the 'affordable to deliver' requirement for a best value plan, the company has sought to make the plan as affordable as possible. However, the WINEP and WISER requirements are driving a programme of very significant size and scale and with an ambitious timetable for implementation. This means that it is not possible at the time of the WINEP final submission in January 2023 to conclude that the programme would be affordable to customers as a whole. The company will continue to engage with the UK Government and regulators to understand the scope to improve this position. The WINEP programme has been subject to sufficient processes and internal systems of control to ensure the reliability of information and has been assured in line with the published assurance framework. The company has appropriately considered the feedback and recommendations from independent external assurance partners. Notwithstanding the board's support for the submission, it highlighted the considerable risk associated with the programme including the risk relating to: affordability, deliverability, the long-term impact on operating costs, the impact on whole-life carbon, and the impact on operational and delivery performance. The submission of the WINEP is a statutory requirement and having taken all reasonable steps to deliver a high-quality WINEP programme the board believes our proposed programme is one that would be most likely to promote the long-term success of the company for the benefit of its members as a whole.

⁽¹⁾ Water industry national environment programme, Options development guidance, July 2022, version 3.



In this section you will find:

Our approach to identifying, assessing and managing risks and opportunities

Our principal risks, common themes, and most significant event-based risks

Our management of climate, nature and other risks of material interest

New and emerging risks and opportunities

Our risk and resilience framework

We have a robust risk and resilience framework for the identification, assessment and mitigation of risk.

Our approach to risk and resilience

Successful management of risks and uncertainties enables us to deliver on our purpose to provide great water and more for a stronger, greener and healthier North West and be more resilient across our corporate, financial and operational structures. A key objective of our approach to risk and resilience is to support the sustainable achievement of the strategic priorities that underpin our vision to be the best UK water and wastewater company:

- Provide a safe and great place to work;
- Deliver great service for all our customers;
- Improve our rivers;
- Create a greener future;
- Spend customers' money wisely; and
- Contribute to our communities.

Our risk and resilience framework provides the foundation for the business to anticipate threats to delivering an effective service in these challenging times, and to respond and recover effectively when risks materialise.

Key components of the framework include:

- an embedded group-wide risk management process, which is aligned to ISO 31000:2018 risk management guidelines;
- a board-led approach to risk appetite, based on strategic goals;

- a strong and well-established governance structure giving the board oversight of the nature and extent of risks the group faces, as well as the effectiveness of risk management processes and controls; and
- a portfolio of policies, procedures, guidance and training to enable consistent, group-wide participation by our people.

Continuous improvement is a key feature of the framework, which incorporates a maturity assessment model to identify areas to enhance. Based on risk management capabilities relative to five levels of maturity, a recent assessment has supported the development of a road map of improvements. This includes the enhancement of non-financial assessment criteria by aligning to the six capitals (see page 34) to ensure a consistent consideration of key stakeholders and areas of value; an improved focus on control; and the continued development of tactical appetite and tolerance statements.

Identifying opportunities

Factors from both the internal and external business environment may give rise to opportunities that will positively affect our performance and future prospects. The identification, analysis and management of upside as well as down side risk will further support the achievement of the strategic priorities, with our Systems Thinking approach and culture of innovation being a fundamental component (see pages 62 to 63).

Governance and reporting process

The risk management and governance and reporting process, as summarised on page 52, can be represented by the following diagram:

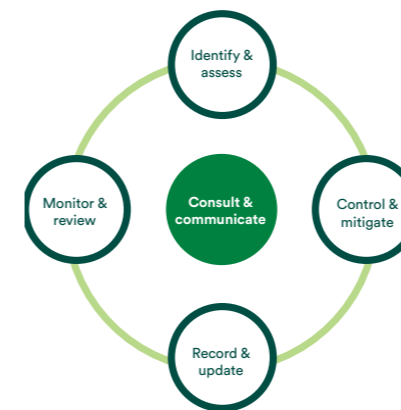


Risk appetite and tolerance

Focused on supporting decision-making, the risk appetite and tolerance framework consists of a package of measures. The General Risk Appetite represents financial limits against which event-based risks are compared at each full and half-year assessment and reporting cycle. In parallel are a series of strategic statements which align directly to the principal risks (see pages 64 to 65). Each statement reflects the strategic intent, strategic priority, relevant stakeholders and governance, but fundamentally emphasises the attitude to risk taking and control relative to four descriptors:

- **Averse:** A strong opposition to accept risk within business strategy or operational activity.
- **Prudent:** A reluctance to accept risk within business strategy or operational activity, but careful acceptance within tight boundaries.
- **Moderate:** Willingness to accept risk with regard to business strategy or operational activity provided this is within reasonable limits.
- **Accepting:** Willingness to accept risk with regard to business strategy or operational activity.

As a regulated company providing essential public services, none of the principal risks have risk accepting as a strategic direction or approach. Underpinning each strategic statement, and currently under development, are a series of more tangible tactical statements with specific levels and limits.



How we identify and assess risk

We have a number of mechanisms in place to identify risk. These include a risk universe, cross-business horizon scanning forums, consultation with third parties and comparison with National Risk Registers. Each risk is event based and is sponsored by a senior manager who is responsible for the ongoing analysis of the corresponding causal factors, consequences and the control effectiveness, taking account of both the internal and external business environment. This process quantifies the likelihood of the event occurring and the full range of potential impacts from a minimum (best case) to a maximum (worst case). Comparing this position against the desired target state, in combination with the strengths, weaknesses and gaps of the control environment, supports the decisions for further mitigation as appropriate. Risks are assessed both bottom-up, through the biannual business assessment process, and top-down through review of the risk profile at the executive group audit and risk board (GARB), executive performance meeting and the group board. This approach ensures reporting reflects the risks facing the company, serves to calibrate the most significant risks from a financial and reputational context and enables assessment of the risks relative to our appetite.

Risk profile

The business risk profile is based on the value chain of the company, with the ten principal risks representing inherent risk areas (primary and supportive) where value can be gained, preserved or lost relative to the performance, future prospects or reputation of the company. Underpinning the principal risks, the profile consists of approximately 100 event-based risks, each of which is allocated to one of the ten inherent risk areas based on the context of the event, enabling the company to consider interdependency and correlation of common themes (see pages 64 to 65) and control effectiveness.

Principal risk heat map

The heat map provides an indicative view of the current risk exposure (likelihood of occurrence and most likely impact) of each of the principal risks relative to each other.

Seven of the principal risks have remained relatively stable in the last 12 months with the following principal risks demonstrating an increase in exposure:

- **Finance** due to current economic conditions and uncertainty;
- **Conduct and compliance** due to the potential for increased penalties; and
- **Political and regulatory** due to increased public and political interests in the water sector and societal expectations.

➔ Read more about [our principal risks](#) on pages 64 to 65 and [new and emerging risks](#) on pages 74 to 75



Risk exposure

An indication of the current exposure of each principal risk relative to the prior year. ● Decreased ● Stable ● Increased

Principal risks

- 1 Water service
- 2 Wastewater service
- 3 Retail and commercial
- 4 Supply chain and programme delivery
- 5 Resource
- 6 Finance
- 7 Health, safety and environmental
- 8 Security
- 9 Conduct and compliance
- 10 Political and regulatory



Fostering a culture of innovation

We embrace technology and seek innovative solutions to create opportunities that help us tackle the challenges we face and continue improving performance.

This is at the heart of our Systems Thinking approach, as set out on page 63.

We use a variety of methods to find novel ideas and solutions from different sources, internally and externally, including idea scouting, learning from other water companies across the world, and from other industries.

Culture

Our core values drive an innovative culture, and we encourage innovation at all levels inside the business, such as our CEO Challenge programme where graduates work in groups to find novel ways to tackle challenges that we face as a business and present these back for consideration and implementation.

Innovation Lab

Our Innovation Lab, currently undergoing its fifth programme, encourages suppliers to bring us innovative ideas and allows them to test solutions in a live environment, helping us find solutions where we may not otherwise have looked.

AMP7 innovation fund

Recognising the service and efficiency improvements that innovation can offer, Ofwat has established an innovation fund through which companies bid for funding for innovative projects.

We have been involved in successful bids to influence over £80 million of projects, leading on seven totalling £28.2 million. This includes the Catchment Systems Thinking Cooperative where we are working with others to revolutionise the way crucial data about the water environment is shared, with a particular focus on river health. We have already delivered one leading project and expect to complete a second in 2023.

Working with others to find mutual benefit solutions

We do not operate in isolation and we recognise that working with others can create significant opportunities to identify and develop better solutions.

This co-operative approach can take many different forms, such as summits that bring people from a variety of different organisations together to discuss and formulate ideas, co-creation of solutions with customers or other interested parties, and forming partnerships to tackle issues of mutual interest together.

Affordability and vulnerability summits, and the Hardship Hub

This year we hosted our first vulnerability summit and fourth affordability summit, bringing together a mix of organisations from across the North West, including debt advice charities, the Department for Work and Pensions (DWP), councils, housing associations and other utility companies, to discuss what more can be done to support people who are struggling. Our first affordability summit led us to develop the Hardship Hub, a platform that helps debt advisers gain and share knowledge on local support schemes, allowing them to help people more quickly and easily.

Future rivers forum

We partnered with The Rivers Trust to host a Future Rivers Forum in November 2022, looking at how we can address the challenges that face rivers in the North West, such as climate change, population growth and pollution. This is a problem that cannot be solved in silos; it needs practical, collaborative action. Industry leaders from a variety of sectors worked together to produce solutions and tangible actions that will progressively reduce negative impacts to river health. This is one of many areas where we are working with others to improve river water quality, including recruiting river rangers through our Better Rivers plan.

Love Windermere

We are a part of the Love Windermere partnership, led by the Environment Agency, which is working to better understand the factors affecting water quality and develop long-term plans to maintain and improve water quality in the lake while balancing the needs of nature, the community and the local economy.

This plan will set out a road map for environmental protection that could be replicated across the UK, and considers the way that farmland is managed around the lake, how rainwater drains from built-up areas, and the way that wastewater systems and private septic tanks are managed.

Diversity and inclusion summit

In April 2022 we hosted our first diversity and inclusion summit, bringing lots of organisations and businesses together to share ideas and best practice to help grow more inclusive workplaces and communities across the North West.

Severn-Thames transfer scheme

Working with others goes beyond our region, and we are collaborating with other water companies on a national water trading scheme as part of the national strategy for managing the risk posed by increasing dry weather, and doing so in a way that minimises the carbon impact.



Systems Thinking

Our Systems Thinking approach is a key area of continuing opportunity. This enables us to better manage our end-to-end water and wastewater systems, optimising our decision-making and moving away from the traditional reactive approach to address problems proactively before they affect customers. This creates long-term value, improving our asset reliability and resilience, reducing unplanned service interruptions, and delivering cost savings.

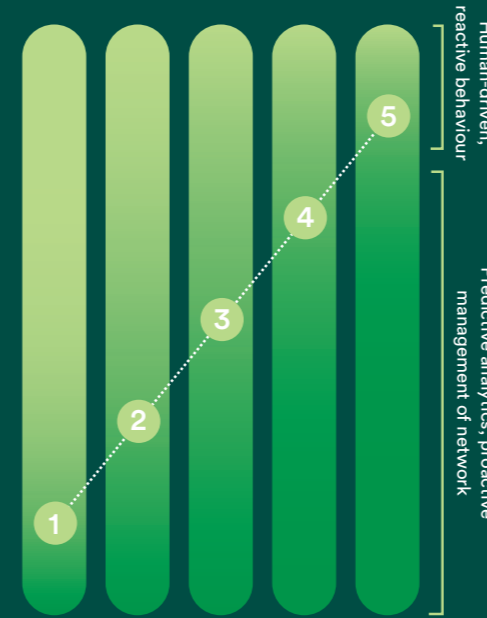
Systems Thinking capability maturity

We assess new opportunities against five capability maturity levels.

