

How we provide great water for a stronger, greener and healthier North West

1. Collect and treat

Providing great water:

We collect raw water from open reservoirs, lakes, rivers and boreholes. We then treat it in one of our 86 water treatment works to ensure it is safe and clean for customers to drink.

For a stronger, greener and healthier North West:

We own and manage 56,000 hectares of land. We are optimising the use of this land to protect water quality, create natural carbon sinks by restoring peatland and planting woodland, and explore potential clean

energy development. We manage our land and water resources in a sustainable way, protecting and enhancing local habitats, and open our land to the public to enjoy nature and its health and wellbeing benefits.

Reservoirs are the biggest source of water in the North West, and we have more than any other UK water company. They are quick to fill when it rains, but are more vulnerable to periods of dry weather than ground water sources. They provide great tasting water, but have high maintenance needs and the raw water requires more treatment than some other water sources.

Relevant material issues

- Water resources and leakage
- Drinking water quality
- Climate change
- Land management, access and recreation

Relevant principal risks

- Water service
- Supply chain and programme delivery
- Resource

Retail

Providing great water:

United Utilities Water Ltd provides metering, billing and customer services for household customers in the North West. Business customers choose a water retailer, and our joint venture, Water Plus, operates in the competitive non-household retail market.

For a stronger, greener and healthier North West:

Our region has the most areas of extreme deprivation in the country. We have an extensive range of affordability and vulnerability schemes, and are helping more than 330,000 customers with £280 million⁽¹⁾ of support in AMP7.

⁽¹⁾ 50 per cent company funded

Relevant material issues

- Customer service and operational performance
- Affordability and vulnerability

Relevant principal risks

- Retail and commercial
- Security
- Resource

Our water cycle

4. Return

Providing great water:

Once the water is clean enough to meet stringent environmental consents, we return it through rivers and streams so that the water cycle can begin again.

For a stronger, greener and healthier North West:

We have a long coastline and 25 designated coastal bathing waters across the North West. We are meeting 24 of 25 standards for these bathing waters and we are industry leading in minimising pollution, with zero serious pollution incidents in three of the last four years.

We are going above and beyond our regulatory commitments to improve river health, with the commitments in our Better Rivers: Better North West programme and additional investment in the 2020–25 period to deliver improvements faster. We are recruiting a team of river rangers to help us look after the local rivers and streams in our communities, and exploring other new ways of working such as how we can work with farmers to reduce the impact of runoff, and the use of nature-based solutions and partnerships with groups such as The Rivers Trust, to ensure we are pursuing the best ways to improve the natural environment and river and bathing water quality across the region.

Relevant material issues

- Political and regulatory environment
- Natural capital and biodiversity

Relevant principal risks

- Health, safety and environmental
- Conduct and compliance

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

2. Store and deliver

Providing great water:

The treated water goes to one of our covered storage reservoirs, ready to be delivered to customers' taps when they need it. We deliver an average of 1.8 billion litres of water every day to 7.4 million people and businesses, using 43,000 kilometres of water pipes.

For a stronger, greener and healthier North West:

Our integrated supply network enables us to move water around the region as needed. Along with production planning and optimisation

of storage levels ahead of anticipated demand increases, and a fleet of alternative supply vehicles, this helps us to deliver a more resilient water supply. We use sensors and artificial intelligence, and have dedicated teams to detect and fix leaks across our pipes as well as helping customers identify leaks on their property, which can save them money on their bills as well as reducing water losses. Our Haweswater Aqueduct uses gravity to transfer water from Cumbria to Manchester, helping to reduce our carbon footprint from energy-intensive pumping.

Relevant material issues

- Water resources and leakage
- Customer service and operational performance
- Drinking water quality

Relevant principal risks

- Water service
- Supply chain and programme delivery



Generate

Providing great water:

We minimise waste from our operations, including by turning sludge byproduct into compost for farmers and capturing gas to generate renewable energy from bioresources.

For a stronger, greener and healthier North West:

Self-generation helps us to reduce our carbon footprint and save energy costs, and the remaining electricity needs that we purchase are 100 per cent renewable.

We are closely following the developments in the interpretation of Farming Rules for Water, and the impact this could have on our provision of compost for farmers throughout the year.

Relevant material issues

- Energy management
- Environmental impacts

Relevant principal risks

- Health, safety and environmental
- Supply chain and programme delivery
- Resource

3. Remove and clean

Providing great water:

We operate 79,000 kilometres of wastewater pipes to transport wastewater from sewers to one of our 584 wastewater treatment works, where it requires separation and treatment before it is returned to the natural environment.

Combined sewers take a mix of wastewater and rainwater to be cleaned. In excessive rainfall, when sewer capacity is overloaded, storm overflows are activated, using a separate pipe to allow this heavily diluted mix to flow directly into rivers or the sea to help prevent flooding of streets, homes and businesses. Read more on page 22.

For a stronger, greener and healthier North West:

Urban rainfall in our region is 40 per cent higher than the average for the rest of England and Wales, and 54 per cent of our sewers take combined waste and rainwater, compared to an average of 33 per cent. This means more water runs into our sewers than other parts of the country, creating a much bigger challenge for reducing the use of storm overflows in the North West. We are already investing substantial amounts in AMP7, supporting our target of at least a one-third sustainable reduction in the number of overflow activations, improving 184 kilometres of rivers. Our ambitious plans for AMP8 target even more significant improvements.

Relevant material issues

- Recycling biosolids to land
- Customer service and operational performance
- Storm overflows
- Climate change

Relevant principal risks

- Wastewater service
- Political and regulatory
- Health, safety and environmental
- Supply chain and programme delivery

Our business model

How our approach generates value for a broad range of stakeholders

Our environment and the resources we rely upon



Our external environment

What we do and how we do it is influenced by a number of factors external to our business, all of which must be considered and managed. We monitor developments and trends in our external environment and adapt our plans as needed to respond.

Political environment

This includes regional and national politicians as well as policymakers. We must understand the key policy issues affecting our industry.

Natural environment

We must be resilient to changes such as climate change and population growth, and ensure our impact on the natural environment is positive.

Economic environment

The economy impacts our financing costs through market rate movements such as interest rates and inflation, and customers' ability to pay their bills.

Regulatory environment

Regulators set minimum standards for customer service, drinking water and environmental performance, and market reform can drive change in the long term.

Technology and innovation

New technology and innovations can create opportunities for improvements in service and efficiency, and also risks such as cyber attacks.

Stakeholders

Our work and the huge areas of land we manage impact a wide variety of stakeholders and we consult them to help develop and execute our plans.



Key resources

We are reliant on each of the six capitals to deliver our purpose, and we strive to have a positive impact on those capitals through our activities in order to support our ongoing relationship with them for mutual benefit in the long term.

Natural capital

We rely on natural resources to supply water and take back wastewater after treatment, as well as to generate renewable energy.

Manufactured capital

We invest to maintain and enhance our assets and build long-term resilience, and we use telemetry to monitor and control many assets remotely.

Intellectual capital

Innovation helps us continually improve, and understanding performance trends in our network helps us spot potential issues early and fix them proactively.

