

2. Provide great water for a stronger, greener, healthier North West

2.1 Key messages

- **The North West is an exciting and diverse region; it's where we live, work and play:** We've built a plan for the next 5 years which has been shaped by and adapted to the region's diverse needs.
- **We are supporting a stronger, greener and healthier North West:** Our plan protects the health and wellbeing of communities and the environment and underpins the economy as a key enabler for sustainable growth.
- **Our plan is ambitious:** Our plan presents our most stretching ambitions with step changes delivered quickly and a new refreshed perspective on the long-term. We have developed robust and adaptive plans to seize opportunities and manage risks over the long-term.
- **Local plans for the five North West counties:** Throughout the plan we've applied a regional perspective to reflect the different needs for each of the five counties that make up the North West. We are proposing tailored plans which consider all needs and requirements of customers and stakeholders. We've identified these through high quality research and in depth conversations so we understand the region we serve.
- **Delivering for the long-term:** Our plan keeps us fit for the future by managing the additional pressure resulting from climate change, growth and other drivers for change through our long-term delivery strategy.
- **A plan which is best value, adaptive and low regrets:** We are building on a strong long-term track record and our plan continues to evolve the way we deliver our services to ensure we are highly efficient and keep bills as low as they can be, whilst delivering high quality and resilient services to meet existing and new obligations.

2.2 Structure

This chapter is all about the North West, the fantastic region we serve, and the role we play in making it stronger, greener and healthier. It discusses the unique factors which create both opportunities and challenges for operating water and wastewater services. It describes our purpose and vision for the next 25 years, and the context of our plans for the next 5 years within this.

This chapter is structured as follows:

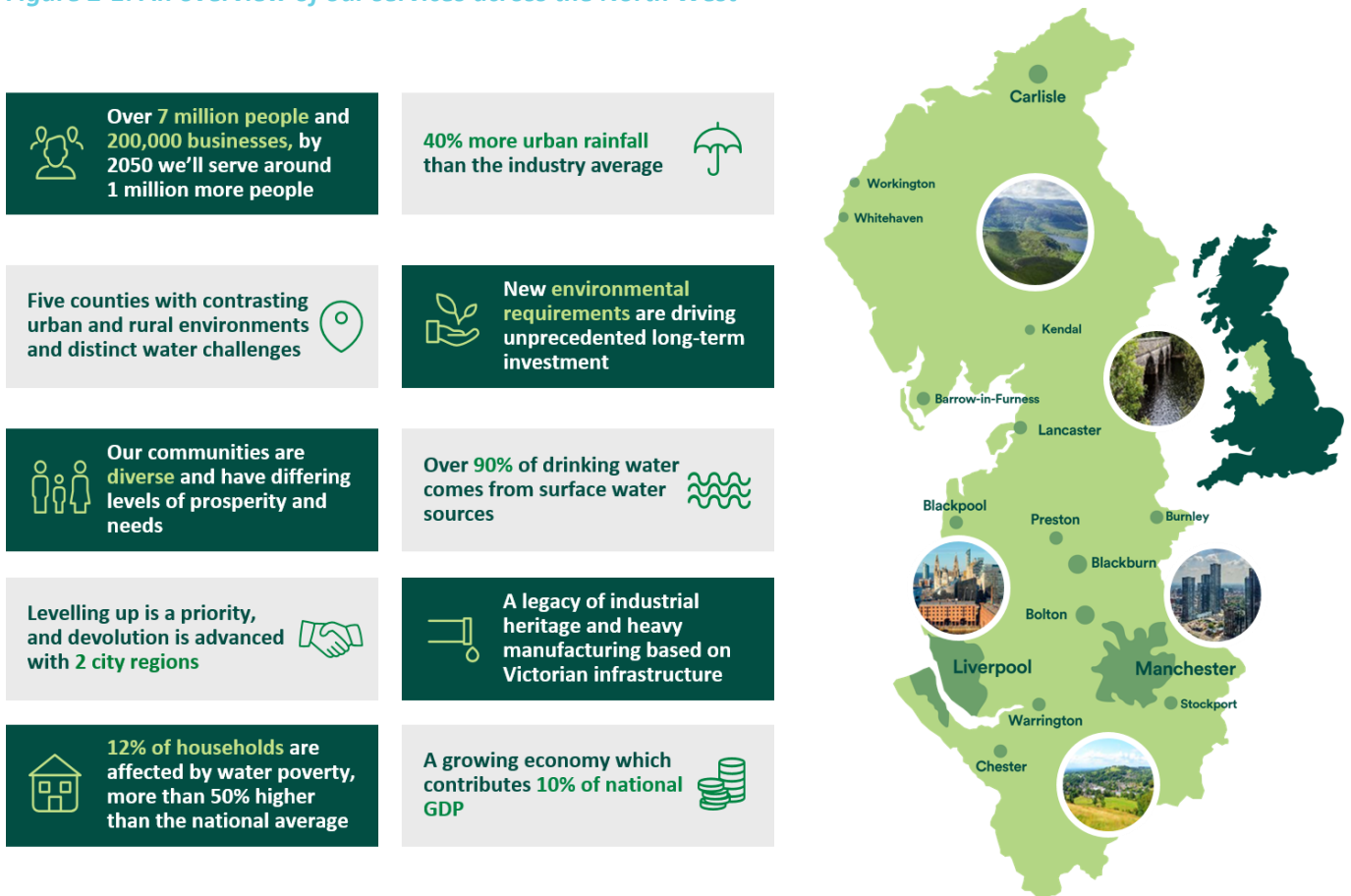
- **Section 2.3** introduces the North West providing an overview of U UW's operating context. It sets out how our plan has been shaped by and for customers, communities and stakeholders; the North West economy; and the environment of the region;
- **Section 2.4** provides an overview of our purpose and vision for AMP8 and the long-term, including the six strategic priorities which underpin our plan;
- **Section 2.5** discusses our adaptive approach for addressing our long-term ambitions, aligned to our long-term delivery strategy;
- **Section 2.6** describes how our plans for the next five years deliver against our ambitions and how AMP8 forms the first step in our long-term plans; and,
- **Section 2.7** shares detail on our strategies across the five diverse counties which make up the North West, outlining their individual needs and our plans to address these needs over the next 5 years.

2.3 Overview

The North West has a thriving culture built on a world renowned legacy across food, literature, sport, music and entertainment. The region is diverse and has been shaped by multicultural communities. It’s the birthplace of Kendal mint cake and scouse, classic literature like Peter Rabbit and Wordsworth. It boasts numerous world renowned sports teams. It’s the region that brought the world the Beatles, Oasis and Harry Styles as well as the bright colours of Manchester Pride and bright lights of Blackpool Tower ballroom and Media City. It is underpinned by a rich diversity – home to Europe’s largest Chinese community and Britain’s oldest African community. The North West is somewhere we are all proud to call home.

- The North West of England is home to over 7 million people and 200,000 businesses that rely on United Utilities Water (UUW) for their essential water and wastewater services.
- The provision of water and wastewater services across the North West puts us in a unique position to bring people and organisations together to tackle some of the most pressing issues for customers, resilience of services and the environment.
- The North West today has been shaped by its environment, economy, history and people, creating distinctive features which impact on our services and what we need to do to invest for the future.

Figure 2-1: An overview of our services across the North West



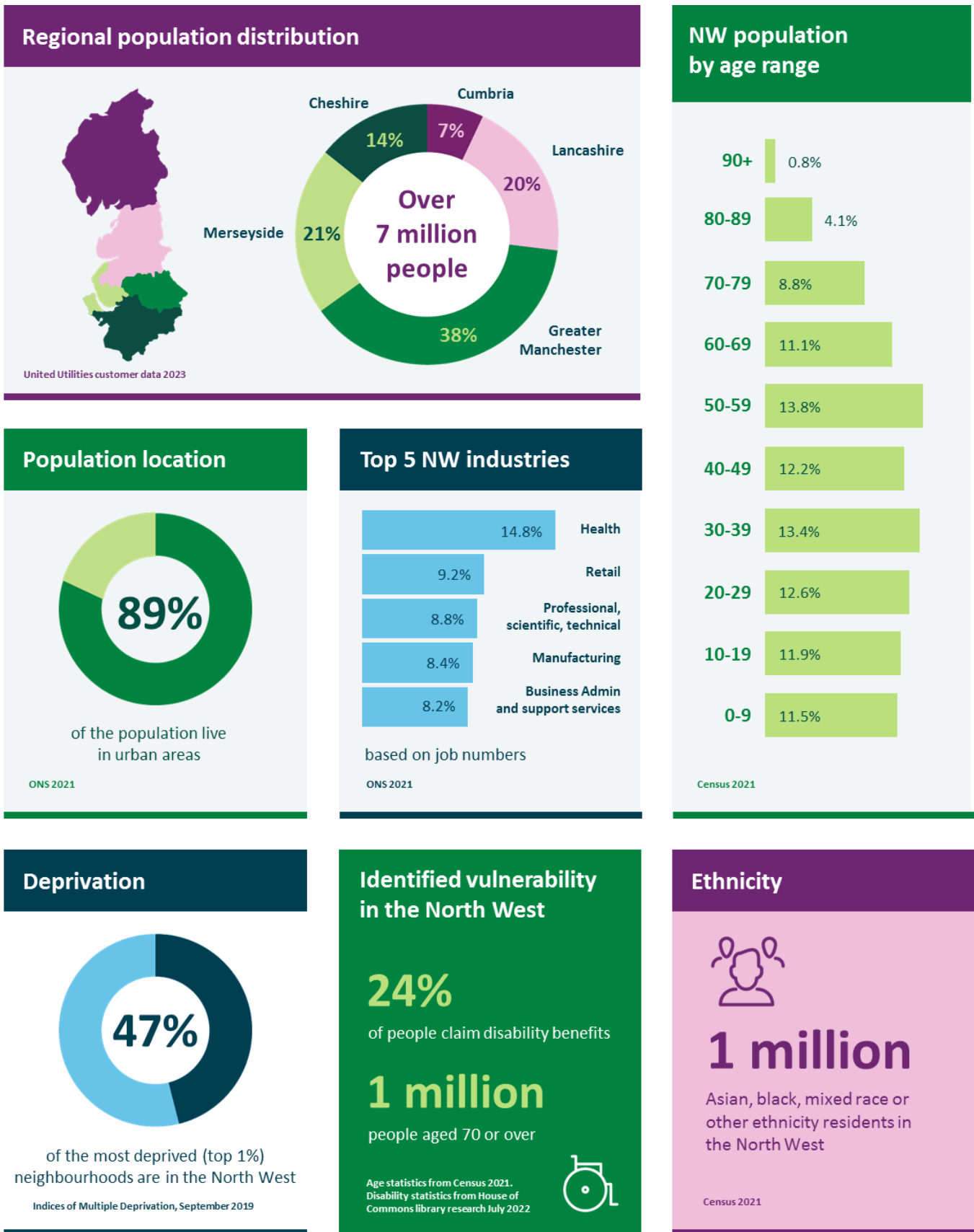
2.3.1 The customers, communities and stakeholders we serve