At the lower levels there is a high degree of human intervention and reactive behaviour.

At the higher levels there is a high degree of predictive analytics, use of artificial intelligence to process vast amounts of data, joined up decision-making across the system, and higher levels of automation.

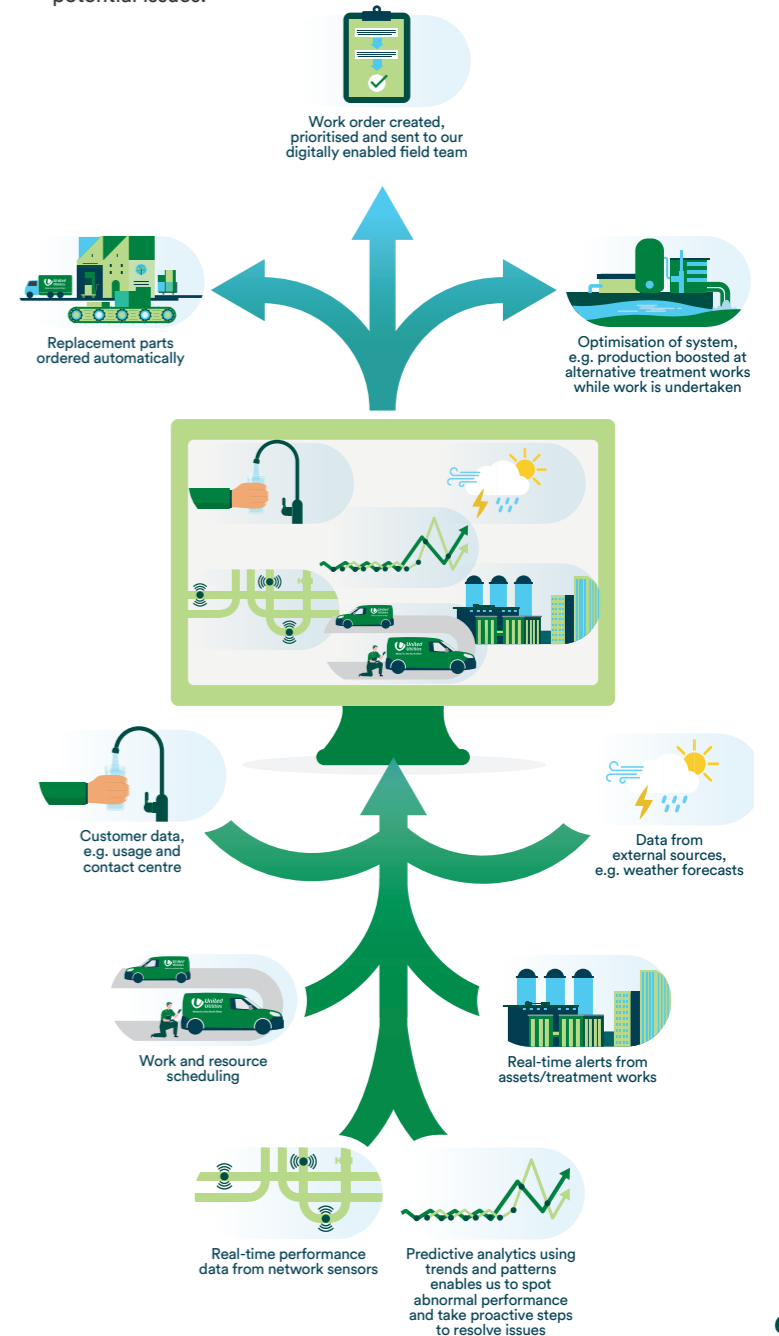
It requires time and investment to reach the higher levels, and we are at different levels in different areas of our business as we continue to embed and progress our approach.



- 1 Maturity level 1**
Event-led human-driven analytics
- 2 Maturity level 2**
Centralised view of system performance
- 3 Maturity level 3**
Technology-enabled, standardised analytics and insight
- 4 Maturity level 4**
Machine-led system analytics and system management
- 5 Maturity level 5**
Machine intelligence provides full system control

Central system management from our Integrated Control Centre

Systems Thinking involves looking at the entire system and all of its linkages, rather than individual assets or sites in isolation, to find the best all-round solutions. Our digital backbone sends vast amounts of real-time data to our Integrated Control Centre (ICC), from which we plan, monitor and control our operations. We also factor in other source data such as weather forecasts and customer demand, and at the higher capability maturity levels we use artificial intelligence and machine learning to identify trends and anomalies that could signal potential issues.





Risks and opportunities

Our principal risks

Risk exposure

An indication of the current exposure of each principal risk relative to the prior year.

Decreased Stable Increased

Inherent risk area (principal risk) ⁽¹⁾	Strategic priority	Sponsor(s)	Principal risk description	Causal themes (Drivers/influences)	Consequence themes	Appetite and tolerance ⁽²⁾	Control/mitigation	Top five event-based business risks (*most significant risks – see pages 68 to 69)
1 Water service		<ul style="list-style-type: none"> Chief operating officer 	A failure to provide a secure supply of clean, safe drinking water and the potential for a negative impact on public confidence in water supply.	<ul style="list-style-type: none"> Asset health Demographic change Extreme weather/ climate change Legal and regulatory change Technology 	<ul style="list-style-type: none"> Customers Environment Investors 	Water Averse	<ul style="list-style-type: none"> Strict quality controls and sampling regime Physical and chemical treatment with automation Cleaning, maintenance and replacement of assets Water resources and production planning Pressure/flow management and leak detection Integrated network and response capability 	<ul style="list-style-type: none"> Failure of Haweswater Aqueduct* Water sufficiency* Dam failure* Failure to treat water Failure of the distribution system (leakage)
2 Wastewater service		<ul style="list-style-type: none"> Chief operating officer 	The failure to remove, treat and return water and sludge to the environment.	<ul style="list-style-type: none"> Asset health Demographic change Extreme weather/ climate change Legal and regulatory change Technology 	<ul style="list-style-type: none"> Customers Environment Investors 	Wastewater Prudent Bioresources Moderate	<ul style="list-style-type: none"> Physical/chemical treatment and sampling/testing systems Customer campaigns Odour management Drainage and wastewater management plans Wastewater network operating model Cleaning, maintenance and replacement of assets Better Rivers programme 	<ul style="list-style-type: none"> Wastewater network failure* Recycling biosolids to agriculture* Failure to treat sludge* Wastewater treatment Mersey Valley Sludge Pipeline
3 Retail and commercial		<ul style="list-style-type: none"> Customer services director General counsel and company secretary 	Failing to provide good and fair service to domestic customers and third-party retailers or a failure of, or issue in relation to, non-regulated interests.	<ul style="list-style-type: none"> Asset health Culture Economic conditions Legal and regulatory change Technology 	<ul style="list-style-type: none"> Customers Investors 	Retail Moderate Commercial Moderate	<ul style="list-style-type: none"> Customer-focused initiatives Best practice collection techniques Customer segmentation Priority Services scheme Data management and data sharing Non-regulated operation governance 	<ul style="list-style-type: none"> Cash collection Customer experience Wholesale revenue collection Failure to maintain meters NAV market obligations
4 Supply chain and programme delivery		<ul style="list-style-type: none"> Capital delivery, engineering and commercial director 	The potential ineffective delivery of capital, operational or functional processes/ programmes including change.	<ul style="list-style-type: none"> Economic conditions Legal and regulatory change Technology 	<ul style="list-style-type: none"> Communities Customers Environment Investors Suppliers 	Supply chain Prudent Programme delivery Moderate	<ul style="list-style-type: none"> Category management Supplier relationship management Capital, change and operational programme management Engineering technical specifications Portfolio, programme and project risk management 	<ul style="list-style-type: none"> Security of the supply chain Price volatility Unfunded developer programmes Dispute with supplier Deliver partner failure
5 Resource		<ul style="list-style-type: none"> People director Health, safety and wellbeing and estate services director Chief operating officer 	The potential failure to provide appropriate resources (human, technological or physical) required to support business activity.	<ul style="list-style-type: none"> Asset health Culture Economic conditions Extreme weather/ climate change Legal and regulatory change Technology 	<ul style="list-style-type: none"> Colleagues Customers Investors 	Resource Moderate	<ul style="list-style-type: none"> Adoption of effective technology Multiple communication channels Training and personal development Talent, apprentice and graduate schemes Change programmes and innovative strategies Maintenance, replacement or renovation of assets 	<ul style="list-style-type: none"> Failure of digital systems Employee relations Quality of critical data Land management Digital licensing
6 Finance		<ul style="list-style-type: none"> Chief financial officer 	The potential inability to finance the business appropriately.	<ul style="list-style-type: none"> Asset health Demographic change Economic conditions Legal and regulatory change Technology 	<ul style="list-style-type: none"> Colleagues Customers Investors 	Finance Prudent	<ul style="list-style-type: none"> Long-term refinancing Liquidity reserves Counterparty credit exposure and settlement limits Hedging strategies Sensitivity analysis Monitoring of the markets 	<ul style="list-style-type: none"> Totex efficiency challenge* Credit ratings* Erosion of pension scheme surplus* Financial outperformance* Unavoidable additional taxes
7 Health, safety and environmental	 	<ul style="list-style-type: none"> Environment, planning and innovation director Health, safety and wellbeing and estate services director 	The potential harm to colleagues, contractors, the public or the environment.	<ul style="list-style-type: none"> Asset health Culture Extreme weather/ climate change 	<ul style="list-style-type: none"> Colleagues Communities Environment Investors Suppliers 	Health, safety and wellbeing Averse Environment Averse	<ul style="list-style-type: none"> Strong governance and management systems Certification to ISO 45001 and ISO 14001 Benchmarking, auditing and inspections Targeted engagement and improvement programmes Carbon reduction initiatives Self-generation of green energy 	<ul style="list-style-type: none"> Carbon commitments* Disease pandemic* Occupational health exposure Process safety Minor injuries
8 Security		<ul style="list-style-type: none"> General counsel and company secretary 	The potential for malicious activity (physical or technological) against people, assets or operations.	<ul style="list-style-type: none"> Asset health Culture Economic conditions Technology 	<ul style="list-style-type: none"> Colleagues Communities Customers Investors Suppliers 	CNI and SEMD Averse Other Prudent	<ul style="list-style-type: none"> Physical and technological security measures Strong governance, inspections and audits Security authority liaison and NIS compliance System and network integration Business continuity and disaster recovery Incident support service 	<ul style="list-style-type: none"> Cyber risk* Terrorism* Criminality Fraud Data protection
9 Conduct and compliance		<ul style="list-style-type: none"> Corporate affairs director General counsel and company secretary 	The failure to adopt or apply ethical standards, or to comply with legal and regulatory obligations and responsibilities.	<ul style="list-style-type: none"> Asset health Culture Demographic change Economic conditions Extreme weather/ climate change Legal and regulatory change 	<ul style="list-style-type: none"> Colleagues Communities Customers Environment Investors Suppliers 	Legislation Averse Other Prudent	<ul style="list-style-type: none"> Ethical supply chain, diversity and inclusivity policies Data classification and levels of authorisation Stakeholder engagement activities Audits and peer reviews Governance, risk assessment and horizon scanning Brand comparisons and dashboard of culture metrics Regulatory reporting 	<ul style="list-style-type: none"> Water Plus Procurement compliance Bribery risk Non-regulated asset Corporate governance and listing rules compliance
10 Political and regulatory		<ul style="list-style-type: none"> Corporate affairs director General counsel and company secretary Strategy, policy and regulation director 	Developments connected with the political, regulatory and legislative environment.	<ul style="list-style-type: none"> Economic conditions Legal and regulatory change 	<ul style="list-style-type: none"> Colleagues Customers Environment Investors 	Cannot be determined due to no genuine choice or control	<ul style="list-style-type: none"> Consultation with government and regulators Consultation and communication with customers Governance, risk assessment and horizon scanning Development of regulatory policy and strategy 	<ul style="list-style-type: none"> Price Review 2024 outcome* Upstream competition (bioresources) DPC delivery of HARP ASHE index Upstream competition (water resource)