Human capital

We rely on skilled and engaged colleagues and suppliers to deliver our services, and skills must be maintained through training and development.

Social capital

The constructive relationships we have built with regulators, suppliers, and other stakeholders are fundamental to our ability to deliver our purpose.

Financial capital

Efficient financing allows us to preserve intergenerational equity for customers while funding necessary long-term capital investment projects.

Our approach to generating value



Strategy

Our six strategic priorities help us deliver our purpose and drive sustainable long-term improvements for customers, the environment and society, at an efficient cost. We use adaptive planning across short, medium and long-term horizons to ensure flexibility and resilience.

Key differentiators

- Our rigorous planning over multiple horizons
- Our multi-stakeholder approach to value creation



Governance

We are committed to responsible business, factoring ESG matters and stakeholder priorities into decision-making at all levels of the business, and executive remuneration is linked to performance against customer, environmental and financial targets.

Key differentiators

- Our integrated thinking
- Our diverse and inclusive culture
- Our holistic remuneration approach



Risks and opportunities

We have a robust framework for identifying, assessing and managing risks and opportunities, with regular monitoring as well as longer-term plans to enhance our resilience to climate change. Our pioneering Systems Thinking approach and culture of innovation help us to maximise opportunities to work better, safer, and more efficiently.

Key differentiators

- Our pioneering Systems Thinking approach
- Our culture of innovation



Metrics and targets

We monitor and measure our performance against a range of operational metrics for each of the stakeholders we create value for, as well as financial metrics covering the income statement, balance sheet, and investor returns.

Key differentiators

- Our multi-stakeholder value creation approach
- Our strong credit ratings and low dependency pension schemes with no pension deficit



Building a stronger, greener and healthier North West

We deliver our water and wastewater services responsibly and sustainably, which supports long-term value creation for all our stakeholders.





Our external environment

Storm overflows

Storm overflows, which includes combined sewer overflows (CSOs) and storm tank discharges, have been an important part of the sewerage network for over 150 years, acting as the catch-all last defence for managing surface water in our communities. This needs to change.

In normal conditions sewage, mixed with rainwater in wet weather, transits through our wastewater treatment works, and only treated water is returned to the natural environment. If the flow is too much for the works to deal with, it is usually stored in tanks until the incoming flows have returned to normal levels. Then the tanks are emptied and the water is treated.

Our sewers are typically no more than 15 per cent full in dry conditions but, when rainfall is very heavy and the tanks fill to capacity, overflows act as a pressure relief valve allowing rainwater, mixed with sewage, to rise inside the sewer and eventually enter a separate pipe which flows into a river or the sea. Sewers operate this way to help prevent the flooding of streets, homes and businesses.

The North West has:

- A significantly higher proportion of combined sewers, receiving a mix of rainwater and sewage, than any other water company;
- 28 per cent higher annual rainfall than the average for England and Wales, so considerably more rainwater entering our sewers; and
- 25 per cent more overflows than the industry average.

When overflows are activated they can sometimes temporarily affect river and bathing water quality. With more extreme rainfall events and significant population growth expected over the next 25 years, more foul and rainwater will be entering our sewers, and the need for overflows would increase if left unaddressed.

We understand and share concerns around this and we are committed to driving a step-change. This will not happen overnight. It is a long-term plan that will need a fundamental re-plumb of the region's sewer system, moving us away from the use of combined storm pipes and creating new ways of dealing with excess wastewater at times of heavy rainfall.

We have made a fast start to a very ambitious plan that is already delivering improvement, and we are keen to go further faster, as discussed on page 15.

54%

combined sewers in the North West compared to 33% industry average, with some urban centres even higher, for example Liverpool has 84%



Storm overflow report 2022

We released a report in 2022 discussing the issue of storm overflows and our plans to reduce their use.



Visit our online report at unitedutilities.com/globalassets/documents/pdf/united-utilities-storm-overflow.pdf



Video from our CEO

Louise Beardmore talks about the issue with storm overflows and how we plan to tackle it.



Watch the video at unitedutilities.com/corporate/responsibility/environment/reducing-pollution/storm-overflows



Better Rivers report 2023

We released a report in 2023 detailing progress against the commitments in our Better Rivers: Better North West plan.



Visit our online report at unitedutilities.com/globalassets/documents/corporate-documents/united-utilities-better-rivers-report-2023.pdf

Political environment

Political decisions have the potential to impact on our operations. We engage with politicians and other policymakers to understand developments, influence where possible, and stay flexible to adapt as needed.

Key trends

Reducing the use of storm overflows

Recognising the need to act on storm overflows, the Government set out a discharge reduction plan in the Environment Act 2021. We are already investing significant amounts in AMP7 to improve the quality of rivers and seas in the North West, including £230 million leading to improvements to 184 kilometres of watercourses and supporting a sustainable one-third reduction in activations of overflows. Transparency is key and we have committed to achieve 100 per cent monitoring of storm overflows before the end of 2023, with 97 per cent already monitored.

We have ambitious plans for reducing activations of storm overflows in AMP8 as part an environmental improvement programme that is significantly larger than any we have ever delivered, and we have provisional approval from regulators to accelerate around £200 million of investment into the next two years, the majority of which relates to this.

Phosphorus reduction and nutrient neutrality

As well as addressing the use of overflows, the Environment Act also sets obligations to reduce phosphorus and address nutrient imbalance, which are reflected in our AMP8 investment plans.

National social tariff

Additional cost of living pressures on households across the country is putting the focus on government and companies to do more to help those struggling to pay. We are a strong supporter of the Consumer Council for Water's drive to launch a national social tariff so water customers across the country are not reliant on the current postcode lottery.

Devolved regional plans

We have a part to play in the plans of devolved regions and mayors for growth and green energy development in the North West, including our diversions activity to support HS2.

Link to principal risks

- Wastewater service
- Health, safety and environmental
- Political and regulatory

→ Read more on pages 64 to 65

Link to material issues

- Trust, transparency and legitimacy
- Political and regulatory environment
- Storm overflows

→ Read more on pages 28 to 29



Natural environment



The natural environment is constantly changing. We must adapt and prepare for these challenges, minimising our impact to help mitigate climate change and support a healthy water cycle.

Key trends

Climate change

We are already seeing prolonged dry periods and hotter summers, wetter winters and more extreme rainfall events, and the challenges created by freezing temperatures followed by rapid thawing. This increases the level of risk for water sufficiency, flooding and pipe damage. The dry weather and high temperatures last summer put much of the country's water supplies under stress, and in December we experienced a severe freeze-thaw event that put services under pressure. With these trends set to continue, we must plan well into the future and continually adapt to strengthen our operational resilience. We have detailed long-term plans for managing water resources, drainage and wastewater management, and are updating our drought plan. We have an adaptation report setting out how we will adapt to meet the challenges of climate change and are developing our plans to transition to a low-carbon economy.

Population growth

We will need to extend our services and ensure we have sufficient resources to meet the increased demand of an anticipated one-million increase in population by 2050.