Customers

The North West is the UK’s third most populous region. Over seven million people rely on United Utilities Water every day to provide great water and wastewater services. The population has grown by 8.6% since 2002 and around an additional 1 million people are forecast to live here by 2050, increasing demand for water services. Additional demands on water and wastewater infrastructure are expected to be concentrated in certain high growth areas, such as Manchester and Carlisle. Population growth and associated development of new or

extended urban areas means water efficiency and rainwater management are key priorities during AMP8 and the longer term.

Figure 2-2: Getting to know customers - the regional profile of customers in the North West



Affordability

We recognise that affordability of all utility bills is a hugely important issue for customers, particularly against a background of rising household costs, economic uncertainty and a decrease in the percentage of people of working age. The degree of socio-economic challenges in the North West means the need for affordability support and priority services to help customers is greater than many other areas in England and Wales. 47 per cent of the most deprived (top 1% deprived) neighbourhoods in the country are in the North West. We work hard to ensure customers receive extra financial support in times of need. We support over 200,000 customers with payment of their water bill. This has been made possible in part by our drive to identify and support those difficult to engage customers who need our help the most.

According to data compiled by Public Health England, the North West is also above other national averages for several other key indicators of deprivation, spanning not just financial, but also educational, physical and mental health indicators. Additionally, studies show health problems can lead to debt issues, often brought on following significant life events. This has in part informed our proactive debt intervention initiatives, which seek to engage customers early when signs of financial stress first emerge, but before debt builds up. Further information on how we support customers with affordability - and how we propose to take this forward in AMP8 - can be found in Chapter 4.

Supporting vulnerable customers

There are a range of vulnerability drivers which can mean customers need extra support, including transient vulnerability. Around 13 per cent of customers in the North West are aged 70 or over and 24 per cent of people in the region have additional needs and claim disability benefits. Local authorities across the North West support the highest number of people seeking asylum outside of London. In March 2023, over 18,000 people were supported in the region while seeking asylum.

We currently have almost 300,000 customer signed up to our free Priority Services Register which helps vulnerable customers who need extra support. Our industry leading support includes translation services, British Sign Language (BSL) provision, or additional support during incidents. Our teams undertake training to tailor support to individual needs, including autism, BSL, mental health and dementia awareness sessions often delivered in partnership with charities specialising in living with vulnerabilities.

Our work on inclusivity to provide an accessible and attentive service has enabled us to be the first water company to achieve the new international standard kitemark, ISO22458:2022¹, for consumer vulnerability and provision of inclusive services. We're continuing to make sure all customers with additional needs across the North West are aware of, and make good use of, the support which we provide.

Supporting diverse communities

There are a diverse mix of cultures in the North West. For 7 per cent of people, English is not a first language. Polish and Urdu are the second and third most common first languages for people living in the North West. There are additionally around 3,000 sign language users in the region. We launched sector leading BSL training for our customer advisors this year and use 'ReciteMe' and translation services via phone and on our website.

We aim to equip customer facing colleagues with tools to understand customer faiths and associated changing needs for water. For example, we recognise that for Muslim communities making sure water supplies are not interrupted is even more important than normal during Ramadan.

Non-household customers

We provide wholesale water services to 200,000 non-household customers across the region. These range from over 500 very large users, consuming in excess of 50Ml/litres per year to the many microbusiness, such as hairdressers and pubs, that require a reliable water supply to get on with their business. Within the North West business customers require over 380Ml of water every day which is over 22% of the overall business demand in England. We work closely with non-household retailers to provide support to non-household customers.

¹ <https://www.iso.org/standard/73261.html>

Stakeholders and communities

The range of stakeholders and communities we serve are as diverse as the landscapes and environments we operate in. In Cumbria we serve some of the most remote rural communities in England, whilst in Manchester and Liverpool we serve some of the country's major urban centres. We work closely with stakeholders and communities who are instrumental in shaping and influencing our investment plans and supporting the delivery of those plans through partnerships and collaboration. For example, In Merseyside we are working with Liverpool City Region to apply a place-based planning approach to water management. Through our trilateral partnership with Greater Manchester Combined Authority (GMCA) and the Environment Agency we have developed a collaborative Integrated Water Management Plan for Greater Manchester², a first for a UK city region.

The political structure of the North West is diverse, with 39 local authorities and 75 Members of Parliament. Devolution has brought greater decision making and financial autonomy to a local level. The North West has two devolved city regions led by metro mayors, GMCA and Liverpool City Region (LCR). The devolved city regions play a key role in prioritising the needs of local people, communities and businesses, and are responsible for planning. Clean and green agendas, including pursuing net zero and sustainable development, feature heavily in local plans and we work with all local authorities across the region on environmental and social issues.

We have built strong relationships with a wide range of stakeholders that work across geographies and community interests including local government, environmental and social charities, businesses and academic institutions. We have experienced the benefits of working in partnership over the past decade and more. For example we work with schools across the North West to install water saving devices, including recently working with a school in Lancashire in the largest 'smart water butt' trial of its kind in the UK. Meanwhile in Oldham we have partnered with Northern Roots to engage with local communities to improve network performance and service delivery. And across the North West our "Hardship Hub" acts as one stop shop window for third sector organisations supporting people in financial hardship. This is an area we will grow further in AMP8, recognising partnerships can unlock additional benefits and can be essential to the successful resolution of shared challenges.

Land owners, tenants and partners, such as the Royal Society for the Protection of Birds (RSPB), support us in improving land management to deliver catchment and climate resilience, protect water quality and biodiversity, and allow inclusive recreational access that is accessible to all. More information about our ambitious AMP8 partnerships plan is available in Chapter 6 and supplementary document *UUW38 - Working in partnership*.



Delivering for communities through the Hardship Hub

Debt advisors in the North West, who provide financial schemes to help individuals and families struggling with debt, lacked a central resource to easily find and share knowledge about available support schemes. Working in partnership we co-created a digital Hardship Hub which provides advisors with a 'one stop shop' for debt support schemes. Developed in conjunction with experts from the money advice community, including the Citizens Advice Bureau, it's been dubbed a 'trip advisor' for financial advice. Advisors can use it to search for all the available help in their local area and can also rate schemes and recommend them to colleagues.

The Hardship Hub website was launched in January 2019 to support those organisations throughout the North West who provide expert advice to individuals struggling with debt. The website contains information on the financial support schemes offered by suppliers across a wide range of sector including gas, electricity, water, telecoms, housing associations, councils and local charities. The site contains information on 599 schemes from 235 organisations and we continue to add to this. The website was given special recognition at the Prolific North Tech Awards, receiving 'High Commended' award in the Technology for Good category. More recently, the Hardship hub has been re-developed and newly launched for the use of all our domestic customers needing assistance.

² <https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/integrated-water-management-plan/report-integrated-water-management-plan-june-2023-pdf/>

2.3.2 The economy we support

The GDP of the North West regional economy was worth an estimated £220 billion in 2021, according to figures published by the ONS. This makes it the third largest regional economy in England supporting over 3.7 million jobs. We are proud to be the longest serving FTSE100 Company in the region. In AMP7 UUW generates directly and indirectly 22,700 jobs across the company and its supply chain. We estimate this will grow by 7,000 in AMP8. Water and wastewater infrastructure and services underpin every aspect of the regional economy and supports healthy, thriving communities. Further investment in water and wastewater infrastructure is essential for sustainable growth.

As well as shaping the environment, rivers have shaped the towns, cities and rural economies of the North West. The Mersey and Ribble served as critical transport links, developing the industrial heartlands of Manchester, Liverpool and Lancashire. The Eden and Derwent's terrain is suited to hardy hill sheep farming which dominates Cumbria and Northern Lancashire; whilst the low lying rivers Weaver and Douglas in West Lancashire and Cheshire left fertile floodplain soils where arable and dairy farming dominate. Consequently, each of the 14 river catchments which make up the North West have distinct needs and require place-based approaches when planning for long-term goals and uncertainties.

The North West has a rich history of industry and manufacturing, and is still one of the UK's biggest manufacturing hubs. There are 15,000 manufacturing businesses based in the region directly employing around 350,000 people. A significant proportion of manufacturing is for aerospace, pharmaceuticals and automotive industries. The water UUW provides and treats represent critical services that enable manufacturing industries to thrive and our plan ensures we can continue to support the economy and sustainable growth.

In 2022, the North West construction industry was estimated to contribute a total output of nearly £19 billion to the economy. All counties of the North West have high demand for new homes from registered providers (social housing), the private rental sector and mortgage-able properties. Developments range from large scale multi-property sites to individual new builds. General construction continues to contribute to the North West with construction companies developing commercial and industrial premises as well as high density residential developments, usually in city centres. Planning for additional development is an essential aspect of our Water Resources Management Plan (WRMP) and Drainage Wastewater Management Plan (DWMP) processes to enable sustainable growth. We understand development within our region and what we need to do to support growth through the delivery of industry leading developer services.