Our strategic priorities

- Improve our rivers
- Create a greener future
- Provide a safe and great place to work
- Deliver great service for all our customers
- Spend customers' money wisely
- Contribute to our communities

Notes

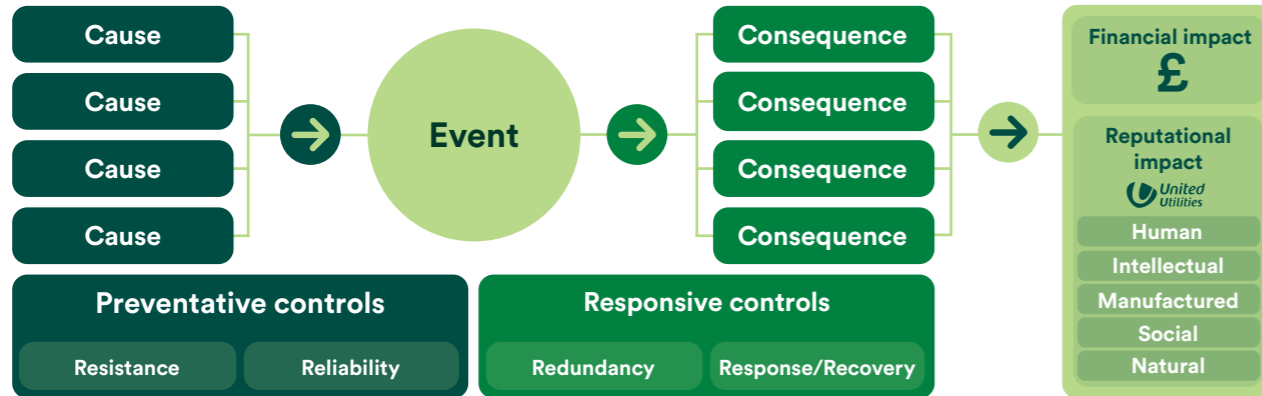
⁽¹⁾ Principal risks: based on the value chain of the company, principal risks represent inherent areas where value can be gained, preserved or lost. Water, wastewater (including bioresources) and retail and commercial areas are the primary inherent risk areas with all other areas being supportive or contributing activities.

⁽²⁾ Appetite and tolerance: Averse: A strong opposition to accept risk within business strategy or operational activity. Prudent: A reluctance to accept risk within business strategy or operational activity, but careful acceptance within tight boundaries. Moderate: Willingness to accept risk with regard to business strategy or operational activity provided this is within reasonable limits. Accepting: Willingness to accept risk with regard to business strategy or operational activity.



Common themes

As illustrated in the diagram below, each of the event-based risks has multiple causes and consequences, which in turn lead to financial and/or reputational (non financial) impact. Preventative and responsive controls, which incorporate the four components of resilience (resistance; reliability; redundancy; and response/recovery), are applied to reduce the likelihood of the event occurring and limit the impact if the event were to materialise. New and emerging circumstances in respect of causes, consequences and controls make the profile multifaceted and dynamic. Analysis of the profile highlights common themes, notably associated with the causes and consequences. These common themes can then be considered more holistically, which combined with the analysis of the strengths, weaknesses, gaps and interdependency of control across the business, enables a more integrated approach to risk management.



Common causal themes

The event-based risks include multiple causal factors, which individually, or in combination, could drive or influence the risk event to occur. Categorisation illustrates seven common causal themes:

- Asset health: General use, exposure to natural hazards, pressure and load all contribute to the deterioration of assets. In addition, other factors such as technological obsolescence and operating assets beyond their optimal capacity to cope with increased demand (population growth and/or climate change) also affect asset health. Asset health is a cross-business risk as it can affect operational efficiency and resilience.
Culture: Embedded through processes, reward mechanisms, values and behaviours, corporate culture cuts across the majority of risks including: service delivery; recruitment and talent management; colleague engagement; security; and our reputation to multiple stakeholders. In an increasingly challenging business environment, our focus is to continue to embed a culture of delivering benefit to customers and communities, taking accountability and seeking new and innovative ways to deliver our services more efficiently and effectively.
Demographic changes: Population growth/shift and evolving age profiles can impact the capacity and capability of water and wastewater treatment and network assets, can affect demand on water resources, and increase uncertainty in relation to pension obligations.
Economic conditions: Macro events can have multiple financial implications, including: lower revenue; reduced cash collection; increased operational cost through inflationary pressures; and increased cost of borrowing.
Extreme weather/Climate change: Our water resources, asset base and operations can generally cope with extreme weather conditions, although they can become overwhelmed in intense situations. Climate change projections highlight increased temperatures, rainfall, wind and more frequent extreme variations in weather patterns. Climate change will affect both our capacity and capability for service delivery, and the environment that we strive to protect and enhance. It is therefore a key focus and we are committed to the principles set by the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) – see page 05.

- Legislative and regulatory change: Changes in, or the interpretation of, legislation and regulation can have implications for our business model, asset base and ways of working.
Technology: Increased automation, system integration and artificial intelligence, against the backdrop of Systems Thinking, provides competitive advantage and improves efficiency and user experience for our colleagues, suppliers and customers. However, there is an increased capital requirement to keep pace with technological change, challenges in short-term adaptability of the workforce, and data and security threats as systems converge.

Common consequence themes:

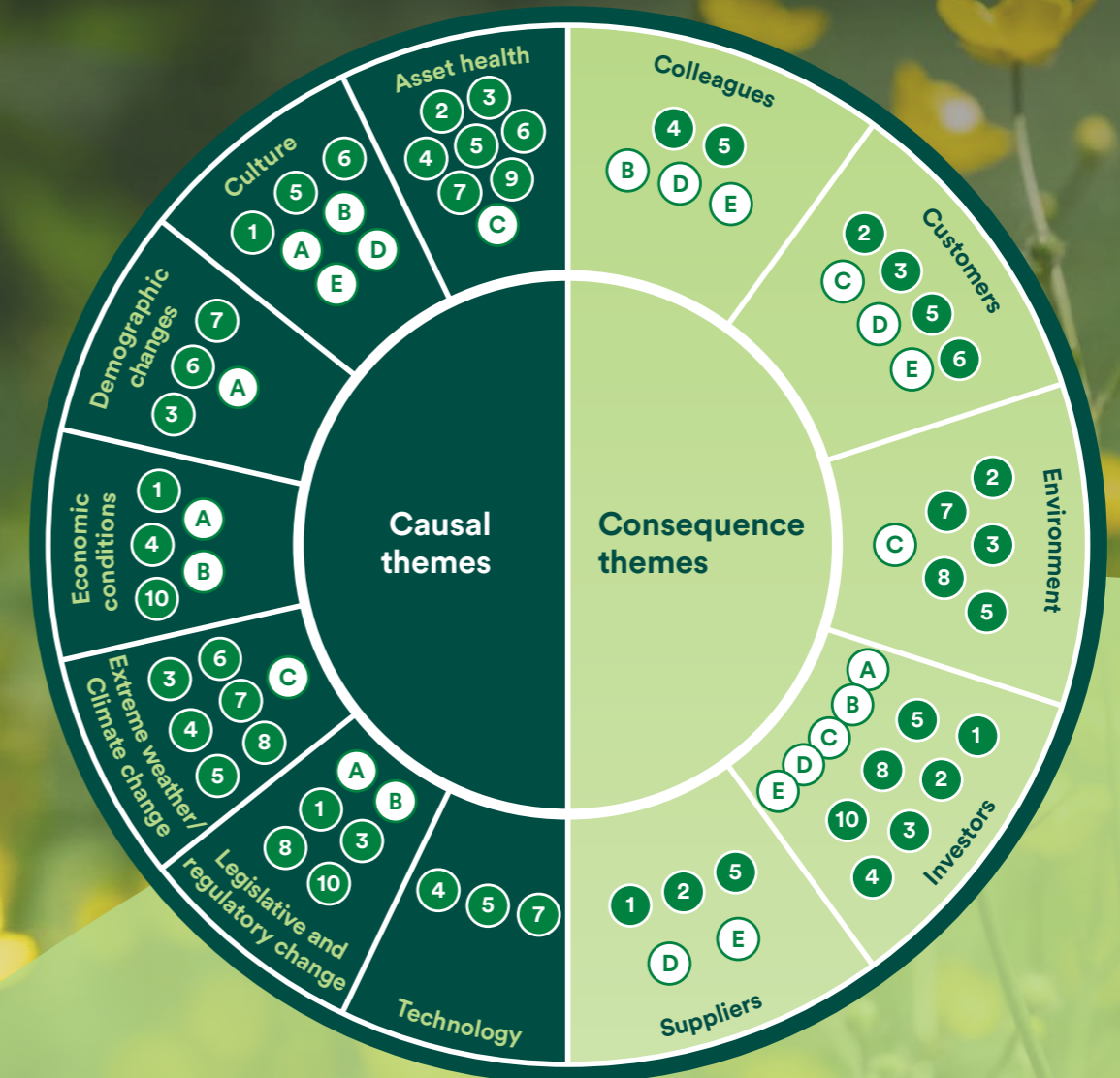
Each consequence is analysed for the financial and reputational (non-financial) implications relative to multiple stakeholders. Categorisation of the consequences illustrates five common impact themes:

- Colleagues: Our colleagues are fundamental to delivering our service requirements as well as our strategic objectives. Equally, our colleagues can be affected by multiple risks across the business, but primarily in relation to employment and health, safety and wellbeing risks.
Customers: Customers are impacted through our service offering, the quality of their experience when dealing with us, and how our operational and capital schemes affect them in the community.
Environment: Our assets, operations and capital programmes can have a significant impact on the environment in both rural and urban settings. As a major land owner and operator of a large fleet of vehicles, the way we manage these also has environmental implications.
Investors: The vast majority of risks in the profile have financial implications that could affect shareholder investment in the short and long term. Reputational impact associated with ethics, environmental protection and efficiency is also relevant for investors' interest in the company.
Suppliers: The safety of working conditions, economic conditions, asset health, and contractual arrangement can all affect the effectiveness, sustainability and resilience of our suppliers and partners who are crucial to meeting our objectives and ensuring effective service.

The company's most significant event-based risks

Mapping of common themes to the most significant group risks

The diagram below illustrates how the common themes (causal and consequence) relate to the company's most significant event-based risks, demonstrating how new and emerging circumstances can not only influence the risk exposure, but also focus attention for control and mitigation.



Most significant event-based risks

- 1 Price Review 2024 outcome
2 Failure of the Haweswater Aqueduct
3 Wastewater network failure
4 Totex efficiency challenge
5 Cyber
6 Water sufficiency
7 Carbon commitments
8 Recycling of biosolids to agriculture
9 Failure to treat sludge
10 Credit ratings

- A Erosion of pension scheme surplus
B Financial outperformance
C Dam failure
D Disease pandemic
E Terrorism











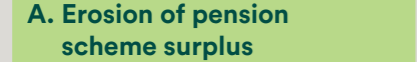




Key
Top ten ranking risks relative to likelihood and impact
High impact, low likelihood risks



The company's most significant event-based risks continued

The most significant event-based risks represent the ten highest-ranked risks by exposure (likelihood of occurrence of the event multiplied by the most likely financial impact) and those risks which have been assessed as having a significantly high impact, but low likelihood. Depending on the circumstances, financial impacts will include loss of revenue, additional or extra cost, fines, regulatory penalties and compensation. Reputational impact relative to our multiple stakeholders and the five non-financial capitals is also assessed, reported and considered as part of the mitigation.