Natural capital and biodiversity

Much of the landscape in the North West is legally protected for its environmental or cultural significance. The functioning of these natural environments is important to support communities and the regional economy, but they face pressure from climate change and population growth. We have a role to play in restoring healthy and resilient ecosystems, and need to work collaboratively with like-minded organisations to deliver nature-based solutions that offer many benefits including carbon sequestration, cleaner water, and improved biodiversity.

28%
more rainfall in the North West than average across England and Wales

34%
of our region is National Park, Area of Outstanding Natural Beauty or a Site of Special Scientific Interest

Link to principal risks

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

➔ Read more on pages 64 to 65

Link to material issues

- Climate change
- Water resources and leakage
- Natural capital and biodiversity

➔ Read more on pages 28 to 29

£280m

support provided to
vulnerable customers
over 2020–25
(50% company funded)

Economic and financial market conditions affect our business in various ways. Our costs are impacted by trends in inflation and interest rates, and the economic environment can impact customers' ability to pay their bills.

Key trends

Inflation and interest rate increases

Inflation has been rising sharply, reaching highs not seen for over 40 years. While the peak is believed by many to have passed, rates are still very high, and this has driven government decisions to raise interest rates as well. The impacts of these market trends on our business are complex, with significant cost increases partly offset by increased allowances under the regulatory mechanism. Our activities are energy and chemical-intensive, so we are particularly impacted by the sharp rises we have seen in these costs, and 55 per cent of our debt is in index-linked form and therefore impacted by inflation. We have increased wages with consideration to inflation, and our AMP7 dividend policy is growth in line with CPIH inflation to 2025. It is worth noting, however, that our regulatory capital value rises with inflation, we have £3 billion of fixed-rate debt that increases in benefit as interest rates rise and, unlike many, our low dependency pension schemes are protected from market rate movements.

Cost of living crisis

Inflationary cost increases have a big impact on customers, and the country is experiencing a cost of living crisis with many households really struggling. It is typically the most deprived communities that are hit the hardest, and we have more in the North West than any other region, which makes the industry-leading affordability support we provide to customers even more critical.



Economic environment

Link to principal risks

- Retail and commercial
- Supply chain and programme delivery
- Finance

➔ Read more on pages 64 to 65

Link to material issues

- Affordability and vulnerability
- Financial risk management
- North West regional economy

➔ Read more on pages 28 to 29



Technology and innovation



New technologies and innovative ideas present opportunities for us to adapt the way we work to make things better, faster, safer and cheaper, but technology can also create risks such as the threat of cyber attacks.

Key trends

Artificial intelligence bolstering our Systems Thinking approach

The use of AI and machine learning has potential to improve infrastructure performance and management. Our Systems Thinking approach involves remote monitoring and control, taking a 'whole system' view of our network and assets, and proactive and preventative optimisation to spot and resolve issues before they impact customers. At the higher maturity levels we use AI to optimise the way we operate.

Cyber security

Protecting infrastructure assets, customer information and commercial data from malicious activity is now a reality of the modern world. The global political situation in recent years with rising tensions between Russia and the West has added to the evolving threats. It is critical that we maintain a stringent approach to cyber security that evolves with new technological advances.

Customer expectations

In an increasingly digital world, customers expect more from services than ever before. Technology has changed the way customers can get in touch with companies to access their bills, update their information and receive updates on services and support. As customer expectations change, we need to evolve our own services to ensure we meet those expectations.

Sensors

across our network provide real-time data, helping us detect and proactively fix leaks and blockages

Link to principal risks

- Security
- Retail and commercial
- Conduct and compliance

➔ Read more on pages 64 to 65

Link to material issues

- Customer service and operational performance
- Cyber security
- Data security

➔ Read more on pages 28 to 29

5-year
regulatory cycles,
known as AMPs

>£50bn
allowance across the
industry to deliver
further improvements
over the 2020–25 period

Sustainable business means continually planning and preparing for future service improvements and potential market reforms, as well as meeting current regulatory commitments.

Key trends

Current performance and preparations for AMP8

We are subject to regulation of price and performance by various bodies, as set out in the diagram, that protect the interests of customers and the environment and perform comparative assessments of companies' performance. We must balance incentives and requirements that can sometimes act in tension, such as the desire for rapid environmental improvements and the upward pressure this can place on customers' bills. We maintain constructive dialogue to agree commitments for improvement.

The water industry national environment programme (WINEP) sets out the actions needed to meet environmental obligations, the DWI can put in place programmes of work to improve drinking water quality, and companies must prepare and maintain long-term plans for managing water resources (WRMP) and drainage and wastewater (DWMP). Ofwat sets each company's final determination (FD) detailing revenue, required service levels, and the incentive package for five-year asset management plans (AMPs). Performance against the FD is reported in an annual performance report (APR). 2022/23 was the third year in AMP7, and in October we will submit our plan for the 2025–30 period (AMP8).

Future market reform

There is a constant need to engage and monitor developments across all stages of the regulatory cycle, feeding into consultations on potential future market reforms for our industry.

Regulatory environment



Link to principal risks

- Conduct and compliance
 - Political and regulatory
- ➔ Read more on pages 64 to 65

Link to material issues

- Trust, transparency and legitimacy
 - Political and regulatory environment
 - Competitive markets
- ➔ Read more on pages 28 to 29



Our external environment

Stakeholders

As set out on page 01, there are many stakeholders who take an interest in the water industry, its role in society, and the North West region. Our decision-making considers the need to balance the often conflicting priorities of these stakeholders.

It is important that we understand what matters to our stakeholders and develop constructive relationships built on mutual trust. The nature of our work means we are at the heart of communities across the North West region. We interact with a large variety of stakeholders, from communities and environmental interest bodies to suppliers and regulators.

Stakeholder views and priorities are factored into our decision-making

We engage with stakeholders to understand their views and priorities.

Read more about how we engage with stakeholders on pages 56 to 57.

These views are factored into strategic decision-making at board level, as set out in our S172(1) Statement on pages 58 to 59. They also feed into our materiality assessment, which gives rise to the material issues matrix on page 29, and this in turn feeds into our assessment of risks and opportunities, as set out on pages 60 to 75.

Stakeholder materiality assessment

We consider stakeholder priorities alongside our own assessment of what has the biggest impact on the company and its ability to create value. We then present the output in a material issues matrix, which can be found on the next page.

This informs decisions about what we report in documents such as this. Setting out issues in this way helps to ensure we understand key stakeholder priorities and are able to consider their interests in strategic decision-making, helping us to create long-term value.

In defining the strategic relevance of an issue to the company, we have adopted the integrated reporting <IR> framework definition of materiality, which states:

“a matter is material if it could substantively affect the organisation’s ability to create value in the short, medium or long term”

Value, in this context, may be created internally (for the company and/or colleagues) and/or created externally (for customers, the environment, communities, investors, and suppliers). Value may be financial or non-financial. We view this approach as consistent with the emerging concept of double materiality.

2022/23 assessment of material issues

Last year we carried out a thorough review of our material issues and matrix design. Striking the right balance between different interests and views is not easy but our assessment process consolidated feedback based on a balance of views obtained from all our stakeholders.

This year we have completed a light touch review of our material issues, approved by senior management. Storm overflows has increased in significance while COVID-19 has decreased in significance as the country recovers from the pandemic. These moves are reflected in this year’s matrix.