Tourism plays a key role in the region's economy and culture. Between April and December 2021, the North West region saw the fourth highest number of day visits in England, over 13 million visits, accounting for some 13 per cent of England's day visit market. Populations can increase by up to 68 per cent during peak periods in some popular towns. This creates challenges in planning for water and wastewater services, with fluctuating demand for water and increases in discharges to our sewer network.

Another challenge to the sewer network in the North West is the higher than national average density of food service establishments, with 118.2 per 100,000 population compared to an average of 90.8 per 100,000 population. This creates additional challenges with 'fats, oils and grease' entering the sewers, which over time, build up causing blockages and ultimately sewer flooding or pollution.

The North West generated 11.2 per cent of England's renewable energy in 2021, the third highest producer compared to other regions in England. The majority of the renewable energy generated in the North West comes from offshore and onshore wind. We recognise the importance of supporting green energy and have invested in renewables generation on our sites. This includes combined heat and power (CHP) from biogas and hydroelectric power generation. In addition we host solar photovoltaic systems and wind turbines across a number of our sites. Altogether these renewable sources allow us to self-generate around 20 per cent of our electricity consumption. At our regional bioresources treatment centre in Manchester we produce almost 50GWh of green gas per year, which is exported to the gas grid. This makes us the largest green gas producer in the North West.

Looking ahead, the North West is one of the two nationally fast tracked industrial clusters developing hydrogen generation, storage and distribution networks, and scoping is underway for tidal energy generation in the River Mersey and Liverpool Bay. Our long-term plans for water account for the additional water resource needs which

are required to support hydrogen production in the North West. We have made provision for approximately 30MI/d for hydrogen production in the Strategic Resource Zone supply demand balance in our WRMP and will continue to work with the hydrogen sector to support its development in the North West.

The agriculture, forestry and fishing sector makes up just over 1 per cent of regional jobs but has shaped the landscape of the region and is nationally significant in terms of production. The North West is home to 25 per cent of England's dairy farming with more than 480,000 cows with an additional three million sheep and over 420,000 beef cattle, making up 17 per cent of England's livestock production. The sector is dependent on reliable water supplies as well as having a big impact on water quality through land management practices.

2.3.3 The environment we support and work within

The North West is home to some of England's most beautiful landscapes. Diverse geographies, topography, land use and the weather all make the North West unique. Historically carved by glaciers forming upland lakes and over eight thousand kilometres of rivers, and today affected by some of the wettest weather in England. The history and geography of our region have fundamentally shaped our approach to delivering water and wastewater services.

Investment to protect and restore the environment has been wide ranging. The North West has a legacy of innovations in treatment technologies to benefit the environment, from the birthplace of modern biological treatment at Davyhulme in 1916 through to Europe's largest new build 'Nerada' - an innovative biological treatment process at Blackburn Wastewater Treatment Works, introduced in 2021. More recently, machine learning, artificial intelligence and leading edge analytics through our Dynamic Network Management approach have been important in optimising our systems and maximising existing network capacity to further reduce pollution and improve performance of our systems and assets. Here in the North West we have also led the development of catchment management programmes in the water industry, including our award winning Sustainable Catchment Management Programme (SCaMP) and Catchment Systems Thinking strategy (CaST). We have written about some of the more unique features of our environmental strategies in supplementary document *UUW35 – Environmental strategy*.

Climate - managing rainfall

The North West is impacted by some of the wettest weather in England, with 40 per cent more urban rainfall than the industry average. In addition, the region has experienced numerous, and more frequent, extreme storms in recent years, causing major disruption to communities and infrastructure, including our own.

Resilience to the impact of more intense and frequent storms is a national priority and consequently climate change puts even more pressure on our assets. The Government's third national Climate Change Risk Assessment (CCRA3), reported to Parliament and built on the latest evidence from scientific leaders. It highlights risks to infrastructure services from river, surface water and groundwater flooding as an area where further action is required now. The CCRA states that "river and surface water flooding is already a large risk to UK infrastructure, with each season adding new evidence to underpin the significant magnitude of the threat". Every 5 years we publish a climate change adaptation report which outlines our approach to assessing and managing climate related risk. This report is available on our website³.

The North West has more combined sewers than most other water companies; over 54 per cent of our public sewers carry both foul and surface water compared to an industry average of 33 per cent. Combined sewers fill up more quickly in a storm, as rain collects in the same pipework as wastewater. Coupled with the regions' higher than average rainfall, these conditions mean that UUW storm overflows have typically operated more frequently than elsewhere. Storm overflows were built historically in many parts of the world as an essential way of providing pressure relief valves to protect streets, homes and businesses from sewer flooding. In the North West, rapid urban expansion in the 1800's left a legacy of combined sewer systems in the heartlands of Victorian cities. There are over 2,200 storm overflows across the North West.

The sewer network of the North West has been designed and has evolved to the local and regional climate over the decades it has been in operation. Higher than average rainfall and the associated prevalence of combined

³ <https://www.unitedutilities.com/corporate/responsibility/environment/climate-change/>

sewers together create proportionately greater challenges for draining and treating wastewater. These are dominant factors in the North West having higher levels of sewer flooding from weather related events and more frequent overflow spills to reduce those flood risks. These factors, combined with changing expectations around acceptable levels of service has led to significant investment needs in AMP8 and over the long-term.

In the face of a rapidly changing climate the sewer network is coming under increased pressure to effectively drain the area we serve, especially during extreme rainfall events. With the frequency and intensity of rainfall events forecast to increase under all climate change projections we must take account of, mitigate and sometimes accommodate the increased demand on the sewer network to secure the long-term operability and resilience of the services that it provides. Adapting to both the chronic stresses of gradual season change and the acute shocks of high intensity storms will become more important drivers of change in future years.

We're planning for significant additional rainfall from climate change at the same time as driving down the numbers of storm overflow spills. We are committed to a step change reduction in the numbers of storm overflow spills in AMP8 and have a continued programme to meet Environment Act targets for storm overflows through to 2050. Consequently, there is a significant volume of surface water and wastewater to be managed at many locations, without exacerbating the flood risks that the storm overflows protected against. This will require a large and complex programme of interventions and investment. Collaboration with others will be critical in delivering this historic step change in performance. Responding to tackle overflows and protecting against climate change is an important part of our plan.

Climate - managing water resources

The relatively wetter climate, geological foundations and significant upland areas of the North West have shaped how we provide customers with water. 93 per cent of water resources in the region are from surface water sources - lakes, reservoirs and rivers - with a much smaller proportion from groundwater sources compared to the national average. The North West has the highest ratio of surface water to groundwater sources in England, which means that our water resources reduce comparatively quickly during dry weather, but can also recover rapidly in wet weather. To effectively manage this challenge, we operate the largest fleet of reservoirs in the UK and through our integrated supply network have built flexibility into the system to balance supply and demand needs. Additionally, we have the largest amount of owned water catchment land which we manage and invest in to protect water quality.

Many of our surface water resources are in the upland, northern catchments of Cumbria, whilst a large proportion of customers live in the south of the region. We use large aqueducts to transport raw water from the north, to the large population centres in the south of the region. In AMP8 it will be critical that we maintain and manage these significant assets to ensure resilience for supplies over the long-term, including action to secure resilience to climate change.

We plan for long-term climate change impacts on water resources. Climate change means that in the UK we will have hotter and drier summers, and by 2040 we expect more than half of summers in the North West to exceed temperatures of those experienced in 2003. Sustainability of water resources is a national priority, with the UK climate change risk assessment highlighting that, by the end of the century, a water resource deficit across the UK of between around 1,220 and 2,900 MI per day could arise. According to the UK climate change risk assessment UKCRA, this equates to the daily water usage of between 8.3 million and 19.7 million people.

We work with other water companies through the regional planning group, Water Resources West, to understand and help manage the supply-demand balance, not only for the North West but across the UK. A 2018 report by the National Infrastructure Commission, 'Preparing for a drier future'⁴, highlighted the risk of extreme drought, and supported the twin track approach of investing to both enhance supply and reduce demand to manage this long-term risk. Our 25-year WRMP outlines our long-term investment plan for water resources and describes the combination of demand and supply side options we've identified to build long-term resilience of supplies.

⁴ <https://nic.org.uk/studies-reports/national-infrastructure-assessment/national-infrastructure-assessment-1/preparing-for-a-drier-future/>

Climate - managing water quality

As the majority of North West water resources are sourced from upland surface waters, much of the water we provide is soft, with lower mineral content and lower alkalinity. This makes the water more corrosive to cast iron pipes, contributing to a higher rate of discolouration, consequently this means we need to invest in and provide additional levels of treatment.

Surface water supplies are also prone to the naturally occurring compounds geosmin and 2-methylisoboreneol (2-MIB) that are produced by some algae and bacteria, and can lead to earthy or musty taste and odour in drinking water. We carefully manage water resources through increased monitoring and intelligent source selection during the warmer, drier months when concentrations of these compounds and demand for water are simultaneously at their highest. In recent years, we have mitigated this risk by removing sources, or in more severe cases where the additional treatment is not an option, entire water treatment works from supply until the concentration of these compounds has reduced to a level that will not impact the aesthetic quality of the water for customers.

We anticipate other impacts of climate change on our water resources, including an increased risk of soil erosion and associated water quality issues resulting from an increase in frequency of short, intense summer storms. Our ongoing investment in nature based solutions in catchments to slow flows and reduce soil erosion is a critical part of our long-term plan to deliver resilient supplies.

Protected landscapes

There is widespread recognition of the importance of the North West's landscapes, both environmentally and culturally. Many areas have legally protected status, including: three World Heritage sites, three National Parks and three Areas of Outstanding Natural Beauty (AONB). The functioning of these landscapes is fundamental to supporting the communities and economy of the North West, including essential natural processes that enable water supplies and reduce the risk of flooding. The North West is also home to over 200 Sites of Special Scientific Interest (SSSI) and 55 Special Areas of Conservation (SAC). UUW is proud to own and collaborate in the conservation of these protected areas to protect and restore their critical functions in the water cycle and deliver many wider benefits for recreation, nature and climate regulation.