Summarised below are the top ten ranking risks (1–10), and those assessed as having high impact, but low likelihood (A–E):

<h3>1. Price Review 2024 outcome </h3> <p>Risk exposure: The capacity and capability to develop a business plan that creates value for customers, communities, and the environment that is sustainable and resilient for the long term relative to the unique characteristics of the region we serve, in light of multiple influencing factors – notably changing demographics, climate change and asset health.</p> <p>Control/mitigation: We have established cross-cutting work streams and theme owners to identify the products and evidence required for the submission and we will maintain a close dialogue with Ofwat throughout the process.</p> <p>Assurance: Extensive customer research and several external providers have been commissioned for technical optioneering. Second line assurance is provided through a dedicated price review team and a PR24 programme board. There is a blend of internal audit and external assurance focused on the quality of the submission.</p>	<h3>2. Failure of the Haweswater Aqueduct </h3> <p>Risk exposure: The Haweswater Aqueduct is a key asset with current low resilience due to deterioration, with failure potentially resulting in water quality issues and/or supply interruptions to a large proportion of the United Utilities customer base.</p> <p>Control/mitigation: A capital project to replace the tunnel sections of the aqueduct has already commenced with the completion in November 2020 of one section. The remaining sections are due to be replaced as part of Haweswater Aqueduct Resilience Programme (HARP).</p> <p>Assurance: Technical and geological advice and modelling have been sought throughout the programme development, with second line assurance including engineering technical governance. Independent assurance is provided by internal audits and external assurance over the HARP procurement process.</p>	<h3>3. Wastewater network failure </h3> <p>Risk exposure: Blockages, operational issues or inadequate hydraulic capacity relative to population growth, extreme weather, asset health, and legal/regulatory change, resulting in unpermitted storm overflow activations, sewer flooding and environmental damage.</p> <p>Control/mitigation: Preventative maintenance and inspection regimes, customer campaigns, sewer rehabilitation programme and Better Rivers programme.</p> <p>Assurance: Second line assurance provided by wholesale assurance, engineering technical governance and flood review panel. Subject to regular internal audits and external assurance of regulatory reporting.</p>	<h3>4. Totex efficiency challenge </h3> <p>Risk exposure: Totex efficiencies designed for AMP7 are under significant challenge through a combination of factors including supply chain issues, inflationary pressures, and additional investment to deliver performance improvements.</p> <p>Control/mitigation: Integrated Business Planning (IBP), risk-based investment prioritisation and the company business planning process all contribute to efficient delivery of services and the capital programme. In addition, there are number of executive led initiatives to realise efficiency opportunities.</p> <p>Assurance: First line assurance is undertaken through monthly price control meetings, with the strategic programme board, monthly executive performance review meetings and quarterly business reviews providing second line governance and assurance. Third line assurance is undertaken through cyclical internal audits.</p>	<h3>5. Cyber </h3> <p>Risk exposure: Data and technology assets compromised due to malicious or accidental activity, leading to a major impact to key business processes and operations.</p> <p>Control/mitigation: Multiple layers of control, including a secure perimeter, segmented internal network zones, access controls, constant monitoring and forensic response capability.</p> <p>Assurance: Security measures reflect multiple sources of threat intelligence. The security steering group provides second line assurance, with independent assurance provided by cyclical internal audits and various technical audits by external specialists.</p>	<h3>6. Water sufficiency </h3> <p>Risk exposure: Water sufficiency is one of the most sensitive risks to climate change, with the increased frequency of hot and dry weather being evidence of changing circumstances. Extended periods of low rainfall and exceptionally hot weather, with accompanying increased customer demand, impacts our water resources which can result in the need to implement water use restrictions.</p> <p>Control/mitigation: We produce a Water Resources Management Plan (WRMP) every five years, which forecasts future demand and water availability under repeats of historic droughts, adjusted for climate change. A statutory Drought Plan is also developed every five years, setting out the actions we will take in a drought situation.</p> <p>Assurance: The WRMP and Drought Plan are subject to various second and third line assurance activities prior to publication.</p>
<h3>7. Carbon commitments </h3> <p>Risk exposure: The capacity and capability to decarbonise water and wastewater activity to meet commitments and legal obligations across the various time horizons of 2030, 2035 and 2050 in light of expected population growth pressures and uncertainty regarding the required technological advances to decarbonise operational activity.</p> <p>Control/mitigation: In the near-term we are creating woodland, restoring peatland and have initiatives to address process and energy emissions. We are working with suppliers and industry partners to better understand and optimise decarbonisation opportunities and pathways.</p> <p>Assurance: First line assurance by carbon team using water industry team for technical support and guidance. Climate change mitigation steering group and corporate risk framework provide second line assurance. Our science-based targets, energy and carbon reporting are subject to external assurance and verification.</p>	<h3>8. Recycling of biosolids to agriculture </h3> <p>Risk exposure: Represents various impact scenarios including operational failures, increased restrictions or total ban of recycling biosolids to agriculture. The risk considers the Environment Agency's interpretation of the Farming Rules for Water regulations and the increasing threat to recycling a large proportion of biosolid to land.</p> <p>Control/mitigation: Treatment, sampling and testing regimes ensure that sludge meets acceptable standards for application with formal service level agreements between wastewater and bioresources. We work closely with farmers, land owners and contractors to ensure regulations such as Farming Rules for Water and the standard operating procedures are met.</p> <p>Assurance: Bioresources production planning team undertakes first line assurance against UK Biosolids Assurance Scheme (BAS) accreditation, and other codes of practice such as the safe sludge matrix which certifies our recycling activities. Second and third line assurance is also undertaken by the assurance and internal audit teams respectively.</p>	<h3>9. Failure to treat sludge </h3> <p>Risk exposure: Relates to the interdependency between wastewater and bioresources treatment activity in light of changing demographics, asset health and legislative/regulatory change such as the Industrial Emissions Directive (IED) now applying to biological treatment of sewage sludge.</p> <p>Control/mitigation: We look to maximise our treatment capacity by adopting a Throughput, Reliability, Availability and Maintainability (T-RAM) approach for our facilities. We also undertake a digester and tank clean programme, regular testing and analysis of sludge, and balance capacity and demand through the bioresources production planning team.</p> <p>Assurance: Bioresources production planning team undertakes first line assurance against UK Biosolids Assurance Scheme (BAS) accreditation, and other codes of practice such as the safe sludge matrix which certifies our treatment. Second and third line assurance is also undertaken by the assurance and internal audit teams respectively.</p>	<h3>10. Credit ratings </h3> <p>Risk exposure: Credit ratings below internal targets, due to deterioration in financial and/or operational performance and/or external factors (such as inflation), resulting in more expensive funding.</p> <p>Control/mitigation: Continuous monitoring of markets, and the management of key financial risks within defined policy parameters.</p> <p>Assurance: Second line assurance provided by financial control and quarterly business reviews, with oversight provided by the treasury committee. The treasury function is subject to regular internal audits.</p>		
<h3>A. Erosion of pension scheme surplus </h3> <p>Risk exposure: The potential for the pension scheme funding to increase because of life expectancy rates leading to additional contributions.</p> <p>Control/mitigation: Constant monitoring combined with hedging against interest rates, inflation and growth asset risk.</p> <p>Assurance: Policy and oversight is led by the pensions review management group, taking into account advice from accountancy and law firms. Pension governance is subject to periodic internal audits.</p>	<h3>B. Financial outperformance </h3> <p>Risk exposure: Failure to achieve financial outperformance due to macroeconomic conditions and efficiency challenges, impacting the cost of debt and delivery of the company business plan.</p> <p>Control/mitigation: Interest rate and inflation management, ongoing monitoring of markets and regulatory developments, and sensitivity testing as part of our company business planning process relative to assumed periods of low inflation both in isolation and in conjunction with the realisation of severe but plausible risks.</p> <p>Assurance: First line assurance is undertaken by the finance team as part of the company business planning process, with second line assurance undertaken at monthly executive level meetings. Further oversight is provided by the group board and treasury committee and third line assurance is provided through cyclical internal audit reviews.</p>	<h3>C. Dam failure </h3> <p>Risk exposure: Uncontrolled release of a significant volume of water from reservoirs due to flood damage, overtopping, earthquake or erosion leading to catastrophic impacts downstream.</p> <p>Control/mitigation: Each reservoir is regularly inspected by engineers. Where appropriate, risk reduction interventions are implemented through a prioritised investment programme.</p> <p>Assurance: Various sources of second line assurance, including supervising engineers, dam safety group, assurance team and regular board reviews. Independent assurance is provided by panel engineers and internal audit.</p>	<h3>D. Disease pandemic </h3> <p>Risk exposure: Serious illness in a large proportion of the UK population, with consequences to our workforce, the wider supply chain and macro economy.</p> <p>Control/mitigation: We have a pandemic contingency plan which is regularly reviewed and was updated to reflect lessons learned from COVID-19. The plan includes multi-channel communication with non-pharmaceutical interventions.</p> <p>Assurance: The assurance team undertakes second line assurance, with internal audit undertaking various reviews.</p>	<h3>E. Terrorism </h3> <p>Risk exposure: A significant asset to be compromised by terrorist activity leading to loss of supply, contamination and/or pollution.</p> <p>Control/mitigation: A risk-based protection of assets in line with the Security and Emergency Measures Direction (SEMD) and close liaison with the Centre for the Protection of National Infrastructure (CPNI), regional counter terrorist units, local agencies and emergency services.</p> <p>Assurance: Security measures are reviewed on a regular basis by our internal asset owners in conjunction with the central security team. Second line assurance is provided by the cross business security steering group. In addition, internal audit undertakes cyclical audits with external technical assurance being delivered by specialists.</p>	

Key

-  Top ten ranking risks relative to likelihood and impact
-  High impact, low likelihood risks
-  Climate-related risk



TCFD How we identify, assess and manage climate-related risks and opportunities.

Summary

- The company operates a mature risk and resilience framework for the identification, assessment and management of all risks.
- We have both physical and transitional climate risks in our corporate business risk profile, including seven of our most significant event-based risks, see pages 68 to 69.
- Climate change is fully integrated across our overall corporate risk management system with climate change identified as both a material issue (see page 30) and one of our most prominent causal themes of event-based risks.
- Our 2021 climate change adaptation report available on our website includes a comprehensive climate change risk assessment of both physical and transition risks and opportunities. The most material of these are presented on page 42 and it is clear how these risks are key drivers to our strategies and business planning.
- We published our 2022 Drought Plan.

Climate risk identification and assessment

We have a mature risk and resilience framework for the identification, assessment and management of risks that is described on pages 60 to 69. Following recognition of climate change as a material issue, a special review of all event-based risks in our business risk profile was carried out to ascertain which risks in our business risk profile are sensitive to climate change. The risks identified as most sensitive are outlined on the next page, along with our 2023 assessment of their current likelihood and impact. Long-term likelihood and impacts at 2050 and 2100 are also shown and are based on the Met Office climate projections using the most likely global emissions scenario known as RCP 6.0, in which emissions peak around 2080 and average temperatures will have risen to between 3 and 3.5°C by 2100.

Incorporating longer-term climate change impacts explicitly into our corporate risk framework has raised the profile of climate change. This enabled the board to consider our appetite and tolerance, choosing to mitigate and control the risks from within existing risk management processes and with the same thresholds for materiality.

We consider both physical risks that impact our operations, assets or resources, and transitional risks, and those associated with the transition to a low-carbon economy, such as evolving policies, regulation and legislation. We use a variety of approaches to assess risks such as PESTLE, to ensure complete coverage of external influencing factors, and complex and detailed models to use Met Office UK climate projections to understand the impacts on water resources and drainage and wastewater management.