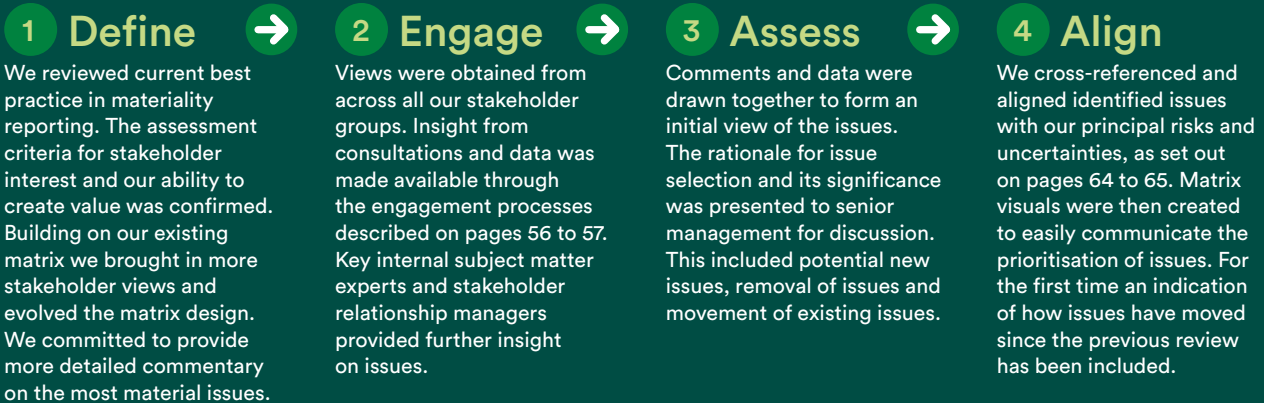
Based on current best practice of reviewing material issues every two years, we will undertake a full materiality assessment in the coming year.

The assessment process identified 28 material issues. More information about the most material issues can be found on the following pages. We describe the issue, provide our response to managing the issue, explain how the issue links to our strategic priorities and how it is included in our plans for the future.

➔ Read more about [how SDGs link to our material issues](#) on pages 78 to 79

➔ Read more about [how six capitals link to our material issues](#) on pages 34 to 37

Our materiality assessment process

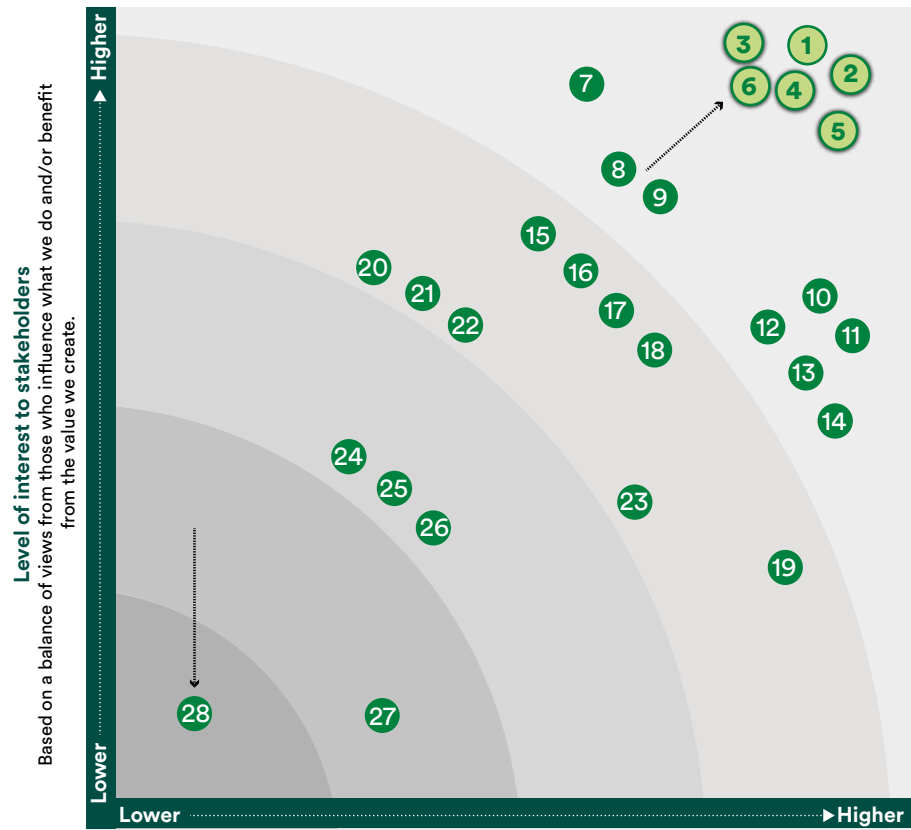


Materiality matrix

Issues are plotted on the matrix from lower to higher in terms of level of interest to stakeholders and how much it can affect our ability to create value. The most material issues are highlighted in light green.

Independent review

Our 2021/22 approach was reviewed by responsible business consultancy Corporate Citizenship, which commented that “United Utilities has set out the orderly, balanced and comprehensive process by which it has arrived at its refreshed materiality assessment. The detailed coverage of the six most material issues fosters public understanding. It sets out the links to strategic priorities, risks and future actions. It shows how United Utilities recognises the most important issues and acts upon them.”



Effect on our ability to create value

Based on the potential effect on our ability to create value over the short, medium and long term. Value can be created for United Utilities and our stakeholders. Value can be financial and non-financial.

Key:

↗ Movement based on significance

Material Issue

- 1 Trust, transparency and legitimacy
- 2 Resilience
- 3 Customer service and operational performance
- 4 Climate change
- 5 Political and regulatory environment
- 6 Storm overflows
- 7 Affordability and vulnerability
- 8 Drinking water quality
- 9 Water resources and leakage
- 10 Financial risk management
- 11 Corporate governance and business conduct
- 12 Natural capital and biodiversity
- 13 Innovation
- 14 Cyber security

Material Issue

- 15 Health, safety and wellbeing
- 16 North West regional economy
- 17 Land management, access and recreation
- 18 Sewage sludge to land
- 19 Energy management
- 20 Environmental impacts
- 21 Data security
- 22 Diverse and skilled workforce
- 23 Responsible supply chain
- 24 Colleague engagement
- 25 Supporting communities
- 26 Competitive markets
- 27 Human rights
- 28 COVID-19



Our external environment

Material issues, key trends, and risks and opportunities

Key ESG trends identified in our external environment feed into our materiality assessment. They are assessed on stakeholder interest and their impact on our ability to create value. Our materiality assessment identifies broad issues, and then it is through our risk management that we identify, monitor and assess the specific risks and opportunities that we face, their likelihood and impact, and ensure we have adequate controls and processes in place to mitigate risks and act on opportunities.

The following examples demonstrate how key trends, material issues, and risks and opportunities are all interconnected.

Climate change

Key trends: Climate change will affect the natural environment, with adaptation needed to cope with more frequent periods of extreme weather – and mitigation needed to help minimise the long-term impact on our business and on the world as a whole.