Working with the Royal Society for the Protection of Birds to protect landscapes

Our partnership with the RSPB has a long standing history. Joint work at our Haweswater estate over the past ten years has delivered benefits for water quality and biodiversity. The partnership has demonstrated that nature-based solutions make a very real contribution to meeting the challenge of a changing climate and the economic pressures facing upland farmers. Our collaborative project to re-meander Swindale beck in Cumbria won the River Restoration Centre's UK River Prize 'Project Scale Award' in 2022.

Figure 2-3: The re-meandering of Swindale Beck (shown before, on the left, and after, on the right)



We work together at several sites, including Bowland in Lancashire, Dove Stone Reservoir near Oldham, and Lake Vyrnwy in North Wales. Across these catchments the partnership delivers benefits such as supporting farming tenants, restoring peatland, creating and managing new woodland, and working to improve the visitor experience.

We actively manage some of the most extensive areas of blanket bog and upland peat in the country, areas which have been identified as internationally important for biodiversity and as stores of carbon. Maintaining and enhancing these peatlands is critical in managing the quality and quantity of water we source for public supplies. These environments are vulnerable; wildfires catalysed by warmer and drier weather conditions have occurred more frequently over the last 10 years, impacting raw water quality, biodiversity, and releasing natural carbon stores.

Rivers, lakes and coastline

We have placed the environment at the very centre of our decision making because delivering great water and wastewater services is fundamentally dependent on the health and resilience of the natural environment. Our investment has protected designated areas and water quality through catchment management, reducing and deferring the need for interventions at our treatment works while also delivering wider greenhouse gas reduction, biodiversity benefits and recreational health benefits.

The North West coast stretches from the Wirral peninsular in the south to Gretna in the north. Along the coast we have 29 designated coastal bathing waters, and 26 designated shellfish waters. Protecting the quality of coastal waters is important for customers and the regional economy with notable tourism hotspots such as Blackpool. The North West marine plan areas are of particular importance to numerous bird species, reflected in the number of statutory and non-statutory designated sites. They include one of the only two entirely marine special protection areas, Liverpool Bay, in England. Coastal areas are characterised by estuaries in the north and south with Morecambe Bay, the largest area of continuous intertidal mudflats and sandflats in the UK.

We recognise the importance of the water environment for amenity, health and recreation. The region has 4 inland bathing waters which are particularly important for customers. We're working with partners through 'Love Windermere', the biggest ever cooperation of sectors to tackle challenges in Windermere. The partnership is developing a science-based plan to set out a road map for environmental protection of the lake.

Increased coastal and riparian erosion resulting from climate change is expected to put more critical infrastructure at risk, such as pipes situated on eroding coastlines and riverbanks. Flooding from rivers presents notable risk to our water and wastewater treatment works or other network assets, which are often located next to rivers to carry out their core functions. This risk of flooding is increasing with climate change.

Agricultural landbank

We support farming through provision of sustainable organic nutrients in recycled treated biosolids, to almost 20,000 hectares of agricultural land each year. The majority of these biosolids are produced following treatment of wastewater in the urban areas of Greater Manchester and Merseyside where there is limited local agricultural landbank, increasing the distance we have to transport biosolids for recycling.

Demand for our biosolids product is shaped by the geography of our region. In the North West the agricultural landbank is characterised by small upland hill sheep farms in the north of our region, and larger dairy farms in Cheshire and the south. The North West landbank available for biosolids recycling is constrained by significant areas of protected landscapes, upland topography, wet weather and large volumes of competing livestock manure inputs. Only 50 per cent of agricultural land is available for recycling, and only 16% is arable, which is the most flexible for biosolids recycling. As a result, we have to travel further to recycle to agricultural land than other water companies.

The relatively lower proportion of local landbank means our biosolids recycling routes are vulnerable to changes. New environmental regulations resulting from changes to the Farming Rules for Water are expected to be clarified in 2025, the impact of these regulations could lead to unprecedented landbank restrictions in the future with insufficient lead times to implement changes. More about these issues is included in supplementary document *UUW58 – Bioresources business plan*.

2.3.4 What the North West's context means for water services

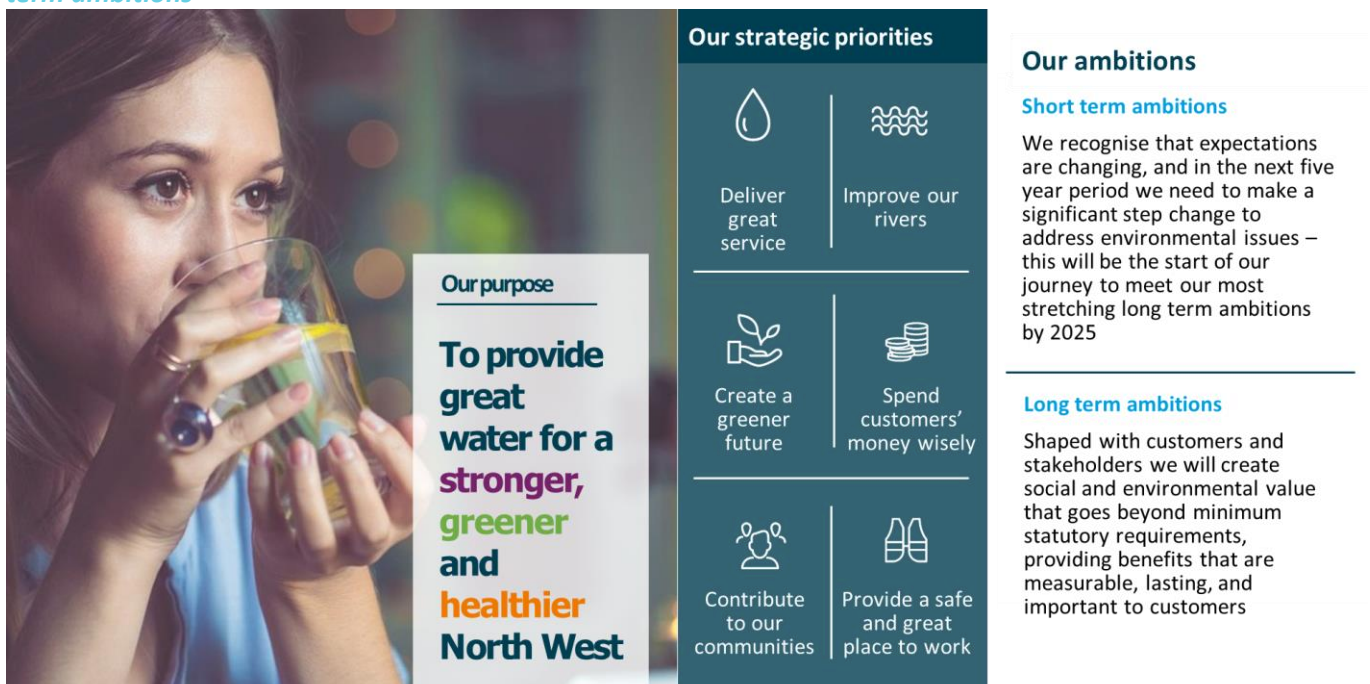
In summary, many of the challenges and opportunities we identify are specific to the North West region and the people we serve. These make the North West distinct from other regions in the following ways:

- We serve customers across five diverse counties which have distinct needs – we need to deliver a plan that works for everyone;
- Our communities have some of the highest levels of deprivation in the country, we need to do more than others to support customers through affordability and vulnerability programmes;
- The North West’s water resources are largely made up of surface water sources which are distributed via aqueducts. Whilst historically this has meant more resilient supplies, those supplies are under pressure both in terms of yields and raw water quality as a result of climate change;
- Urban rainfall is 40 per cent higher than the UK average , posing challenges to the operation of storm overflows and the capacity of our sewerage network, exacerbated by our high proportion of combined sewer systems and the growing impacts of climate change;
- We have strong relationships with others and recognise the value of partnerships and collaboration. As caretaker for a significant amount of land, many of our partnerships operate across catchments. There are distinct challenges and needs across catchments, so using a place based approach to planning enables us to deliver tailored plans;
- We support the levelling up agenda, employing directly and indirectly 1 in 100 jobs and supporting strong manufacturing sectors which rely on strong and stable water services;
- Our industrial heritage means we have a high proportion of heavily modified water courses, and legacy industrial contamination; and,
- Agricultural demand for biosolids recycling is constrained and consequently we travel further than any other water company to recycle our biosolids.

2.4 Our ambitions for the North West

This section describes our purpose and vision, the strategic themes which support the vision and the specific ambitions which underpin each strategic theme in both the long and short term. The line of sight from our purpose and vision through to our ambitions is described below in Figure 2-4. Our shorter-term ambitions link to our AMP8 programme and plan, our longer-term ambitions feed through to our long-term delivery strategy.

Figure 2-4: Our purpose and vision is delivered through six strategic priorities, underpinned by short and long-term ambitions



2.4.1 Our purpose and vision, developed with customers and stakeholders

Our purpose and vision is to provide great water for a stronger, greener and healthier North West. This drives us to deliver our services in an environmentally sustainable, economically beneficial, and socially responsible manner, and create sustainable long-term value.

Over the past five years we have been making great progress towards our goals, delivering for customers, communities, and the environment. We have a strong track record of keeping our promises and doing what we say we are going to do. Further information evidencing our track record in delivering on our promises can be found in Chapter 10.

During this time, we've also been having conversations, listening to customers, communities and stakeholders. We recognise that expectations are changing, and in the next five-year period we need to make a significant step change to address environmental issues – this will be the start of our journey to meet our most stretching long-term ambitions by 2050.

Regular, in depth conversations with customers and stakeholders have shaped our vision and ambitions for this plan and the longer term. We undertake continuous research throughout the year as well as bespoke research projects to understand customer preferences. We've used an independent consultancy to triangulate insight from a wide range of internal, industry and regulator projects as well as operational data to track priorities over time. In addition we have carried out a number of bespoke research projects to understand ambitions and investment priorities for the longer term. This has directly shaped the ambitions and investment proposed in AMP8 and beyond. Further detail on how customers and stakeholders have shaped our plans can be found in Chapter 3.