In our quantification of the significance of different risks we also recognise that some risk events may happen multiple times so we compare impacts over a long-term (typically 40-year) horizon. This accentuates where interdependencies of climate change and other demographic changes influence the frequency of events as well as the consequences.

Managing climate-related risks

We have a clear understanding of the risks in the short and medium term but to help us manage uncertainties and ensure a low regrets approach, we are maturing our strengths in long-term and adaptive planning and considering the uncertainty associated with particularly complex issues including climate change, but also population growth, technology and abstraction reduction needs.

In preparing our latest climate change adaptation report, we assessed the organisation's resilience to physical outcomes of climate change, such as hotter, drier summers and more extreme weather events. Over 90 risks were noted that might impact a single business area, for instance wastewater, and we also identified business-wide risks, interdependencies and transitional risks. The most material of these physical and transitional climate risks are also presented in the table on page 42 to show how climate trends lead to business challenges and can result in consequences to customers or the environment. By recognising the causes and consequences, and assessing the likelihood and the severity of impact (both financial and reputational) should the event occur, we are able to prioritise climate-related risks and take proactive and early action to manage these risks and reduce the frequency and severity.

The actions being undertaken to manage these climate risks are described in the third climate change adaptation report. We are applying a Systems Thinking approach to provide great water for a stronger, greener and healthier North West. This means that interventions to address one risk have multiple benefits. For instance, sustainable drainage systems (SuDS) to slow down or divert rainwater runoff both reduce the risk of sewer flooding and optimise wastewater treatment capacity. Green infrastructure solutions such as SuDS provide an opportunity to deliver wider social value in the community and local environment.

Our public Water Resources Management Plan (WRMP) and Drainage and Wastewater Management Plan (DWMP) are examples of where adaptive planning are used to shape our plans for the long term (25+ years) while staying aligned with our short-term needs. In these plans we describe how we have used complex models to test how resilient our services would be against a range of possible future climate change and demand scenarios (population growth and movement, economic trends and patterns of water use). Understanding these impacts allows us to adapt our plans to improve performance and resilience across key topic areas such as water supply, leakage, sewer flooding and pollution.

Integration of climate-related risks into our risk management framework

We are maturing our understanding of risk and uncertainty to build and maintain long-term resilience across the corporate, financial and operational structures of the group. Planning for the long term allows us to deliver further environmental and social value, for example, through prioritising sustainable drainage and monitoring impacts before investing in more traditional assets; or carrying out modelling and investigations to ensure we spend customers' money wisely as we look to create a stronger, greener and healthier North West.

Future focus

- Produce our PR24 business plan with full integration of carbon reduction and climate resilience priorities.
- Improve our long-term strategic plans for water resources and drainage, integrating advanced climate change analysis to shape our investment and operational approaches in the short, medium and long term.
- Learn more about the profile of risk events, their causes and consequences, and to identify opportunities to improve our capacity and capability.
- Further embed climate change impacts into corporate decision-making tools and processes.

Read our [climate change adaptation report](https://www.unitedutilities.com/corporate/responsibility/environment/climate-change/climate-change-adaptation) on our website at [unitedutilities.com/corporate/responsibility/environment/climate-change/climate-change-adaptation](https://www.unitedutilities.com/corporate/responsibility/environment/climate-change/climate-change-adaptation)

Our event-based risks most sensitive to climate change⁽²⁾

TCFD risk categories

- Chronic physical risk – changing trends in weather patterns, such as rising temperatures, sea level and rainfall.
- Acute physical risk – chance of severe weather events, such as storms, heat waves and floods.

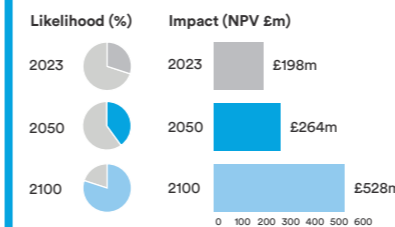
⁽¹⁾ One of the top ten ranking event-based group risks (see pages 68 to 69).
⁽²⁾ Global emissions scenario RCP 6.0.

Water sufficiency event⁽¹⁾

Prolonged dry periods can cause supply challenges. Warmer temperatures intensify these pressures because of increased water usage and evapo-transpiration.

Controls

- Reduce leakage.
- Support customers to use less water.
- Install more meters in domestic properties.
- Develop new sources of water, particularly boreholes.
- Long-term water resources management planning.
- Facilitate water trading between the North West and other regions of the UK.

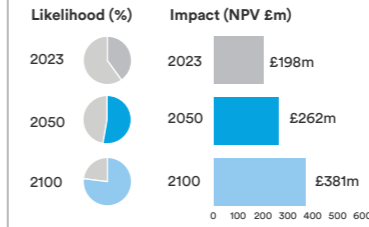


Failure of wastewater network⁽¹⁾

More frequent and intense storms can overload the wastewater network and lead to severe sewer flooding or storm overflow activations. Urbanisation makes this worse due to quick runoff from hard surfaces.

Controls

- Increase combined sewer capacity and build stormwater holding tanks.
- Implement and encourage 'slow the flow' and sustainable drainage solutions.
- Support customers to use sewers responsibly.
- Use technology to monitor and better control flows in the sewer system.
- Install flood protection devices to at-risk properties.

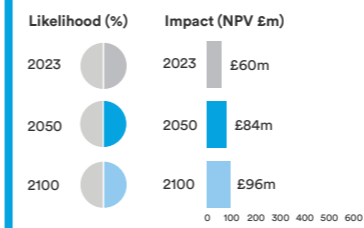


Failure to adequately treat wastewater

Extremely heavy rainfall, which is projected to happen more often, can exceed our wastewater treatment works capacity and result in activations of overflows to prevent flooding of assets, streets and homes.

Controls

- Investment to meet legislated environment and treatment capacity requirements.
- Inclusion of climate change growth parameters in long-term adaptive plans.
- Controls for failure of wastewater network will support this risk.

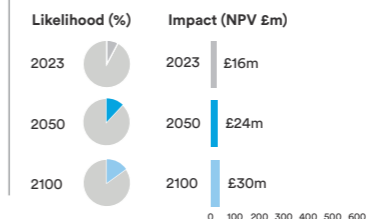


Failure of above-ground water and wastewater assets (flooding)

Operational sites can be flooded from sea, river or surface water sources. Climate change is expected to increase the likelihood of flooding due to average winter rainfall being projected to rise, frequent storm events and rising sea levels.

Controls

- Install permanent flood defences at most flood-prone sites.
- Improve flood forecasting capabilities.
- Build better network connectivity to maintain water supplies during floods.
- Invest for quick after-flood recovery.



Control effectiveness

Controls are the activities we undertake to reduce the long-term risk or realise the opportunity.

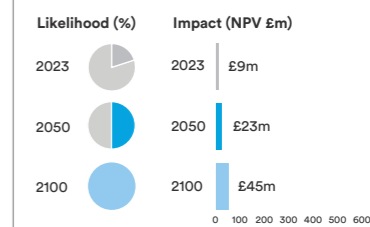
- Mostly sufficient
- Somewhat sufficient
- Largely insufficient to mitigate risk

Land management⁽¹⁾

Deterioration in land quality due to climate change has both direct and indirect impacts. Hotter, drier summers lead to fire, flood, subsidence and landslip events which in turn have associated health, safety and environmental impacts.

Controls

- 'Catchment Systems Thinking' and proactive land management, including nature-based solutions.
- Deliver net gain in biodiversity from our construction projects.
- Directly restore peatland and woodland.
- Work in partnership with farmers, regulators and others to improve upland watercourses.

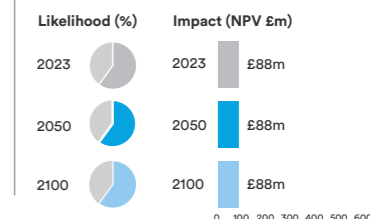


Recycling of biosolids to agriculture⁽¹⁾

Water logging resulting from more persistent rainfall will limit options for recycling biosolids to land for a greater part of the year. Uncovered sludge stores and stockpiles will be more vulnerable in persistent wet, winter weather, increasing the risk of environmental pollution from runoff.

Controls

- Additional storage capacity.
- Contingency planning for alternative methods for sludge disposal, e.g. incineration.





TNFD How we identify, assess and manage nature-related risks and opportunities.

Many key risks in our risk management assessments are linked to the natural environment, including many of our principal risks and significant event-based risks.

We recognise that impacts and dependencies on nature are often location-specific and are inextricably linked to the local environment and communities.

The risk breakdown structure that underpins our operational risk assessment framework includes consequences related to biodiversity, flooding, drought, water quality, recreational access, carbon storage, air quality and waste. This includes a process to make decisions that avoid, minimise or mitigate nature-related risks. Prioritisation of risks is determined based on current risk exposure (calculated based on likelihood of occurrence and most likely impact) of each of the principal risks relative to each other. Decisions are made on the level of risk we are prepared to manage relative to risk appetite and tolerance in order to deliver on our strategy.

There is a close link between nature and climate change, with many pressures on the natural environment becoming more acute as the climate changes. Our climate change adaptation report highlights key physical risks related to the natural environment. Two of our carbon pledges – woodland creation and peatland restoration – are intrinsically linked to the natural environment and will deliver nature-related benefits beyond their value as natural carbon sinks.

In 2022, we published a discussion document jointly with The Rivers Trust on barriers to nature-based solutions, entitled PR24: Unlocking nature-based solutions to deliver greater value. This identified some of the key risks associated with the transition to a nature-positive economy, alongside recommendations for collaborative working with the Government and others to address these barriers. We are working with regulators, other water companies and non-governmental organisations to take forward proposals to address these risks.

Links to principal risks

- Water service
- Wastewater service
- Health, safety and environmental

Links to event-based risks

- Price Review 2024 outcome
- Wastewater network failure (sewer flooding)
- Water sufficiency
- Recycling of biosolids to agriculture

Read our [joint discussion document with The Rivers Trust on nature-based solutions](https://unitedutilities.com/globalassets/documents/pdf/pr24---unlocking-nature-based-solutions-to-deliver-greater-value.pdf) at unitedutilities.com/globalassets/documents/pdf/pr24---unlocking-nature-based-solutions-to-deliver-greater-value.pdf



OTHER How we identify, assess and manage other risks and opportunities of material interest.

Cyber security

Security is one of our ten principal risks, including cyber security, and cyber is identified as one of our most significant event-based risks. We have a low risk appetite in this area, and to date have not experienced a material breach in our IT security. We undertake number of mitigating actions, including:

- Enhanced physical security measures to counter general criminality and potential terrorism as appropriate.
- We monitor and review alerts and guidance issued by the National Cyber Security Centre and the US Cybersecurity and Infrastructure Security Agency, and implement new security technologies where needed to address growing threats, such as upgrades to our firewalls and multi-factor authentication to access our systems.
- We have a structured security policy framework including detailed guidance to allow all users, administrators and moderators to operate within a clearly communicated, best practice ruleset. Internal audits are regularly carried out to ensure compliance is maintained.
- Colleague training, including mandatory 'Security Seven' training, cyber incident training, and enhanced training for incident first responders. We also improve colleague awareness with regular cyber incident response exercises, phishing tests and associated phishing training, as well as running regular cyber-related events.
- Our Cyber Security Incident Response Plan is incorporated into business continuity and incident management plans and processes, and we have a dedicated business-wide Cyber Security Incident Response Team.
- Strong, independent assurance, including a continuous annual schedule of penetration testing, red team exercises for both physical and cyber and regulatory audits against our operational assets, and independent assurance and guidance against our regulatory security commitments as part of our annual security assessments. We have a comprehensive supply chain security assurance process, and work with suppliers to help them reach the required security level where needed.