Material issues: Our business is so intrinsically linked to the natural environment that climate change has wide-reaching impacts on several of our material issues, including resilience, sewer flooding and storm overflows, water resources and leakage, and energy management, as well as being a material issue in its own right.

Risks and opportunities: Climate change permeates several of our principal risks, including the top two – water and wastewater service. It is a common causal theme, and three of our top event-based risks are related to climate change – sewer flooding, water sufficiency, and carbon commitments. National water trading presents an opportunity to help with the national strategy for managing drought risk, given the higher rainfall we receive in the North West, and this may create opportunities to increase our water resilience.

Storm overflows

Key trends: Communities are concerned about the impact of storm overflow activations on river health across the country, and we agree that it is time to deliver a step change. Reducing activations of overflows will form a large part of our investment plans for AMP8, and we have already begun accelerating expenditure to make a fast start on this.

Material issues: It is not surprising, given the huge interest this topic has received recently, that sewer flooding and storm overflows is one of our material issues. It feeds into environmental impacts as well, and sentiment shows that it is an area in which the industry needs to renew public trust – the number one material issue.

Risks and opportunities: The requirement to reduce the frequency of storm overflow activations came out of the Environment Act so this was an element of political and regulatory risk. The use of storm overflows plays into wastewater service risk and health safety and environmental risk, as well as the sewer flooding event-based risk. Delivering the required reductions will take significant investment, and therefore this is also connected with supply chain and programme delivery risk, and finance risk. Clearly this new driver of investment creates an opportunity for us to deliver further improvements to river quality in the North West.

Affordability

Key trends: The economic climate and the cost of living crisis it has created has implications on customer affordability. Discussions around a potential national social tariff could help customers across the country access a fair share of affordability support that is not dependent on the willingness and ability of others in their specific region to contribute towards that support.

Material issues: Affordability and vulnerability is one of the top six material issues, and the North West regional economy has clear implications on affordability for customers in our region. The political and regulatory environment will determine appetite for a national social tariff, which could have a positive impact on affordability for vulnerable customers across the whole country.

Risks and opportunities: Customer affordability is part of retail and commercial risk, and the national social tariff decision presents either a risk or an opportunity with respect to affordability support for customers in the North West.



Regulatory developments

Key trends: Preparations for AMP8 and the potential for future market reform are key trends in the regulatory environment.

Material issues: The political and regulatory environment is one of the material issues identified, and the preparations for AMP8 and commitments that will be set within our final determination in 2024 will have implications for customer service and operational performance in coming years. Competitive markets was an outcome of previous market reform for the non-household retail market, and is a potential subject of future reforms.

Risks and opportunities: Political and regulatory risk is one of our top ten principal risks, and legislative and regulatory change is identified as a common causal theme of event-based risks such as the price review 2024 outcome (for AMP8). The Environment Agency's interpretation of Farming Rules for Water is a driver of the event-based risk around recycling of biosolids to agriculture.

Technology and innovation

Key trends: The emergence of artificial intelligence, Systems Thinking capabilities, and the threats to cyber security are key trends in the technological environment.

Material issues: Innovation is identified as one of the material issues, and our ability to capitalise on new technologies and innovations has potential benefits for as customer service and operational performance, and health, safety and wellbeing. However, with greater use of technology comes greater security risk, in terms of both cyber and data security issues.

Risks and opportunities: Technology presents cyber security risks, identified within principal risks and as an event-based risk, as well as resource risk, as we are reliant on skilled staff and must train them in emerging technologies. Innovation is a key source of opportunity, through further development of our Systems Thinking approach, and identification of new and better ways of working. The ability to bid for innovation funding through our regulatory framework also presents an opportunity.





Responding to the most material issues

Understanding and responding to the most material issues affecting our business is key to delivering our purpose. Addressing these issues in our short, medium and long-term planning ensures we are responding to the things that matter most to our business and our stakeholders.

1 Trust, transparency and legitimacy

Being open, honest and transparent is key to building and maintaining trust and legitimacy. As well as reporting openly, this means setting out commitments and delivering on them. Our stakeholders want to know that we are treating colleagues fairly, protecting customer data, and paying our fair amount of tax as part of growing calls for companies to demonstrate how they are contributing to society as a whole and operating in the public interest.

In recent years, the UK water sector has faced challenges to its legitimacy, amplified by the ongoing industry-wide investigations by Ofwat and the Environment Agency into possible unpermitted sewage discharges. Consequently, trust has been eroded and questions raised about the ownership structure of the sector, dividends and links between performance and reward. Ofwat has called for further transparency and disclosure and demonstration of companies' contribution to public value.

Our response

Being open about our purpose and transparent about how we are delivering for all of our stakeholders is key. We aim to maintain high ethical standards of business conduct and corporate governance. We apply best practice against our corporate and regulatory reporting, linking performance to remuneration.

We have open and transparent reporting around all of our equity and debt financing arrangements, do not use offshore financing vehicles, and we have secured the Fair Tax Mark independent certification since 2019.

We maintain a comprehensive set of policies, linked to and including, human rights, modern slavery and whistleblowing.

Cybercrime is a threat we take very seriously through our policies and dedicated data protection team protecting customer information.

We work with suppliers and contractors whose principles, conduct and standards align with our own. Our key suppliers have committed to our United Supply Chain approach. We are a signatory to the Prompt Payment Code, and fully comply with rules on reporting payments to suppliers.

2 Resilience

Resilience is a broad and interconnected topic. A resilient company will embed resilience throughout its operations, financing and corporate systems of governance and control.

Providing essential services to customers requires long-term planning to manage future challenges, such as population growth and climate change, to ensure they are provided effectively to meet increasing expectations.

Long-term financial resilience starts with a robust balance sheet and management of financial risks. Companies have to be aware of their own financial situation and make sure that they understand the financial resilience of others, such as suppliers and former colleagues.

Companies need to have the right people and skills for the modern digital world. Increasingly, stakeholders are interested in the ability of an organisation's governance and assurance processes to help avoid, cope with and recover from disruption and to anticipate trends and variability in all aspects of their business.

Our response

It can take many years and require substantial investment to increase the resilience of existing assets or build new ones, which is why our long-term planning is so important. We have detailed plans in place to anticipate and prepare for future challenges. We build these needs into our business plans for each five-year regulatory period to anticipate the future funding we need to allocate in order to act at the right time.

We have a strong balance sheet, a secure pension position, and take a prudent approach to financial risk management, which delivers long-term resilience to financial shocks. As a public listed company, we consistently adhere to the highest levels of governance, accountability and assurance. We have a robust risk management framework for the identification, assessment and mitigation of risk.

We maintain good relationships with colleagues, and their representatives, and we continually strive to build diversity across our business. We build skills resilience internally through training and development, including digital skills, and award-winning graduate and apprentice schemes.

3 Customer service and operational performance

In an increasingly digitised and instant economy, customers expect more from services than ever before. This includes the water sector, with high expectations for the reliability and responsiveness of services.

Increased appreciation of the environment from stakeholders brings greater focus on the operational performance of companies that rely and impact on the environment.

Ensuring a reliable service in the face of a growing population, changing climate and increasing expectations of service requires integrated long-term thinking and targeted investment to ensure both short and longer-term reliability.