Customer research and stakeholder engagement reinforced:

- Customers expect great water quality, every time they turn on their taps;
- Customers want to see a step change in the outcomes we deliver for the environment. Tackling storm overflows is an important part of this;
- Customers want us to reduce the amount of water that is leaking from our pipes;
- Customers are concerned about their ability to afford future water charges;
- Customers and stakeholders agree it's important to see step changes in outcomes and want to see these now, however this needs to be balanced by money being invested wisely and efficiently;
- Customers and stakeholders think vulnerable customers should be supported, where even a small change in cost can create a heavy burden; and,
- Stakeholders want the North West to be a thriving community and a great place to invest.

2.4.2 Our six strategic priorities for the North West

To achieve our purpose and vision, we're working towards six strategic priorities. Through our focus on the six strategic priorities we will create social and environmental value that goes beyond minimum statutory requirements, providing benefits that are measurable, lasting, and important to customers. We are committed to being transparent about our operational performance and ensuring strong customer and stakeholder support for the investments we make in delivering greater social and environmental value.

Our six strategic priorities underpin our approach for both the next five years and enable us to think ahead to ensure we can continue delivering great service over the next 25 years, ensuring we are prepared to manage the challenges and opportunities that may arise. The ambitions for each strategic priority and the value these ambitions will deliver for customers, communities and stakeholders, are summarised in the tables below. More information on the value delivered by our plan can be found in Chapter 6.

Strategic priority 1: Deliver great service for all customers

Water and wastewater services are essential for daily life. Delivering great service means ensuring all customers have great water quality, ensuring interruptions to supply are minimised and leakage is driven as low as possible, preventing sewer flooding and supporting vulnerable customers through affordability and priority services schemes.

Our ambitions

Shorter-term

- Support customers who need it most, doubling support through the 2025–2030 period by delivering sector leading affordability and priority services schemes.
- Keep bill increases as low as possible, delivering efficient and best value plans for the long-term and making use of markets to drive efficiency.
- Provide customers with great water quality which is 100% compliant with drinking water quality standards.

Longer-term

- Improve the taste, smell and appearance of water, aiming to reduce contacts by 63% by 2050.
- Aim to eliminate lead pipework by 2070.
- Enhance the network and use cutting edge innovation to manage the challenges posed by climate change, aiming to halve sewer flooding incidents by 2050.

What value will this deliver?

Health and wellbeing? ✓	Economic equality ✓	Trust and transparency ✓	Reduce inequality ✓	Economic growth
Quality of place	Biodiversity and ecosystem health	Air quality	Climate mitigation	Protecting the water environment

Strategic priority 2: Improve our rivers

We are dedicated to protecting and enhancing the North West’s environment and rivers. Managing issues such as storm overflows and flooding is complex and requires removing significant volumes of rainfall from and increasing the capacity of our sewer network. We are determined to improve river water quality in a way that achieves maximum impact as a rate that is affordable, and catalyses action from many parties.

Our ambitions

Shorter-term

- We are targeting a 26.8% reduction in overflow spills during AMP8, as part of a 60% reduction over the decade to 2030 through rainwater management and increased capacity.
- Protect and improve bathing waters, reduce spills to an average of three per bathing season, and invest in our wastewater treatment works to deliver high standards.
- Deliver the best environmental performance, targeting 4* Environmental Performance Assessment (EPA) rating from the Environment Agency.

Longer-term

- Reducing spills from overflows to an average of ten spills per overflow each year by 2050.
- Continue to drive down pollution incidents and eradicate harm from our assets by 2050, employing leading edge technologies to remotely monitor and control our systems.
- Continue to improve the quality of our wastewater treatment works –achieving new standards and reduce phosphorus in discharges by 80% regionally by 2038.

What value will this deliver?

Health and wellbeing?	Economic equality	Trust and transparency ✓	Reduce inequality	Economic growth
Quality of place ✓	Biodiversity and ecosystem health ✓	Air quality	Climate mitigation	Protecting the water environment ✓

Strategic priority 3: Create a greener future

We are committed to mitigating our contribution to further climate change and to adapting iteratively to the changes we experience. We want to eliminate waste and will continue to develop and maximise the value created through recovery and re-use of our vital sludge resource. We will keep our finger on the pulse of new and emerging issues for the environment.

Our ambitions

Shorter-term

- Use our biosolids, land and other assets for clean energy, to generate energy from waste.
- Transition our cars and vans to low emissions options by 2028.
- Reduce household water use by 10% by 2030 (from 2019/20 baseline)
- Protect nature and biodiversity through our operations, and work with partners to maximise benefits.

Longer-term

- Support customers to reduce water use to an average 110 litres per head per day by 2050.
- Meet our ‘science based approach’ targets towards net zero greenhouse gas emissions by 2050.
- Embrace circular economies, recover and recycle nutrients in biosolids to provide a sustainable source of nitrogen and phosphorus for famers.
- Deliver integrated wastewater and biorefinery hubs to recover energy, nutrients and CO₂.

What value will this deliver?				
Health and wellbeing?	Economic equality	Trust and transparency ✓	Reduce inequality	Economic growth ✓
Quality of place	Biodiversity and ecosystem health	Air quality ✓	Climate mitigation ✓	Protecting the water environment

Strategic priority 4: Spend customers’ money wisely

We recognise the importance of keeping bill increases as low as possible at a time when household wallets are facing upward pressures from many services. This financial pressure comes at a critical time when urgent action is needed to improve the health of our environments and ensure services are resilient to long-term challenges. We’re maximising efficiencies to ensure we can deliver more at an affordable rate.

Our ambitions

Shorter-term

- Through robust challenge and use of markets we have identified £375 million of base efficiencies and £376 million of enhancement efficiencies.
- Improve asset management and embrace technology to proactively monitor, respond and invest in assets.
- Deliver ‘value engineering’ to ensure we get value for money from our supply chain.
- Leverage digital and automation technologies, to streamline our operation, such as through the delivery of dynamic network management to more proactively manage our assets.

Longer-term

- Through adaptive planning, we consider the most appropriate phasing of investment across our system over time, to ensure the burden is shared equitably between current and future customers.
- A robust and resilient financial position, and ability to raise efficient financing, is essential to ensure our ability to fund the long-term infrastructure projects needed to ensure great water now and in the future.

What value will this deliver?				
Health and wellbeing?	Economic equality ✓	Trust and transparency ✓	Reduce inequality	Economic growth
Quality of place	Biodiversity and ecosystem health	Air quality	Climate mitigation	Protecting the water environment

Strategic priority 5: Contribute to our communities

Our work places us at the heart of communities and we strive to engage fully with them and work in partnership. We generate value for communities across the North West through local investment, partnerships and educational programmes, as well as employee involvement.

Our ambitions

Shorter and longer-term

- Be visible in our communities, demonstrating what we deliver for the North West, we’re engaging with local communities across the five counties of the North West (section 2.7).
- Be open, regularly engaging with customers and stakeholders and committing to sharing data, such as real-time spill data which will be made available by the end of 2023.
- Manage our land responsibly, provide access to green and recreational spaces through our catchment land.
- Deliver social value and environmental value through our operation.
- Create partnerships to drive efficiency and deliver additional social and environmental value through these.
- Build on our track record of successful partnerships and being valued as a trusted partner.

What value will this deliver?

Health and wellbeing? ✓	Economic equality	Trust and transparency ✓	Reduce inequality	Economic growth
Quality of place ✓	Biodiversity and ecosystem health	Air quality	Climate mitigation	Protecting the water environment

Strategic priority 6: Provide a safe and great place to work

Our colleagues are the driving force behind what we deliver, and form the backbone of our organisation. Providing a safe and great place to work means putting health, safety and wellbeing above all else, attracting and developing a diverse group of talented people, and creating an inclusive workplace where people are empowered to contribute.

Our ambitions

Shorter and longer-term

- Build a zero harm culture and positively challenge each other to constantly improve our health, safety and wellbeing.
- Attract and nurture great talent, provide training and development opportunities to engage talent through our award winning apprenticeship and graduate programmes.
- Support and show leadership in driving new inclusivity initiatives such as ‘Ambitious about Autism’ and ‘10,000 Black Interns’.
- Build on the success of our apprentice programme and maintain ‘good’ status from Ofsted for our training academy.
- Create a diverse, inclusive and supportive working environment where all our colleagues feel valued and free to contribute to their full potential.
- Empower our people to contribute, encouraging diverse thought and ideas to deliver better outcomes.

What value will this deliver?

Health and wellbeing? ✓	Economic equality	Trust and transparency	Reduce inequality	Economic growth ✓
Quality of place	Biodiversity and ecosystem health	Air quality	Climate mitigation	Protecting the water environment

2.5 Addressing long-term issues for the North West

2.5.1 Long-term strategies and adaptive planning

The challenges and opportunities outlined in section 2.3 are relevant for the next five year period and the longer term. We welcomed Ofwat's guidance on long-term delivery strategies (LTDS) and the focus on long-term needs and uncertainty to inform our AMP8 plans. We have adapted our approach to long-term planning in response to Ofwat feedback and guidance. We have embraced adaptive planning as an approach which allows us to test a range of future scenarios to account for uncertainty and provides a systematic approach to plan for 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. This is presented through a 'core pathway' reflecting the most likely investment but which keeps other options open to manage future uncertainty. We have considered the uncertainty associated with particularly complex issues including climate change, population growth, technology, and abstraction reduction needs. The impacts of these drivers for change are presented through 'alternative pathways'. Our approach to developing the LTDS and adaptive plans are described in detail in *UUW12 - Long-Term Delivery Strategy*.

Planning for the long-term has supported us in defining our performance targets for AMP8 and identifying the key enhancements required in the next five years. For example, prioritising sustainable drainage and monitoring impacts before investing in more traditional assets; or carrying out modelling and investigations to ensure longer term solutions are best value. Through this process we have confidence that our AMP8 investment is efficient, well targeted and low regrets.