Financial risk management

Finance is one of our ten principal risks and credit ratings and financial outperformance are identified as event-based risks. The controls we have in place through our financial risk management policies and processes provide a high degree of mitigation and protection from market volatility, enabling us to raise finance across the economic cycle. Our debt has a long average life and maturities are spread to avoid a high concentration of risk in any one year. We monitor financial ratios regularly as well as considering the impact on these metrics within our business planning processes.

Read more on pages 265 to 272

Affordability and vulnerability

Retail and commercial is one of our ten principal risks, and this incorporates a number of underpinning event-based risks. These include customer experience, cash collection, billing accuracy, and affordability support, which collectively take account of economic conditions including cost of living pressures, providing value for money, and supporting our most vulnerable customers. In order to achieve high levels of performance, our customer experience and debt strategy includes multiple controls, including:

- Customer consultation (requirements and expectations);
- Customer surveys;
- Affordability schemes;
- Tariff setting policies; and
- Reconciliation processes.

Health, safety and wellbeing

Health, safety and wellbeing is part of one of our ten principal risks: health, safety and environmental. We have an adverse appetite and tolerance in this area.

We have identified six factors critical to our success:

- Active leadership;
- Engaged, empowered colleagues;
- Clear expectations;
- Safe, healthy working environments;
- Simple effective systems; and
- Continuous improvement.

We work relentlessly to ensure our health, safety and wellbeing culture is built upon these six key principles.

Responsible supply chain

Supply chain and programme delivery is one of our ten principal risks, and we have a prudent risk appetite and tolerance in this area. We are committed to working with suppliers that share our values. As part of our United Supply Chain approach, our Responsible Sourcing Principles are structured around ESG issues that are important to us as a business and in our approach to responsible sourcing. We assess sustainability risk on partner and strategic suppliers against our Responsible Sourcing Principles to target our enhanced due diligence audits and to focus on opportunities for improved performance in tackling key issues such as modern slavery and human trafficking.

Equity, diversity and inclusion

Equity, diversity and inclusion is not directly identified as a key risk, but having a diverse and inclusive workforce is important to ensure we have access to a wide range of ideas and views and to maximise colleague engagement, which has an impact on resource risk – one of our top ten principal risks. We are dedicated to continuing to improve in this area.



New and emerging risks and opportunities

We define new risks as those which have not previously been apparent and are expected to have long-term implications for the group and/or sector. We consider emerging risks to be those which are growing, developing, becoming more apparent or prominent. The emerging status of a risk can therefore relate to either newly established or existing risks.

Horizon scanning activity is a key feature of the risk and resilience framework. It is undertaken routinely as part of external research and benchmarking, the assessment of event-based risks, and through dedicated forums such as the new and emerging risk forum and the compliance working group.

Where there are high levels of uncertainty, or the circumstances are too complex to quantify, we classify and retain new and emerging risks as watching briefs. Where there is more understanding, assumptions can be applied to the assessment of causal factors (drivers/influencers), consequences (immediate, knock-on and cascading outcomes), and control effectiveness (strengths, weaknesses or gaps) which will be reflected in the quantification of the likelihood and/or impact.

Recent assessments of new and emerging risks can be categorised into three areas, notably economic conditions, security and legislative/regulatory change.

Economic conditions: continue to be a challenge due to high inflation and scarcity of critical resources.

- **National scarcity of resource:** The AMP8 capital programme is expected to be significantly larger than in AMP7 across the whole water sector, which, compounded by investment programmes in other industries (i.e. nuclear and rail), may result in high levels of competition for resources with implications to delivery.
- **Price volatility:** Although there has been stabilisation over the last 12 months, inflationary pressure over multiple commodities continues to be a factor with energy the most volatile.
- **Security of the supply chain:** In addition to the increase in competition for resource and geo-political tensions, scarcity of some critical goods and services in the supply chain continues to be a challenge.
- **Supplier viability:** The medium and long-term sustainability of suppliers is an emerging risk due to ongoing inflationary pressures combined with increasing scarcity across the supply chain.
- **Credit rating:** While underlying credit quality is not a concern, the impact of high inflation on finance expense results in the potential for credit agency thresholds to be breached when combined with other factors such as additional investment spend to meet environmental and service improvements over and above price review allowances.
- **Cash collection:** Inflationary pressure is having a significant impact on the cost of living, which may affect customers' ability to pay bills.

Geopolitical: in addition to influencing economic conditions, geopolitic tensions continue to have an emerging effect on the security of critical national infrastructure and energy resilience.

- **Cyber:** The rising tensions between Russia and the West have been reflected in the quantification of the cyber risk. As a result, increased security measures have been applied which include security operations teams on extended high alert and the rapid deployment of technical blocking of critical indicators of compromise.
- **Energy resilience:** There is an increasing external threat of planned and unplanned outages, and voltage quality from national grid that could affect technological and operational assets.

Legislative/regulatory change: Increased public and political interest in the water sector and changes to societal expectations is leading to a number of developments.

- **Storm overflow activations:** Overflow activations are subject to the environmental permitting regime, however we understand and share the increased public and political interest in water quality and the focus on the impact of activations. We are therefore committed to addressing the situation and have already reduced overflows over the last two years. We are initially tackling those assets with the highest frequency of activations, and have received draft approval from Ofwat to accelerate funding to deliver further improvements faster. We have also introduced new river rangers to help with these important improvements and we are in the final stages of planning for further significant activation reductions in AMP8. However, the scale and complexity of changing the design, configuration and operation of process and network assets is significant and will pose new and emerging risks in their own right.
- **Pollution risks:** In April 2023, Defra issued a consultation with regards to variable monetarised penalties which includes a potential significant increase in the penalty cap.
- **Recycling of biosolids to land:** A total ban on recycling biosolids to agricultural land already exists in some European countries. Adoption of this approach by the UK Government would result in significant change of assets and operations.
- **Plastics and forever chemicals:** There is increased attention on single-use plastic, microplastic (plastics less than 5mm) and perfluoroalkyl and polyfluoroalkyl substances (PFAS) commonly known as 'forever chemicals', with their presence in the environment being linked to the water cycle.

Material litigation

The group robustly defends litigation where appropriate and seeks to minimise its exposure by establishing provisions and seeking recovery wherever possible. Litigation of a material nature is regularly reported to the group board. While our directors remain of the opinion that the likelihood of a material adverse impact on the group's financial position is remote, based on the facts currently known to us and the provisions in our financial statements, the following three cases are worthy of note:

- In relation to the Manchester Ship Canal Company matter reported in previous years, a hearing was held in the Court of Appeal in 2022 and the main additional points raised by MSCC were dismissed, although MSCC were granted leave to appeal to the Supreme Court. The final appeal was heard in early March 2023 and the Court's decision is awaited. This may provide further clarity in relation to the rights and remedies afforded to the parties and others in relation to discharges by water companies into the canal and other watercourses.
- As reported in previous years, in February 2009, United Utilities International Limited (UUIL) was served with notice of a multiparty 'class action' in Argentina related to the issuance and payment default of a US\$230 million bond by Inversora Eléctrica de Buenos Aires S.A. (IEBA), an Argentine project company set up to purchase one of the Argentine electricity distribution networks which was privatised in 1997. UUIL had a 45 per cent shareholding in IEBA which it sold in 2005. The claim is for a non-quantified amount of unspecified damages and purports to be pursued on behalf of unidentified consumer bondholders in IEBA. The Argentine Court has recently scheduled various hearings to receive the testimony of fact witnesses and experts (starting in May). UUIL will vigorously resist the proceedings given the robust defences that UUIL has been advised that it has on procedural and substantive grounds.
- A Letter Before Action was received by UUIW in February 2023 in respect of potential collective proceedings before the Competition Appeal Tribunal. We are informed that the Proposed Class Representative (PCR) is intending to bring a claim on behalf of a class comprising consumers of UUIW (on an opt-out basis) who have allegedly been overcharged for sewerage services as a result of an alleged abuse of a dominant position. We have been informed that the PCR also intends to bring the claim against United Utilities Group PLC, as the ultimate parent company of UUIW. Proceedings have not yet been issued.





In this section you will find:

How we create value for our stakeholders in the short and long term.

How we create value more widely, including contributing to the UN SDGs.

How we measure the value that we create, including climate and nature-related metrics.

Some key short, medium and long-term sustainability-related targets.



How we create value for customers

Short term

- We focus on providing continuous, resilient and reliable water and wastewater services for customers, ensuring clean water is available at their taps when they need it, and wastewater is taken away when it goes down their drains.
- When customers need to contact us, we are helpful, friendly and supportive, talking and listening to them so that we can understand and meet their expectations.
- We maintain bills that are good value for money, providing help and support for those who are struggling to pay.

Long term

- Our water and wastewater services make a major contribution to the long-term health and wellbeing of customers in the North West.
- Through long-term financing and the regulatory framework, we are delivering multi-million pound infrastructure projects to improve services and resilience for the long term. We ensure the cost of this is shared fairly and affordably between those that benefit now and in the future.
- Providing additional help to vulnerable customers builds long-term trust.



How we create value for the environment

Short term

- We meet increasingly stringent environmental consent levels, which help to improve the quality of rivers and bathing waters and so support tourism in the region.
- Our investment in renewable energy generation is reducing our carbon footprint and contribution to climate change.
- We have invested in new infrastructure, such as our West Cumbria project, to allow us to transfer water around the region more efficiently to avoid depletion of individual water sources.

Long term

- Promoting campaigns to educate the public and younger generations on water usage helps protect this valuable resource and reduce usage now and for years to come.
- We innovate and invest in new technologies to solve environmental challenges for future generations.
- We manage our land in a way that safeguards habitats and protects wildlife that makes its home in rivers and other water bodies.
- We plan far ahead to ensure our activities and investment enhance the long-term resilience of the rural and urban environment in our region.



How we create value for colleagues

Short term

- We have a strong focus on health, safety and wellbeing and aim to ensure all colleagues go home safe and well at the end of the day.
- We invest in training and development to enable our colleagues to grow their skills and to keep them motivated.
- Listening to our colleagues helps to create an engaged workforce, increasing job satisfaction, and through colleague communications and conferences we update our people on business developments so they feel part of a team.

Long term

- Investing in the development of current, and future, colleagues means we will have a workforce with the right skills for the future.
- Health, safety and wellbeing extends to mental as well as physical health. We promote awareness of stress and other mental health issues, promoting an all-round healthy lifestyle in the long term which, in turn, reduces the burden on healthcare services.
- We provide pension offerings that support colleagues in later life.
- Promoting equity, diversity and inclusion means we have a workforce that truly represents the region.

How we create value for our stakeholders



How we create value for communities

Short term

- We look after beautiful rural landscapes and pockets of urban green space, and open much of our land to the public, supporting regional tourism and offering communities health and wellbeing benefits through access to relaxation and recreation.
- Working in partnership with others means we can accomplish more in tackling mutual issues, such as partnering to engage people with nature and river improvements.
- Our operations and projects are often near homes and businesses, and we engage with these communities to build understanding and trust.

Long term

- Our graduate and apprentice programmes ensure we have a diverse and skilled talent pipeline providing opportunities across the region.
- Managing land responsibly means we leave the North West environment in a better condition for future generations.
- We work with teachers and children to raise awareness about water and the natural environment, giving the next generation an understanding of the true value water brings and how we can all play our part in protecting the services nature provides.



How we create value for suppliers

Short term

- We spend significant amounts of money with our suppliers each year to help deliver maintenance and enhancement projects across our asset base, and this helps support thousands of jobs in our region.
- Paying suppliers on time gives them confidence in us and allows companies to maintain cash flow and become more resilient.
- While our operations and suppliers are mainly UK and European, they work closely with us to address human rights, in particular modern slavery.