Many of our assets are ageing compared to other utilities. To meet the expectations of customers and regulators, it is critical that we combine modern technology into our networks and management of customer service.

Our response

Delivering our purpose is reliant on good operational and customer performance. Our pollution incident reduction plan and reinvestment of regulatory outperformance has improved our environmental performance.

We have improved customer service provision through both traditional and digital channels, measuring ourselves against key external benchmarks. We have an enhanced social media presence to respond quickly to stakeholders with over one million customers engaging with us digitally. This is alongside making new services available to customers, such as 'Get Water Fit', which is helping customers learn more about their water usage.

Our culture of innovation and Systems Thinking drives us to adapt our assets and the way we operate to use modern technology and the best new ways of working.

We monitor the performance and health of our assets, with the help of sensors across the network, and this allows us to be proactive. For example, by monitoring pressure in the water network we can spot issues and fix them before we get a burst, saving costs and sparing customers the impact.



4 Climate change

Greenhouse gas emissions and how they are affecting the earth's climate is important to many stakeholders. There is a growing expectation on companies, across all sectors, to take action to reduce their greenhouse gas emissions and to adapt to the impacts of climate change.

Weather is fundamental to the delivery of water and wastewater services, and so climate change will always be of strategic and operational importance to the water sector and its stakeholders. Already, we are seeing the effects of climate change on the North West's weather, with increasing summer temperatures, wetter winters and more extreme rainfall events. With these trends set to continue, unless we take action there will be increasing impact on the services we provide to the communities we serve.

Companies must plan well into the future to understand what changes are likely to occur, and continually adapt to meet the risks and opportunities this presents.

Our response

Our response to climate change risk involves mitigation (minimising our greenhouse gas emissions) and adaptation (ensuring our services are resilient to a changing climate). Where practical, we generate renewable energy on our sites, for example, through the use of bioresources at wastewater treatment works, helping to reduce our emissions. We have reduced our carbon footprint considerably since 2005/06 and have set ambitious science-based targets as part of our continued efforts to reduce emissions. We have committed to six pledges to help us achieve significant further reductions in emissions and have linked the long-term incentive outcomes for our executives to these.

We have detailed plans, such as the 25-year Water Resources Management Plan and Drainage and Wastewater Management Plan, that set out how we will adapt our services to meet the challenges of climate change with key authorities across the region.

We have reported against the recommendations of the Task Force on Climate-related Financial Disclosures for the past four years to provide transparency of our approach.

5 Political and regulatory environment

The UK Government's current goal is to be the first generation to leave the environment in a better state than we found it. The Environment Act, which became law in 2021, includes commitments to improve water management, and the water sector has a leading role to play to implement its requirements. This will drive significant increases in investment, putting unwelcome upward pressure on customers' bills.

Environmental and quality regulators set stringent consents for water company activities to ensure the environment and water quality are protected. In meeting these obligations, companies need to work hard to maintain compliance. This requires striking a balance with other environmental impacts, such as the use of natural resources and emissions of greenhouse gases. Read more about our regulators on page 27.

Our response

We welcome the Environment Act and the inclusion of aspects relating to storm overflows. Many of our Better Rivers pledges will be delivered by 2025, including investment in wastewater systems, enhanced data monitoring and sharing, greater innovation and more use of nature-based solutions.

The Environment Agency assesses water companies' performance across a basket of measures, and we are one of the best-performing companies over the last six years. Our regulatory framework shapes our interaction with the environment, and we work with our environmental regulators to agree long-term plans.

Alongside this, we need to deliver other core regulatory obligations – such as those set out by Ofwat – and compliance with ever increasing drinking water quality standards. Our Water Quality First programme has improved our performance and reputation with the DWI.

A phased, long-term approach to address the concerns and interests of stakeholders, including environmental regulators, ensures that the necessary work can be delivered, while providing support for those who would otherwise find bills unaffordable, spreading some of the spend over several years.

6 Storm overflows

Storm overflows have been part of the sewerage network for decades. When rainfall exceeds the capacity of our sewers, treatment works and storm tanks, overflows are activated allowing rainwater, mixed with sewage, to enter a separate pipe that flows into a river or the sea. This acts as a pressure relief valve, helping to prevent the flooding of streets, homes and businesses.

There has been increased public, political and regulatory interest in the usage of storm overflows across the country over the past year. Many people have told us they do not like the idea of untreated sewage going into our rivers and seas, no matter how diluted, and we understand and share these concerns.

We are developing plans to deliver a significant reduction in the number of activations of overflows in the North West.

Our response

Last year, we announced our Better Rivers: Better North West plan to take action to improve river health across our region. We have made good progress so far and have delivered a 39 per cent reduction in reported activations since 2020.

We have draft approval from regulators to accelerate around £900 million of investment, with £200 million of this expected to be delivered in the next two years, most of which relates to reducing overflow activations. This means we go further and faster.

The Environment Agency requires all water companies to fit monitors to their storm overflows to capture information on how they are performing. 97 per cent of the North West's storm overflows are now monitored and we will achieve 100 per cent by the end of 2023. We now have a greater understanding of our region's vast 79,000 kilometre wastewater system than at any point in history, providing a rich source of data to assess and inform activity to improve the system.

We are committed to being open about our performance and plans, to keep stakeholders engaged and collaborate on solutions. In 2022, we held our first Environmental AGM and published our Better Rivers report to give an insight into how we are progressing on our commitments.



Key resources

The six capitals

To deliver our purpose we are reliant on a broad range of resources. We use the internationally regarded concept of the six capitals to define our key resources, and to help us manage our impacts and dependencies.

Our relationship with the six capitals is not one-way. Much as their availability and quality have an impact on our business, our activities also have an impact on the capitals, and this can be positive or negative. As a regulated water and wastewater company that continuously relies on, and interacts with, nature and society to deliver our purpose, it is especially helpful to consider and manage our key resources through the six capitals framework to ensure we maximise the positive impact we can have.