2.5.2 Key messages from our Long-Term Delivery Strategy

Our long-term strategy includes low regrets investments that enable our forecast outcomes to be delivered under a range of future scenarios. It includes investment that aims to ensure:

- In the period between 2030 and 2050, we can deliver forecast outcomes under the benign scenarios which we have conducted scenario testing against. Adverse scenarios may require that we switch to an alternative pathway; and
- Throughout the period to 2050, we invest in low regrets activities to keep options available to switch to alternative pathways, for example by delivering enabling works in the shorter term for uncertain needs.

We have tested against a range of scenarios to ensure that our plans can adapt to future uncertainty in the face of climate change, population growth and environmental changes, as well as understanding the opportunities offered by innovation and technology.

Our long-term strategy seeks to enable us to deliver against our ambitions by investing in our existing assets to maintain and maximise performance through base expenditure, and delivering against new requirements through enhancement expenditure.

We intend to review our long-term strategy annually from AMP8 and fully update cyclically, at least every five years, reflecting latest data on performance, trends, scientific understanding and technical capability. This is timed to inform our comprehensive five year plan, helping ensure a highly confident approach for every investment cycle.

Long-term strategy for water

Our LTDS outlines an average of just under £1 billion of enhancement expenditure each AMP over the next 25 years for water. Climate change is putting water resources under increasing pressure across the UK, a result of hotter and drier summers.

Our proposed investment, plus our base expenditure, targets ambitious performance: halving the level of leakage, reducing non-household demand by over 14 per cent and reducing water use per person per day to 110 litres by

2050. Our targeted reductions in demand aim to support improvements in supply resilience to climate change and deliver benefits for greenhouse gas (GHG) emissions.

Our plan also aims to deliver water that is resilient to challenges, such as climate change, asset health and potential risks from emerging contaminants and associated new water quality standards, so that we can continue to deliver excellent water quality. We target outcomes which support national water supply resilience by developing options which could enable us to transfer large volumes of water outside our region during times of need elsewhere in the country.

Our proposed plan for water is formed of low regrets solutions which are flexible in addressing uncertain futures. They enable us to deliver our ambition of providing broad benefits to customers in the North West as well as supporting national water resource needs and delivering environmental improvements.

Long-term strategy for wastewater

Our proposed expenditure for wastewater marks a step change in investment through to 2050 averaging around £6 billion per AMP for wastewater enhancement. Such levels of investment are unprecedented, but crucial to tackle the long-term challenges we have outlined, alongside stretching performance delivered through base.

Our LTDS forecasts significant increases in future wastewater investment, driven largely by investment in storm overflows and management of nutrients from wastewater treatment works. This reflects our dedication to tackling the pressing environmental issues which are priorities for customers and stakeholders. The scale of change required to tackle storm overflows is exacerbated in the North West due to our higher prevalence of combined sewers and high urban rainfall.

Our core and alternative pathways for wastewater address long-term and interim targets set out by Government. We recognise that a step change in our approach to tackling issues such as storm overflows and flooding is required to deliver against the targets in a way that delivers best value. We've outlined bold ambitions through our Advanced WINEP proposal in collaboration with regulators to unlock barriers to delivering nature based solutions and we are excited that we have been given approval to proceed with this.

Our LTDS projects reductions in storm overflow spills to less than 10 per year, reduce internal flooding by 50 per cent and external flooding by 30 per cent. We aim to enhance the resilience of our network, for example proactively reducing sewer collapses. By 2050, we aim to reduce pollution incidents by 33 per cent. We will protect and restore catchments through our industry leading catchment systems thinking approach, including bold early action by 2030 to improve 6,987 hectares of Sites of Special Scientific Interest (SSSI) and almost 289.9 km of river. Additionally, we are investing to maintain the status of our 26 shellfish waters and 29 bathing waters.

Our plan offers a flexible, low-regrets, and best-value solution, culminating in substantial environmental improvements. This step change in investment aims to ensure that our wastewater services deliver for customers while safeguarding the natural environment for future generations.

Long-term strategy for bioresources

Our long-term plan for bioresources identifies the need for an average of £360 million of enhancement expenditure each AMP over the next 25 years. We anticipate a step-change in the bioresources business model, although there is significant uncertainty over the scale and the timing of the change.

The uncertainty on future availability of landbank for biosolids recycling means an adaptive long-term plan is critical. The scale of change required, if landbank is no longer available, will take multiple AMPs to put in place the solutions to provide guaranteed alternative outlets. We have prioritised low regrets investment where we have certainty over the requirements. However, if we require an immediate (AMP8) move away from recycling biosolids to land (a deviation from our core pathway), this may require immediate costs of up to circa £300 million to divert biosolids away from agriculture. This would be alongside commencing and committing to a further £700 million in AMP8 and AMP9 to deliver a resilient and long-term alternative outlet for biosolids. We therefore propose an in-AMP uncertainty mechanism for the bioresources price control as set out in Chapter 9.

AMP7 has seen multiple shocks to the biosolids market and we will deliver agreed WINEP investment of almost £170 million in AMP8 to improve the resilience of our biosolids recycling service. The risk of losing the sludge recycling outlet to land is increasing, requiring acceleration of investment aligned with our core pathway.

We aim to protect the environment through a phased transition out of biosolids recycling to agriculture by 2050 to match the growing environmental ambitions of customers and regulators. We aim to deliver resilient bioresources services that can meet changes in demand resulting from population growth and increasing standards of wastewater treatment leading to increased raw sludge production. We will utilise markets for delivery where they provide best value.

2.5.3 Monitoring progress against the long-term plan

The Board will retain its overall role providing challenge, support and advice on the LTDS and all our strategic and long-term planning. Strategic matters are frequently discussed with the Board, a specific review of the LTDS will be undertaken mid-AMP, and sooner if deemed appropriate in response to a strategically material development. This frequency provides a formal sign off for the latest LTDS every five years, and a mid AMP progress review.

The Executive will continue to have a leading role in monitoring, shaping and delivering the LTDS through an annual review, and sooner if deemed appropriate in response to a strategically material development.

A monitoring plan has been developed to underpin the above reporting and governance measures. This plan has been designed to integrate with our existing corporate risk management process, to track how our adaptive plan is performing and if and when an alternative pathway may be required. Our LTDS will further strengthen our corporate risk processes by maturing its inclusion of long-term risks. Further information on our monitoring approach for our adaptive plans can be found in our LTDS (*JUW12*).

2.6 How the next five years contributes to our long-term ambitions

Our plan for the next five years outlines the activities and programmes we've developed collaboratively, shaped by input from customers and stakeholders. We've developed our plan for the next five years in the context of the long term, ensuring that we deliver activities which are low regrets and maintain and build resilience to long term challenges such as climate change and population growth. Our plan offers great value and forms the first five years of our new LTDS, marking the next steps on the journey to achieving our stretching long-term ambitions for customers and the environment.

2.6.1 Our strengths and areas for improvement

We recognise that we have areas of strength as well as some significant long-term challenges. In developing our plans for AMP8 we have considered where we can go further to continue to deliver industry leading outcomes for customers, and identified areas where there are significant long-term challenges which need to be addressed. For the latter, we have focused efforts to aim to deliver step changes in our performance over AMP8.

Our strengths include:

- Catchment management delivering the sector's first catchment permits and nutrient balancing regimes through our leading catchment systems thinking approach;
- Implementation of cutting edge artificial intelligence including real time monitoring and control through Dynamic Network Management;
- Award winning customer support schemes and priority services;
- Leading the industry with our frontier performance on pollution an sustained EPA performance; and,
- Identifying and delivering new ideas through our open innovation model.

Our significant long-term challenges include:

- Achieving a step change in performance on storm overflow spills;
- Further improving wastewater treatment to meet new stringent permits;
- Targeting a 50% reduction in leakage;
- Reducing household and non-household consumption;
- Reducing contacts about the taste, smell and appearance of drinking water; and,

- Delivering the step changes required at a pace which is affordable for customers.

2.6.2 Highlights of our plan for the next five years

Achieving a step change in performance on storm overflow spills

To significantly reduce the frequency of storm overflows we will deliver the largest investment for a century in the North West's wastewater network. We're delivering investment to vastly reduce the spill frequency at 437 storm overflows.

Advancing industry frontier performance on avoiding pollution

We are proposing a 25 per cent reduction in pollution incidents by 2030 and zero category one pollution incidents which are the most serious form of pollution.

Further improving wastewater treatment to meet new stringent permits

Our environment programme (WINEP) for AMP8 tackles a range of environmental issues including investment to meet new permit obligations for wastewater treatment standards preventing deterioration along more than 155km of river.

Targeting a 13% reduction in leakage and reducing household and non-household consumption

We will invest in a dual track approach for resilient water resources. We are prioritising reductions in leakage and a significant demand management programme including water efficiency and metering.

Reducing contacts about the taste, smell and appearance of drinking water

Our AMP8 plan will continue to deliver our water quality first programme to ensure that drinking water is of the highest standard for customers and communities, and resilient to the impacts of climate change.

Delivering the step changes required at a pace which is affordable for customers

We recognise that affordability will continue to be a significant priority for our customers, and we aim to keep bill increases as low as possible. Our AMP8 plan aims to support more than 590,000 customers through an unprecedented £525 million of affordability support to those in need, including direct financial contributions from shareholders of £200 million and which is prioritised over dividend distributions.

Our AMP8 plan delivers our most stretching performance commitment levels (PCLs) on both common and bespoke performance commitments, informed by customers' priorities for key service areas. We are working with communities, stakeholders and partners to achieve the PCLs in the most affordable way so that our AMP8 plan continues to deliver against our track record of great performance.

More information on the stretching and ambitious performance improvements and the targets we propose to deliver for customers is set out in Chapter 5.