Long term

- Supporting jobs through our supply chain in the short term catalyses the development of skills and jobs in the North West, providing a stimulus to benefit the regional economy in the long term.
- Working together to develop technologies means we can identify solutions that will make our services better in the future.
- We act with integrity, giving suppliers confidence in the way we do business, which translates to transparency and fairness for our suppliers.



How we create value for investors

Short term

- Since many of our investors are pension funds, charities and colleagues, the income we provide through dividends benefits millions of people every year.
- We are committed to high ethical standards of business conduct, strong corporate governance and doing the right thing so investors can have confidence in the way we do business.
- We maintain a high level of quality and transparency in what we report.
- Our focus on innovation drives continuous improvements, enabling us to be at the frontier of our industry.

Long term

- The majority of shares in our company are typically held for the long term, and we provide an appropriate return to investors through a combination of short-term dividend income and long-term growth.
- We plan far into the future and invest in our infrastructure to ensure sustainability.
- We manage risk prudently so investors can have confidence in our stability and resilience in the round.
- We link investor returns to our environmental and social projects through our sustainable finance framework.



How we create value more widely

As well as the direct value we create for our stakeholders and for the North West, our activities create wider value and contribute towards common goals.

The Sustainable Development Goals (SDGs) comprise 17 global goals to be achieved by the year 2030, and were adopted by a summit of the United Nations (UN) in 2015. They are designed to be the blueprint to achieve a better and more sustainable future for all.

Our approach to responsible business aligns quite naturally with the goals and we have identified nine that are most material to our business and where we contribute the most. We contribute to the delivery of a wider selection of the SDGs through our investment projects and these are described in our sustainable finance framework.

6 Clean water and sanitation

Part of our purpose is to provide great water. This is the reason we exist, ensuring customers in the North West have safe, resilient and affordable water and wastewater services.

This includes avoiding wasting water, and we promote water efficiency through campaigns, advice, education and free water saving gadgets for customers.

We protect and enhance water-related ecosystems across our region through initiatives such as our Catchment Systems Thinking approach.

Links to material issues:

- Customer service and operational performance
- Drinking water quality
- Storm overflows

Working with SMEs and start ups

Our Innovation Lab process creates a unique opportunity for small and medium-sized enterprises (SMEs) and start ups, who we would otherwise not have worked with, to develop and test their products and ideas in a live customer environment.

Contributing to public finances

We paid total taxes of £229 million this year, including business rates, employment taxes, environmental taxes, and other regulatory service fees such as water abstraction charges. These help to fund essential public services across the country.

Dividend income for a diverse investor base

We have a number of pension funds and charities among our shareholders, as well as a high proportion of retail shareholders and many of our colleagues holding shares under our share scheme, meaning the dividends we pay are relied on by millions of people.

8 Decent work and economic growth

We are a significant contributor to the North West economy. Our daily operations provide direct, indirect and induced employment for 22,700 people. We provide training and development opportunities in safe, secure working environments, graduate and apprentice opportunities, programmes for young people experiencing difficulties securing employment, offer equal opportunities to all, and value diversity among our colleagues.

Links to material issues:

- Affordability and vulnerability
- Health, safety and wellbeing
- Diverse and skilled workforce

9 Industry, innovation and infrastructure

We invest heavily in infrastructure, including plans for over £4 billion between 2020 and 2025 to improve the performance and resilience of our assets and operations to impacts such as those arising from climate change.

We embrace innovation, especially in an increasingly digital world, to ensure the region where we operate has reliable, sustainable and resilient infrastructure, now and into the future.

Links to material issues:

- Resilience
- Innovation
- North West regional economy

Charitable activities

Over the past 12 months our colleagues have raised £52,818 for our company charity, Macmillan Cancer Support.

We support and encourage colleagues by providing up to three days' paid volunteer leave per year, matching individual colleague fundraising efforts to any UK-registered charity up to £200 per person per year, and covering the admin fees of payroll giving, or 'Give As You Earn'.

11 Sustainable cities and communities

We use our understanding of customer needs and priorities to deliver services that meet their expectations and engage with communities to enhance participation in what we do. We plan at least 25 years into the future to prepare for increases in the population and new housing that will need connections for water and wastewater services. We are exploring ways to do this using natural solutions to manage water and wastewater, such as Sustainable Drainage Systems (SuDS).

Links to material issues:

- Customer service and operational performance
- Resilience
- Supporting communities

Bringing people together

We have undertaken a number of initiatives that bring people together across a variety of organisations and different industries to share ideas and best practice and drive improvements that go wider than our region and our customer base, like our summits for affordability and for diversity and inclusion, and the Hardship Hub which enables debt advisers to help more people and find cross-industry help more quickly all in one accessible place.

12 Responsible consumption and production

We are committed to sustainably managing natural resources, including reducing leakage and encouraging and supporting customers to reduce water consumption. We generate renewable energy and high quality fertiliser from bioresources, and 98 per cent of our waste goes to beneficial use.

Links to material issues:

- Resilience
- Climate change
- Water resources and leakage

Mitigating climate change

We are committed to playing our part in securing the global goal to curb climate change to no more than 1.5°C, and we set out on pages 45 to 47 our transition plan to reach net zero by 2050, including our six carbon pledges underpinned by ambitious science-based targets.

13 Climate action

Responding to the climate emergency is an imperative for us all and building a greener North West is a key ambition of our purpose and one of our strategic priorities. Delivering against our carbon pledges and science-based targets, while ensuring that our activities and the North West region are resilient to the impacts that a changing climate might bring, is key to our long-term planning.

Links to material issues:

- Climate change
- Resilience
- Responsible supply chain

14 Life below water

We are sector leaders in minimising pollution, look after 29 bathing waters in the North West, and have made good progress, with significant further ambitions, on improving river water quality, which has a knock-on impact on our oceans. This includes reducing storm overflow activations and addressing nutrient imbalance.

Links to material issues:

- Storm overflows
- Natural capital and biodiversity
- Environmental impacts

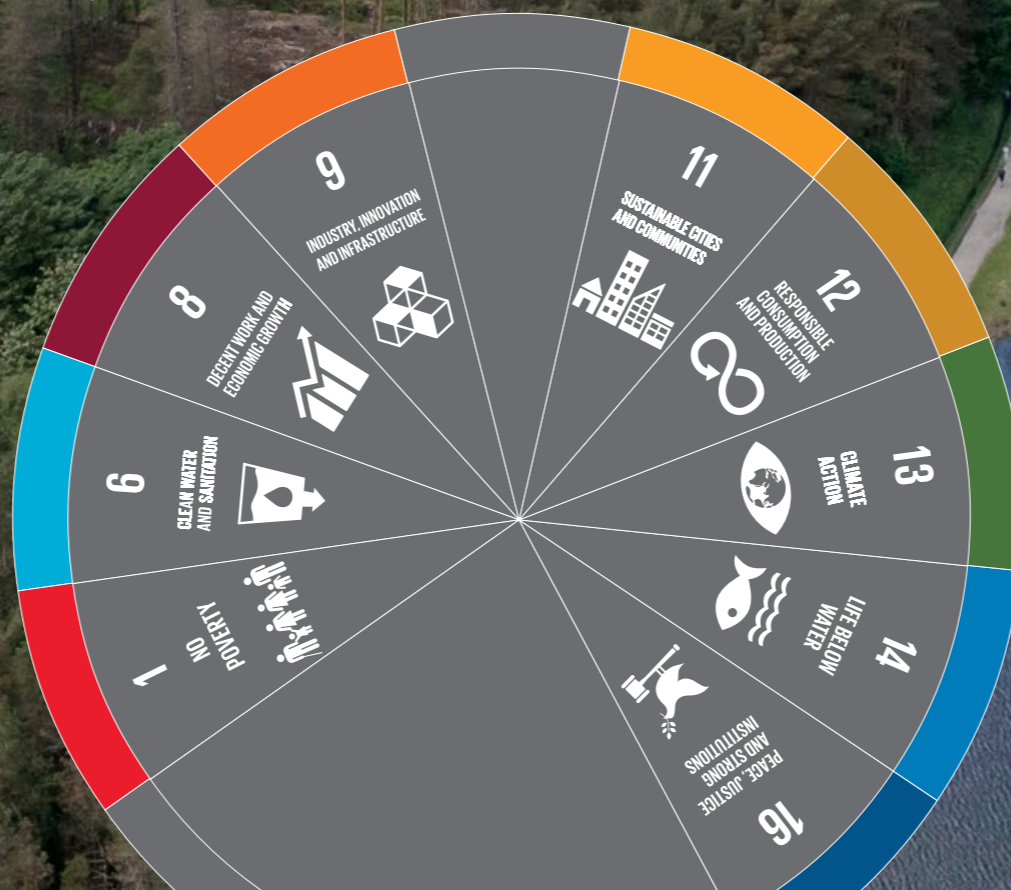
16 Peace, justice and strong institutions

We run our business in a responsible manner, and doing the right thing is one of our core values.

We maintain high standards in corporate governance and ethical standards of business conduct – those systems and processes through which our organisation is managed, controlled and held accountable. We are committed to open, honest and transparent corporate reporting.

Links to material issues:

- Trust, transparency and legitimacy
- Political and regulatory environment
- Corporate governance and business conduct



1 No poverty

The North West contains more areas of extreme deprivation than any other region in England.

We have a sector-leading package of affordability support, and have helped over 330,000 households so far in the last three years. We are also strong supporters of the Consumer Council for Water's drive to implement a national social tariff.

Links to material issues:

- Affordability and vulnerability
- North West regional economy
- Customer service and operational performance



Read our sustainable finance framework on our website at unitedutilities.com/globalassets/z_corporate-site/investor-pdfs/sustainable-finance-framework-2020-final.pdf



Return on Regulated Equity (RoRE)

Return on regulated equity (RoRE) relates to our regulated entity, United Utilities Water Limited, and measures the regulatory returns (after tax and interest) that companies have earned by reference to the notional regulated equity (which is calculated as 40 per cent of the regulatory capital value (RCV), while the other 60 per cent of the RCV is notional net debt).

RoRE comprises a base allowed return, which is set by Ofwat, plus or minus any out or under performance earned. It is reported on an annual and cumulative basis throughout each asset management period (AMP).

As well as being a key regulatory measure, RoRE is one of our financial KPIs and executive remuneration is linked to our RoRE performance through its inclusion in the Long Term Plan.

The three key areas through which we can earn a higher RoRE are:

- delivering efficiency savings versus our cost allowance (total expenditure (totex) outperformance);
- earning outperformance payments for service delivery against our performance commitments (customer outcome delivery incentive (ODI) rewards); and
- raising finance at a lower cost than the industry allowed cost of debt (financing outperformance).

The main areas that could detract from RoRE, therefore, are:

- overspending versus our total cost allowance (totex underperformance);
- incurring underperformance payments for failure to meet our performance commitments (customer ODI penalties); and
- incurring higher finance costs than the industry allowed cost of debt (financing underperformance).

RoRE can also be higher or lower as a result of the outturn tax position versus the allowance.

Our efficient financing has given us a history of financing outperformance. We strive to deliver efficient costs, but our strategy for AMP7 has been to prioritise operating performance and ODI rewards over totex savings, as this drives better long-term value for all our stakeholders.

KPIs and other stakeholder metrics

Our key performance indicators

We measure our performance against a selection of key performance indicators (KPIs), both operational and financial. Bonuses (for executive directors and colleagues right through the business) and long-term incentives for executive directors, are closely aligned to many of our operational and financial KPIs.

Operational KPIs

We have redefined our operational KPIs this year to align with our purpose and strategic priorities, and in doing so this also provides alignment with environmental, social and governance (ESG) matters. More detail on these can be seen on pages 10 to 11.