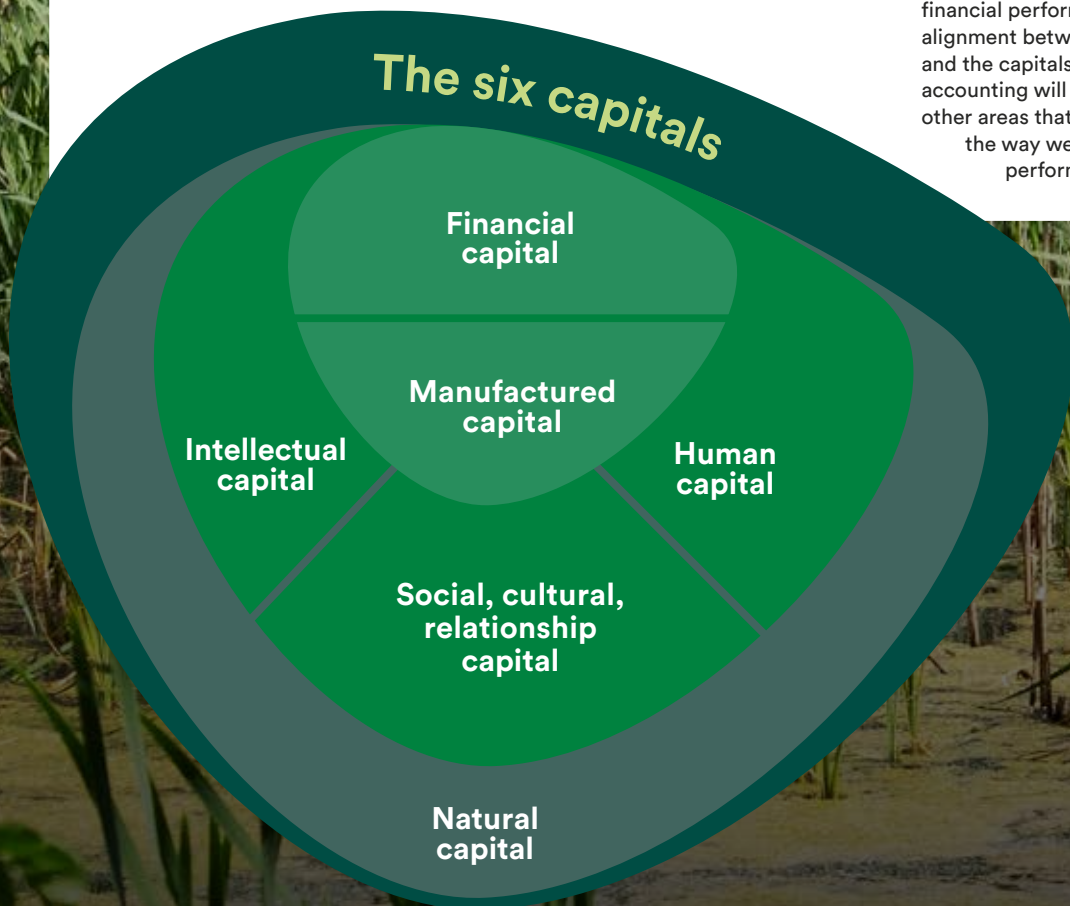
The following three pages explore the ways that we depend and impact on each of the capitals, and how we manage them to ensure long-term resilience and value creation.

To better understand and manage these important interactions, we are creating a six capitals account. This approach is based on the premise that traditional financial accounting doesn't show the full picture. We rely on things that are not on our balance sheet, like our people and the environment, and we have an impact on things that have no associated income statement or cash flow value. Six capitals accounting aims to close that gap by accounting for these non-financial elements, which would be viewed alongside our financial information, to give a fuller picture of our impacts and dependencies.

We are in the process of integrating six capitals thinking into all our business processes and planning, including taking a multi-capital value approach to the formation of our business plan for the 2025–30 period.

This expands on the natural capital accounting method we have previously used, and will provide a fuller picture of the two-way value transfer between the business and each of the capitals, and the consequences of different strategic options, to better inform our decision-making and help us create and protect value for all of our stakeholders.

Performance can also be monitored and assessed by reference to the positive and negative impacts on these six capitals, and this is already well aligned to the way we monitor our performance by reference to value creation for our six stakeholder groups as well as financial performance – with strong alignment between these stakeholders and the capitals. The six capitals accounting will help us identify any other areas that are worth adding to the way we manage and assess our performance.



Natural capital

This includes the renewable and non-renewable environmental resources and processes that provide goods or services that support the past, current or future prosperity of an organisation. This includes air, water, land, minerals and forests as well as biodiversity and ecosystem health. For example, we rely on water sources, such as reservoirs, rivers and boreholes, to supply water to customers and face risks from severe dry weather, when we must manage resilience of water supply.

How we manage this key resource

Much of the water we abstract originates on land before running off into water. We are stewards of large areas of this land, much of which is managed by tenant farmers or in partnership. We ensure it is well managed to improve water quality and help protect habitats.

We plan and invest for the long term to ensure we have resilient water resources. In the short term, we can bring more supplies online to meet demand, and our integrated supply zone allows us to move water efficiently around the region. We also encourage customers to use water more efficiently with tips, free water-saving devices, and metering initiatives.

Water can also cause issues, when rainfall exceeds the capacity of sewers resulting in heavily diluted wastewater being released directly to the environment to minimise the risk of sewer flooding in streets or people's homes. We need to reduce the use of storm overflows, so we must find alternative ways to cope with excess surface water while avoiding flooding. Traditional interventions, such as storage tanks and enlarging sewers, are costly, carbon intensive and subject to space constraints. We are innovating with sustainable drainage and other nature-based solutions that use the urban and rural environment as part of the solution.

We manage the waste from our activities, including sludge, in a sustainable way, with the vast majority going to beneficial use such as recycling or fertiliser for land.

We depend on natural capital to:

- store and clean water that we take to treatment and then to supply customers;
- attenuate water and flows in support of flood management;
- receive wastewater and biosolids safely back into the environment;
- provide a location for our assets and offices, both engineered and nature-based interventions; and
- provide operational and construction resources, such as chemicals, cement, metals and energy.

We impact on natural capital by:

- looking after the condition of the land we own and influence, including habitat health and biodiversity;
- managing our abstractions, final effluent quality, overflows, pollution incidents, and our catchment programmes;
- releasing and storing greenhouse gas (GHG) emissions that contribute to climate change; and
- emitting air pollutants that impact the health of people and nature.

Links to principal risks

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

➔ Read more about [our principal risks](#) on pages 64 to 65.

Human capital

Our colleagues' competencies, capabilities and experiences, and their motivations to innovate. Our people are essential in delivering services for customers, and a skilled, engaged and motivated team of colleagues, suppliers and contractors is fundamental to great performance and colleague retention, which helps ensure efficient training and better performance.

How we manage this key resource

We support thousands of jobs in the North West, including graduate and apprenticeship programmes, helping to secure a legacy for the future in our region. We are an accredited Living Wage Foundation employer, providing our colleagues with competitive salaries and benefits, an attractive pension offering, and the opportunity to join healthcare schemes and a share incentive plan. We provide comprehensive training and development opportunities, including digital skills to help with our Systems Thinking approach, and enable remote working where practical.

We promote equity, diversity and inclusion, recruiting from across the communities we serve and supporting our colleagues with equal opportunities. Networks, representing groups of colleagues that may face specific challenges, are overseen by an executive sponsor and support colleagues through their career progression.

➔ Read more about [equity, diversity and inclusion](#) on pages 54 and 55

We are committed to protecting the health, safety and wellbeing of our people, and have been awarded the workplace wellbeing charter.

We measure colleague engagement through an annual survey, and regularly achieve results higher than UK norms.

We monitor and measure performance through annual reviews. Colleagues at all levels of the company participate in the bonus scheme, with the same bonus performance measures as the executive directors, so everyone benefits from the success of the company.

We depend on human capital to:

- deliver services for customers through the skills, knowledge and experience of our workforce;
- run a responsible business and deliver our services in an efficient and productive way; and
- provide diversity of thought and a range of perspectives.

We impact on human capital by:

- prioritising health, safety and wellbeing and working conditions;
- developing, training and recruiting the workforce, including graduate and apprentice programmes; and
- managing equity, diversity and inclusion with fair opportunities and remuneration.