2.6.3 How we will work towards our long-term ambitions in the next five years

Our five year plan for water

Our strategic priorities for water over the next five years involve investment to deliver water services that are fit for the future through investment to improve water sufficiency, continue to deliver great water quality, and build resilience to climate change.

We will continue to deliver a reliable supply of great, healthy water to homes and businesses across the North West. The health of the community is our highest priority, and the water we supply will meet all health based water quality regulations. We will continue to build on the successes of AMP7, with a focus on water quality first. We propose to deliver a further step change in water quality performance, targeting a 26 per cent improvement in water quality contacts. We aim to avoid water discolouration for 1.38m customers in Merseyside and Cheshire through investment in the Vyrnwy aqueduct.

In order to effectively achieve our ambitions for water, we will focus on: reducing water demand targeting water usage in homes and businesses; significantly reducing leakage using innovative techniques to target and proactively replace pipes; and investment in tools to deliver digitally enabled proactive maintenance. We will build on our achievement in AMP7, increasing our annual water mains renewal rate in AMP8 to over 0.4 per cent. This is in line with our long-term target of 50 per cent leakage reduction by 2050. To help achieve this, we will be replacing over 690km of water mains over the next 5 years.

We will reduce the impact our operations have on customers and improve water supply resilience. We're targeting the industry upper quartile for supply interruptions, reducing these by 13 per cent and aim to reduce the rate of unplanned outage (failures and breakdowns) at our water treatment works by 83 per cent in AMP8.

We will install 900,000 smart meters to homes and businesses, giving them the tools they need to reduce their consumption and bills whilst delivering reductions in per capita consumption (PCC) in line with stretching government targets, including a 4.5 per cent reduction in AMP8 (from 2019/20 baseline) and on track to our target of 110 litres per head per day by 2050.

Our proposed AMP8 plan for water will enable us to target the following:

- Upgrade over 928km of water mains and replace 30,000 lead supply pipe connections to homes;
- Install of 900,000 meters for both household and non-household customers with a lowest bill guarantee for household customers;
- Deliver an additional 22 million litres of water and a 50% reduction in likelihood of implementing temporary use bans;
- Reduce water supply interruptions by 13%;
- Invest in 5 water treatment works to manage raw water quality deterioration;
- Upgrade 65km of the Vyrnwy aqueduct;
- Protect 5 water mains at risk from river erosion;
- Enhance physical and cyber security protection to ensure resilient supplies to the 7 million customers across the region; and,
- Invest in power resilience at our critical sites to secure supplies for 5 million customers.

Further information on our plan for water for the next five years can be found in supplementary document *UUW57 – Water price control business plan*.

Our five year plan for wastewater

Over the next five years we're proposing a programme of transformational change for our wastewater network. The scale of investment needed to tackle storm overflows in the North West is unprecedented and we've optimised our delivery model to enable us to manage this challenge.

Our Better Rivers programme has escalated action on overflows ahead of 2025, and our AMP8 plan includes our largest programme of investment to secure further environmental benefit and reduce storm overflow spills at 437 overflows. Investment includes rainwater management to reduce storm overflow spills and delivering long-term resilience to climate change by managing rainwater before it enters the sewer system. Through this investment we will make bold progress towards achieving the long-term targets outlined in the Environment Act: eliminating harm by 2035 and achieving no more than an average of 10 spills at all sites by 2050.

We're working with partners to identify opportunities to co-create and co-deliver rainwater management solutions, maximising additional value created. Drainage regulation reform which the Government is currently considering through the review into the implementation of schedule 3 of the Flood and Water Management Act 2010 (Jan 2023) would further support our action on rainwater management.

We're investing to achieve long-term Environment Act targets for an 80 per cent reduction in phosphorus by 2038. We will undertake low regrets preparatory work in AMP8 to inform effective and well considered plans for the longer term. For example, our programme of investigations to understand the best way to tackle water quality in the River Mersey.

We will digitally enable our network to be the most proactively managed across the industry. Our strategy is to 'control the controllable' to avoid non-hydraulic flooding and pollution events through expansion of our DNM approach, delivering remote monitoring and control capabilities throughout the sewer system. We will continue customer awareness campaigns targeted around water and wastewater behaviour and introduce large-scale investment in rainwater management and property-level mitigation to secure resilience against severe weather.

Our proposed AMP8 plan for wastewater will enable us to target the following:

- Improve 437 overflows delivering a 26.8% spill reduction and deliver a 32% reduction in internal sewer flooding;
- Build on our track record of industry leading pollution performance, reducing incidents by a further 25%;
- Deliver all of our WINEP obligations to meet new permit requirements improving 386km rivers;
- Invest in-line with our core pathway to achieve long-term Environment Act targets for an 80% reduction in phosphorous by 203;
- Work closely with developers to ensure new supply and demand is sustainably managed, supporting an additional 61,736 people in the North West;
- Improve power resilience at key sites and protect key wastewater treatment works and at risk sewers from coastal and river erosion.
- Invest in rainwater management to manage pressures on the sewer system at or close to source; and,
- Promote nature based solutions through our innovative Advanced WINEP to address future spill target, building on our catchment systems thinking approach.

Further information on our plan for wastewater for the next five years can be found in supplementary document *UUW56 – Wastewater price control business plan*.

Our five year plan for bioresources

The bioresources sector is experiencing a period of unprecedented change driven by environmental concerns, increased regulatory control and economic drivers. We believe that our bioresources business has reached a critical juncture and it has become apparent that we must now start to transform our service.

During AMP7 there have been significant challenges for our bioresources business. We experienced severe disruption to the bioresources market from the Environment Agency's revised interpretation of Farming Rules for Water, as yet unresolved cost shocks from the implementation of the Industrial Emissions Directive and publication of the Environment Agency Sludge Strategy signalling further change in the sector. These AMP7 challenges have inhibited the development of the bioresources market and are symptomatic of the need for change. It is imperative that our future planning, alongside the regulatory approach at PR24, must be sufficiently resilient and flexible to adapt to changing markets and regulation, as well as accommodating exceptional levels of uncertainty.

It is clear from our engagement with customers and stakeholders that the industry must address increasing and emerging concerns regarding nutrient management, emissions and emerging contaminants. We have listened and this is driving new investment to ensure we continuously improve our service.

We have developed an ambitious and efficient long-term strategy to meet these new challenges and realise opportunities to deliver better outcomes for customers and the environment. It is our aim to ensure that sludge treatment and recycling can support the delivery of national priority outcomes including sustainable agriculture, a circular economy, net zero carbon and efficient costs for customers.

AMP8 is the first step of our long-term transformation journey, and is focussed on delivering improvements where there is greatest certainty over the requirements. In AMP8 we will deliver low-regrets actions to ensure regulatory compliance and improve landbank resilience to sustain biosolids recycling to agriculture. Our AMP8 plan also ensures maximum flexibility by keeping multiple strategic pathways open through alignment with our LTDS.

Our proposed plan for bioresources will enable us to:

- Target 100% compliance with ambitious new regulatory expectations, deliver 60 days storage to increase resilience in our biosolids recycling to agriculture operations and enhanced sludge screening to improve the quality of 400,00 wet tonnes of biosolids per year;

- Deliver enhanced environmental protection and ensure an efficient service for customers by investing to increase our service levels to meet ambitious new regulatory expectations and improve operational resilience;
- Generate additional value by reducing operational carbon emissions and recover nutrients, and green energy equivalent to 19% of our total electricity consumption; and,
- Coordinating and collaborating with others to promote the development of the bioresources market and create an opportunity for up to 20% of our sludge treatment activity.

Whilst the need for change is clear, there is considerable uncertainty over the scale and timing of changes for the bioresources sector. We have no clear way to accommodate and plan against the risk that there will be insufficient landbank for biosolids recycling in AMP8. The scale of the investment that would be required if risks manifest as a cost-shock fundamentally threaten the viability of the bioresources business. To proactively manage uncertainty we propose that significant bioresources risks must be notifiable items that would trigger an interim determination (iDoK) if risks materialise in-AMP.

Further information on our plan for bioresources for the next five years can be found in supplementary document *UUW58 – Bioresources price control business plan*.

Our five year plan for retail

Over the next five years we're proposing a stretching plan for retail with base operating costs in line with AMP7, with additional costs driven by growth, real price effects, and delivery of performance improvements, offset by efficiency savings.

Across our plan we've optimised to deliver the lowest sustainable cost through best value solution assessment, helping us to identify cross-benefits between price controls that allow us drive further overall efficiency. Our plan builds on the significant efficiencies we are delivering in AMP7 and identifies new ways of working to enable us to deliver even more value for money through use of markets, innovation, robust cost challenge and partnership working. We believe our plan is consistent with achieving top five ranking in C-MeX, D-MeX and BR-MeX and delivering affordability support for over 1 in 6 households.

We've balanced significant cost drivers with deliverability, financeability and customer affordability: We have significant requirements to meet in AMP8, but we have confidence in our ability to deliver what we have set out to do and to secure best value financing, based on external cross-sectoral benchmarks, helping us to fund these large capital projects and support intergenerational equity to maintain affordable bills for customers. Further information on our plan for retail for the next five years can be found in supplementary document *UUW55 – Retail price control business plan*.

Our five year plan for developer services

The diverse geography of the North West includes densely populated urban centres such as Manchester, Liverpool and Preston as well as rural areas across places including Cumbria, Lancashire the Pennines and Cheshire. All of these areas have high demand for new homes from registered providers (social housing), the private rental sector and mortgageable properties.

Over the next five years our plan for developer services continues to focus on improving the service that we provide to developer, SLP and NAV customers by utilising innovative technology and embracing a continuous improvement culture. We work to offer speedy but right first time services, provide clear and consistent advice and guidance to customers as well as giving customer's choice. Our goal is to be the top-performing water company within the D-MeX rankings.

We will deliver tailored experiences for developer customers and their supply chain utilising digital platforms supported by individual customer case management. We will continue to understand development within our region and what we need to do to support growth through the delivery of industry leading developer services.