Financial KPIs

We have selected financial KPIs that assess both profitability and financial sustainability, including income statement, balance sheet, and shareholder performance metrics. We have made one amendment to our financial KPIs this year, exchanging low dependency pension schemes (which we have already fully satisfied) with return on regulated equity (RoRE). More detail on these can be seen on pages 12 to 13.

Our other performance indicators

Our KPIs are by no means the only measures by which we monitor and assess our performance. We report against many other metrics both internally and externally. As discussed on pages 56 and 57, our stakeholder engagement gives us a view of what matters most to them. We report on a selection of material ESG measures on pages 84 to 109 based on the issues shown to be of highest interest to our stakeholders, including climate and nature-related metrics. These measures relate to the group unless stated otherwise in the performance tables where they relate to the regulated entity, United Utilities Water Limited. We regularly report on numerous ESG performance measures on our website at unitedutilities.com/corporate/responsibility/our-approach


Assurance of performance metrics

All these performance indicators have received an appropriate level of assurance, such as independent third-party verification, regulatory reporting assurance processes, or through our own internal audit team. The performance tables on pages 85 to 109 state what level of assurance has been obtained for each metric, and the sections of this report that have received external assurance are marked as such on the relevant pages, including the figures in our energy and carbon report and our remuneration report. These audit opinions can be found on our website at unitedutilities.com/corporate/responsibility/our-approach/esg-performance

Our annual performance report (APR)

Performance against our regulatory contract is monitored and assessed each year, and reported within the annual performance report (APR), as required by our economic regulator Ofwat. We include several regulatory performance measures within this report. Our APR provides more details, as well as further narrative, about our regulatory performance during the year.

There is financial information contained within the APR. This relates only to the regulated company, United Utilities Water Limited, and its appointed activities, and is calculated in accordance with the regulatory accounting framework. This differs from IFRS reporting, and a reconciliation to IFRS reporting is provided in the APR. For the purposes of clarification, our financial KPIs relate to performance at the group level, and are calculated within the definitions given in this report. Our previous year APRs are available on our website, and the APR for 2022/23 will be published in July 2023.

 Our annual performance report (APR) will be available on our website from 15 July at unitedutilities.com/corporate/about-us/performance/annual-performance-report



unitedutilities.com/corporate



Climate-related metrics and targets used to assess and manage climate-related risks and opportunities

Summary

- United Utilities was the first UK water company to have targets verified by the SBTi, including for scope 3 emissions. We have now achieved SBT 2 as 100 per cent of our annual electricity purchased is from renewable sources.
- We have made progress on SBT 1 reducing absolute scope 1 and 2 emissions by 3.6 per cent (gross) compared to our baseline year 2019/20 and SBT 3 where 23 per cent of our suppliers of capital goods (by emissions) have set their own science-based target.
- UK Government carbon values (BEIS) are used in our risk assessments and our planning for medium and long-term investments, including PR24.

Metrics to assess climate-related risks

Our vulnerability to climate-related risks is determined by two factors: the physical and transitional impacts we experience and the control measures we have put in place to manage the risks and realise opportunities. To manage our physical risks effectively we must track and understand patterns of weather, and weather events, and learn how they can affect us operationally. To do this we have been working with the Met Office to use both their short-term forecasts and longer-term projections in our planning, modelling for up to a 4°C change in global temperature. We monitor factors relating to transitional risks, including energy pricing (of both fossil fuels and low carbon alternatives), carbon pricing (through purchasable credits, offsets and certificates), and the marketplace for the availability and cost of alternative fuelled vehicles, batteries and for emerging technologies to reduce process and fugitive emissions.

Performance metrics: climate-related risk management

We manage our climate-related risks by putting in place controls such as those as set out on page 71 and in Appendix A.3 of the 2021 climate change adaptation report, published on our corporate website. The effectiveness of these controls is seen in our operational performance metrics. The following metrics are recognised as examples of those key to our resilience to a changing climate and are reported in the annual performance report:

- Leakage;
- Per capita consumption;
- Flooding incidents, risk and resilience;
- Storm overflow activations;
- Risk of severe restrictions in a drought;

- Sewer collapses;
- Water service supply and resilience; and
- Low water pressure areas.

Note that, as a regulated business, climate-related opportunities are limited to ways we can avoid costs, rather than generate revenue.

Performance metrics: Science-based targets

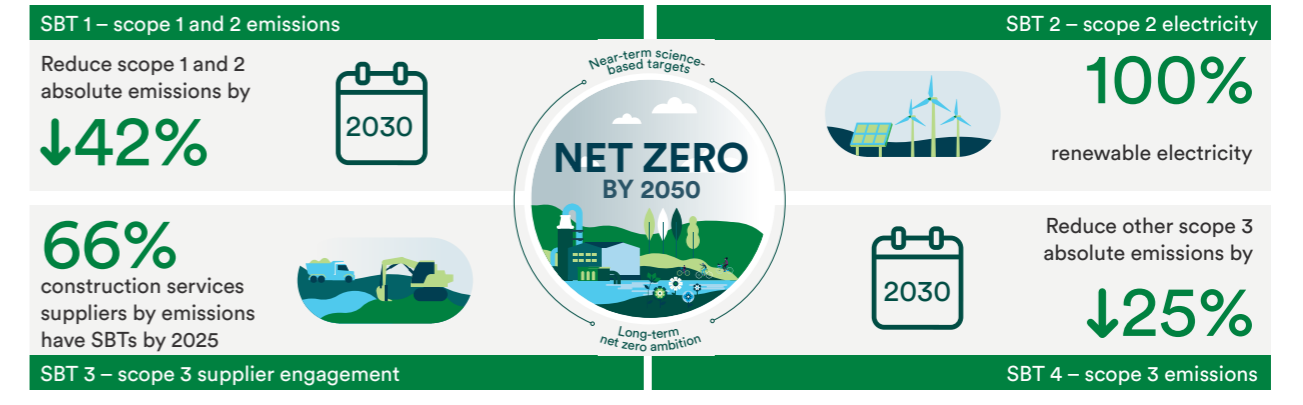
We have a strong track record of playing our part to mitigate climate change and have reduced scope 1 and 2 emissions by over 70 per cent since 2005/06, largely through our substantial investment in renewable power generation and green energy procurement. Our ambition and commitments are based on international guidance and climate science and we were delighted in July 2021 that our four near-term science-based targets were verified by the Science Based Targets initiative (SBTi). Since October 2021, the remainder of our purchased electricity has been on a renewable tariff backed by Renewable Energy Guarantees of Origin certificates, meaning that in the future 100 per cent of our purchased electricity will be from renewable sources – enabling us to deliver on our carbon pledge and our SBT. The SBTi Net Zero Standard was launched in late 2021 and we have committed to validate our 2050 ambition to this standard when we revise and revalidate our near-term targets in advance of 2025.

As well as our company-specific science-based targets, we share the UK water sector ambition for a subset of operational emissions to be net zero from 2030. Note that this target has a smaller scope than SBTi and allows use of purchased credits, using agreed offsetting principles.

Future focus

- Continue our collaboration with suppliers so that we can increase the proportion of our scope 3 emissions that are estimated using volume of product purchased rather than spend.
- Attempt to inform national approach to water investment programmes arising from public pressure and the new Environment Act 2021.
- Work to validate our long-term net zero ambition to the new SBTi Net Zero Standard.

- ➔ Read about [progress to deliver our six carbon pledges](#) on page 92
- ➔ Read our [streamlined energy and carbon report including 2022/23 greenhouse gas emissions](#) on pages 93 to 95
- ➔ Read more about our [2022/23 environmental performance](#) on page 89





TNFD Nature-related metrics and targets

Managing nature-related risks and opportunities

Nature is fundamental to the sustainability of our business and so we monitor a wide variety of metrics and set targets to help monitor and assess nature-related risks and opportunities.

To measure our performance we demonstrate delivery against contributing targets from a number of statutory requirements, such as the condition of protected sites, biodiversity net gain, environmental performance, and supporting strategies. We were the only water company to set a natural capital outcome delivery incentive in our business plan for 2020–25. This is measured by demonstrating additional value created through ecosystem services for customers and the environment. We achieve this by implementing nature-based solutions where they offer best value compared against a hard-engineered solution.

We are a key contributor to the North West's first natural capital account developed in collaboration with many regional organisations. By considering this baseline value, we can benchmark the impact of future changes to our natural assets and quantify improvements. It is helping to understand how valuable the region's natural capital assets are. This year, we have updated our own natural capital account as part of a five-yearly review cycle.

Many of our targets in the short and medium term are regulatory performance commitments for 2020–25. We also have targets that go further, like our Better Rivers pledges and targets for monitoring and reducing storm overflow activations. We are in the process of preparing our business plan with targets for the 2025–30 period. Our long-term targets align with government expectations, such as achieving 75 per cent favourable condition for SSSI locations by 2042. We are committed to improving surface, groundwater and bathing water quality in the immediate term and beyond.

Progress this year

- Updated our corporate natural capital account so we can track and measure trends in our impact on nature.
- Developed our long-term environmental strategy.

Future focus

- Continue to engage with the Task Force to develop our nature-related disclosures, and work towards the global shared vision of 'living in harmony with nature by 2050'.
- Develop a strategy on how we will achieve the four 2030 biodiversity goals adopted by nations during COP15. By engaging in the TNFD process early we are already working towards achieving Target 15 to disclose on our interactions with nature.

OTHER Metrics and targets in relation to areas of material interest

Cyber security

We monitor a number of security metrics and have targets against each. Many are aimed at meeting or exceeding national recommendations or comparative performance, such as targets for security patching recommended by the National Cyber Security Centre, and our phishing test platform where we monitor comparative performance on clicks, compromises and reports. We target zero malware outbreaks and use a series of technical and process controls to ensure we achieve this. We aim to have all our major suppliers security assured to our standards, and maintain a dynamic and live assessment of our supply chain. We are measured annually by our regulators against NIS security targets and have remained compliant since this was introduced. As a tier two PCI-DSS merchant, we are measured annually by our payment industry stakeholder against PCI-DSS and have remained compliant to requirements for many years.

Financial risk management

We operate within targets set out in our financial risk management policies, including a range for how many months' liquidity we maintain on a rolling basis, levels of index-linked and fixed rate debt we want to maintain, and energy price hedging. We set individual credit risk targets for counterparties based on their level of risk. We target a 55 to 65 per cent gearing range, which supports our credit rating targets. Performance against all of these targets is monitored on a monthly basis.

Affordability and vulnerability

We monitor various metrics around cash collection, bad debt, and the number of customers on our support schemes. Our C-MeX score for customer satisfaction is impacted in part by the help we provide to customers in vulnerable situations. We have 2025 performance commitments for lifting customers out of water poverty and signing more customers up to Priority Services. Read more on pages 98 to 101.

Health, safety and wellbeing

We monitor various metrics for health, safety and wellbeing, including accidents and near misses. We have targets for accident frequency rates for both colleagues and contractors, and we target maintaining accreditation with the Workplace Wellbeing Charter. Read more on pages 100 to 101.

United Supply Chain

We aim to have 100 per cent of targeted suppliers signed up to United Supply Chain by 2025. Read more on page 108.

Equity, diversity and inclusion

We monitor a number of metrics on the inclusive nature of our workforce, including gender, ethnicity, disability, and LGBT+. We target scoring at least in line with both the UK norm and the Utilities norm on the diversity and inclusion questions in our colleague engagement survey, and we seek to make progress towards improving our diversity statistics, including closing the gender pay gap. Read more on pages 54 to 55.

Future targets

This page sets out some of the climate-related, nature-related and other sustainability targets we have set ourselves over the short, medium and long term.