Links to principal risks

- Resource
- Health, safety and environmental



Key resources

Manufactured capital

Manufactured physical objects available to an organisation for use in the production of goods and/or the provision of services, including buildings, equipment and infrastructure. For example, our network assets and treatment works are essential to delivering our services for customers and protecting public health.

How we manage this key resource

Since privatisation, the significant investment made in our assets has provided substantial benefits to customers, including reduced supply interruptions, reduced sewer flooding incidents, and improved water quality. We expect to continue with a substantial investment programme for the foreseeable future as current environmental legislation is expected to drive significant investment needs.

Long-term planning helps us understand where and when we need to invest in our assets, and we monitor the condition, performance and health of our assets.

We manage our assets in a holistic way that seeks to minimise whole-life costs, and we embrace new technology and innovation, which is at the heart of our Systems Thinking approach. This helps us deliver efficient total expenditure (totex) without compromising on quality of service or long-term resilience, saving future operating costs and reducing future customer bills.

Our assets and infrastructure projects can affect people who live nearby. We consult with these communities in the planning stage and work hard to minimise any negative impact, such as odours from our wastewater treatment works.

We depend on manufactured capital to:

- deliver safe and reliable services; and
- keep our assets secure.

We impact on manufactured capital by:

- maintaining, protecting and improving assets and infrastructure;
- developing new assets and infrastructure where required;
- managing the effectiveness of our capital delivery programmes; and
- following best practice approaches to be efficient and effective, such as ISO 55001 - Asset Management.

Links to risks

- Water service
- Wastewater service
- Resource
- Security

Financial capital

The pool of funds that is available to an organisation for use in the production of goods or the provision of services, or obtained through financing, such as debt, equity or grants, or generated through operations or investments. As a result of the long-term nature of our assets, and the need to ensure affordability by spreading the cost fairly between the generations of customers that benefit, it is necessary to raise financing to fund investment in building, maintaining and improving our assets, networks and services.

How we manage this key resource

We maintain a robust capital structure, with a responsible mix of equity and debt financing. We monitor our performance against key credit ratios to help us maintain strong and stable investment-grade credit ratings, which gives us efficient access to debt capital markets across the economic cycle.

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.

We maintain relationships with a range of banks and retain access to a broad and diverse range of sources of financing in a number of markets, across which we seek the best relative value when issuing new debt. We periodically refresh our medium-term note programme to enable efficient debt issuance under pre-agreed contractual terms, and the board delegates authority to the CFO, allowing us to respond quickly to attractive financing opportunities. This helps us to consistently raise efficient financing. Our sustainable finance framework allows us to raise debt based on our strong ESG credentials.

We aim to avoid a concentration of refinancing in any one year, and fund long term where possible. Our debt portfolio has a very long average life, and we monitor liquidity forecasts with a policy of having resources available to cover the next 15–24 months of projected cash flows to ensure forward funding needs are met. We have clear and transparent hedging policies covering credit, liquidity, interest rate, inflation and currency risk, and these are aligned with the regulatory model.

We depend on financial capital to:

- finance our activities and smooth out cash flows; and
- pay our operating, financing and capital delivery expenses.

We impact on financial capital by:

- being efficient in our operations;
- working with long-term investors and demonstrating good governance for fair and sustainable returns; and
- being a responsible business that acts fairly on tax.

Links to principal risks

- Supply chain and programme delivery
- Finance

Social capital

The institutions and relationships within and between communities, groups of stakeholders and other networks and the ability to share information to enhance individual and collective wellbeing. It is really important that we maintain positive relationships with stakeholders across our region, such as suppliers, regulators and community bodies.

How we manage this key resource

We have contracted for around 80 per cent of our base capital programme for the 2020–25 regulatory period, with arrangements in place for sharing of cost overruns to incentivise efficient delivery against the target price.

Our supplier relationship management process ensures regular discussions between our commercial team and existing suppliers to help identify issues and opportunities for a smooth and productive relationship, and we engage suppliers on sustainable and ethical issues through our United Supply Chain (USC) approach.

We actively engage with all our stakeholders, including our regulators with whom we discuss short-term and longer-term priorities and objectives and respond to consultations so we are influencing where we are able to.

Our stakeholder engagement extends to various environmental interest groups and community bodies, whom we keep informed, collaborate with and, in some instances, form partnerships with.

This engagement helps us develop a matrix of the issues that are most material to stakeholders and to our ability to create value, and our assessment of these issues is a key part of our planning approach.

➔ Read more about [engaging with our stakeholders](#) on pages 56 to 57

We depend on social capital to:

- maintain and grow trust with all of our stakeholders (e.g. customers, communities, suppliers, investors) to encourage them to act in a way that helps deliver improvements;
- understand the needs of customers and stakeholders to shape how we best deliver for them; and
- collaborate with customers and stakeholders on shared challenges such as leakage, flooding and water efficiency.

We impact on social capital by:

- managing the quality and resilience of our water, wastewater and customer services now and for the future;
- supporting customers who struggle to pay their bill and those in vulnerable circumstances;
- creating spaces for access and recreation; and
- communicating and collaborating with all stakeholders.

Links to principal risks

- Supply chain and programme delivery

Intellectual capital

Organisational, knowledge-based intangible aspects such as intellectual property, and systems, procedures and protocols. For example, the knowledge and systems we have across our business are critical to effectively running our treatment works and maintaining our assets to ensure a long-term resilient service. Our understanding of the region and the people who live here, aligned to our systems and assets, provides a key aspect of this knowledge.

How we manage this key resource

We use a variety of methods to drive innovation and find novel ideas and solutions such as idea scouting, using ideas from other water companies across the world and from other industries. We invite companies to bring innovative solutions to us through our Innovation Lab programme, and we encourage innovation at all levels inside the business, including our CEO Challenge programme where our graduates work in groups to find novel ways to tackle challenges that we face.

These initiatives are a source of fantastic new ideas and often lead to the development of products and software that give us a competitive advantage against our peers in the water industry. Occasionally, new ideas are worth protecting with copyrights, trademarks and patents, and we manage this intellectual property portfolio for short and long-term benefit.

Our Systems Thinking approach involves remote monitoring and control, taking a 'whole system' view of our network and assets, and proactive and preventative optimisation to spot and resolve issues before they impact customers. This requires a network of systems and processes, and at the higher maturity levels we use artificial intelligence to optimise the way we operate. With sensors in our network sending real-time data to our Integrated Control Centre, we develop an understanding of the signature and can predict patterns that enable us to spot anomalies that signal issues we can then proactively fix.

We depend on intellectual capital to:

- provide the know-how to run our business effectively and efficiently;
- deliver continuous improvement and innovation to be more efficient and effective, e.g. real-time monitoring and analytics;
- give competitive advantage by developing strengths in our processes and systems; and
- protect us from cyber attacks.

We impact on intellectual capital by:

- investing in research, development and innovation;
- monitoring and managing our processes and systems;
- managing our digital capability; and
- collaborating with the supply chain and other partners.

Links to principal risks

- Resource