Our services will be delivered through a cost reflective and transparent charging approach. We want the North West to lead the way in delivering sustainable homes by incentivising developers to build homes that use less water and effectively manage surface water. Further information on our plan for developer services for the next five years can be found supplementary document *UUW54 – Developer services price control business plan*.

2.7 Opportunities and challenges across the counties of the North West

2.7.1 The North West is made up of diverse counties

Our region is diverse and is made up of five distinct counties with different needs socially and environmentally. The five distinct counties of the North West can be seen in Figure 2-5. We've built our plan for the next five years around the five counties of the North West, as each is different with its own particular challenges and opportunities. Through embedding this approach we are delivering outcomes which are tailored for customers in the places where they live.

Because delivering locally is important for us, we've been working with stakeholders and customers to develop our understanding of unique needs at a local level across the sub regions of the North West so that we can develop plans that are more relatable to the communities we serve.

We also know that customers' expectations and needs are constantly evolving. We want to be ahead of the curve by anticipating and meeting these expectations by communicating with customers more regularly about our plans and progress and listening to their feedback. This will enable us to ensure investment programmes are in line with what customers want and provide a more transparent and accountable service.

In the following sections we have summarised the unique challenges and opportunities for operating in each of the North West's five counties – and the areas adjacent to them - and how we've tailored our plans for each. Our five county level plans make our investment programmes and the benefits that they deliver more meaningful to customers.

Place-based planning

Place-based planning is the approach we're using to develop our five county plans. This involves working with partners to tackle complex, long-term and system-level challenges that cannot be addressed in organisational silos. Place-based planning means we can identify the right solutions and develop tailored outcomes which deliver for local people and the needs of the environment. We aim to deliver solutions including a combination of traditional hard engineering approaches, nature-based solutions and behavioural change initiatives which are tailored to meet the needs of the local area.

In AMP7 we undertook three place based planning pilots in the Upper Mersey, the Eden and the Fylde coast. In the Upper Mersey, this work has evolved into an integrated water management plan for Greater Manchester⁵, developed with Greater Manchester Combined Authority and the Environment Agency. In Merseyside we're working with Liverpool City Region to deliver an integrated water management investigation in AMP8. Further information - including on these two partnerships - is provided in supplementary document *UUW38 – Working in partnership*.

Figure 2-5: The five counties of the North West



⁵ <https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/integrated-water-management-plan/>

2.7.2 Cumbria

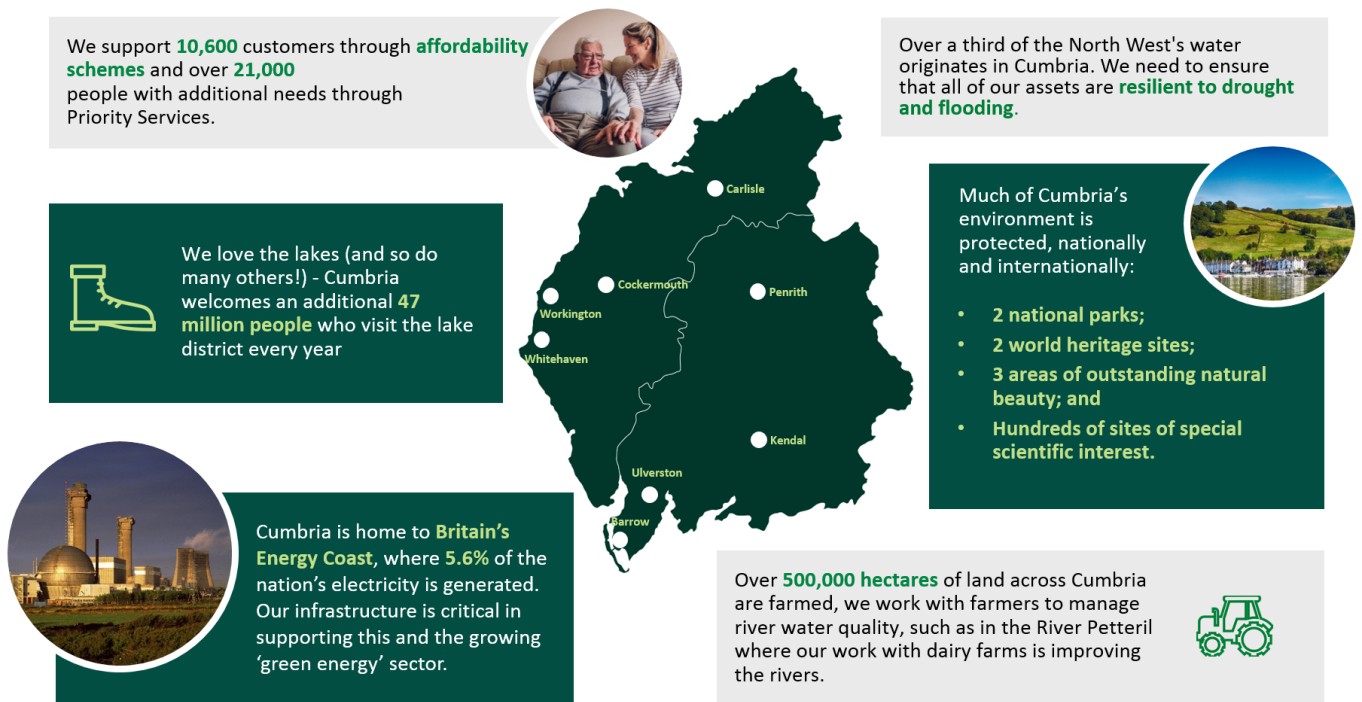
Cumbria is home to some of the wettest areas in England. Consequently, over one third of the North West’s water supply originates in Cumbria, captured in reservoirs and transported across the region. We will work to increase the resilience of supplies during dry weather events and ensure that in doing so the environment is protected and deliver improvements to catchments which protect raw water quality, delivering sustainable abstraction now and for the future.


Cumbria is home to a wide variety of special landscapes: two national parks, two world heritage sites, three areas of outstanding natural beauty and hundreds of designated sites of special scientific interest. We will continue to invest, working alongside partners, including landowners, non-governmental organisations (NGO’s) and community groups, to protect these landscapes and manage our owned catchment land.

Cumbria has finely balanced needs across the tourist economy, food production and delivering for protected environments, preserving this balance is critical over the long-term. We will provide services which respond to changing needs throughout the year and work with other partners to preserve the environment.

Keeping rivers and lakes clean and beautiful is hugely important for Cumbria. Our investment will ensure great river water quality, protecting biodiversity and contribute to achieving bathing water standards across coastal and inland bathing waters in Cumbria. Beyond our own operation, we’ll support sustainable agricultural practices, through our work with partners to maximise benefits for river water quality.

Figure 2-6: Our operation across Cumbria





Kevin Sayers
Area Engagement Lead - Cumbria

Kevin is our area engagement lead for Cumbria. His main stakeholders include two new unitary authorities – Westmorland & Furness and Cumberland – the Lake District National Park Authority and many landowners around the strategically important water sources at Haweswater and Thirlmere reservoirs. Water quality and flooding are high priority issues for Cumbrian stakeholders and Kevin plays a leading role in the Love Windermere partnership, which focuses on the collective efforts needed to improve the Lake’s water quality, as well as representing United Utilities on the Lake District National Park Partnership.

Cumbria has a number of challenges and opportunities:

To manage these challenges, we're:

Affordability and supporting vulnerable customers

The working age population across Cumbria is forecast to decline by 15% between 2016 and 2036, offering support for vulnerable customers in remote communities is important.

We're supporting over **10,600 people** who are struggling to pay their bills and helping **21,300 customers** with additional needs through "Priority Services". Across the North West we are more than **doubling** our support by 2030.

Jobs and growth

Cumbria's Energy Coast is home to over 20% of the UK's windfarm generation capacity, whilst offering potential for future nuclear and hydro-electric generation, resulting in additional water needs for the west coast.

We're facilitating over £1 billion of investment in **the Haweswater aqueduct**, ensuring resilient water supplies across the North West, including Cumbria.

There are pockets of significant growth including St Cuthbert's Garden Village in Carlisle as well as in Penrith, Whitehaven and Ulverston. Each of these comes with additional water needs.

We're investing in schemes to **unlock development** restrictions, as we're doing in Carlisle to support the sustainable development of St Cuthbert's Garden Village.

We're employing **650 people** across Cumbria. Our increased future investment will create more green jobs.

STRONGER

Protecting rivers and catchments

Cumbria is home to over 2,000 square kilometres of national park, two world heritage sites and 278 SSSIs; landscapes which are protected under legislation.

We're protecting and improving **219km** of rivers, including removing barriers to **fish and eel migration** at Haweswater.

Cumbria has many industries from farming to tourism. A balance must be sustained to meet the needs of farming, the visitor economy and the environment.

We're working with stakeholder groups across Cumbria to **reduce pollution at 9 locations** by promoting sustainable farming practices.

Cumbria receives some of the highest levels of rainfall in England. This can lead to flooding and widespread disruption.

We're investing to reduce spills from **158 storm overflows**.

GREENER

Partnerships

Cumbria has well established NGOs and community groups that are passionate about the environment. They want to be involved and support our activities.

Wild Ennerdale, Love Windermere and the Catchment Partnerships for West Cumbria, Eden and South Cumbria are a few examples of stakeholders we are working in partnership with to deliver **better outcomes for the environment**.

Sustainable water supplies:

We look after many areas of countryside across Cumbria including the catchments surrounding Thirlmere and Haweswater. Our investment in the upland catchments will deliver improvements to the environment, benefit water quality and support continued free access to green space.

Restoring **peatland across 2144ha** across Cumbria. This will improve the quality of the raw water in our reservoirs and rivers, as well as capturing carbon.

HEALTHIER

Access and recreation:

Cumbria supports a thriving tourism industry. Population fluctuates throughout the year, as 47 million tourists visit the area. Water and wastewater services, need to be flexible to meet changes in demand.

We're managing sites to ensure they **are freely accessible** in some of Cumbria's most beautiful countryside: Haweswater, Thirlmere and Ennerdale.

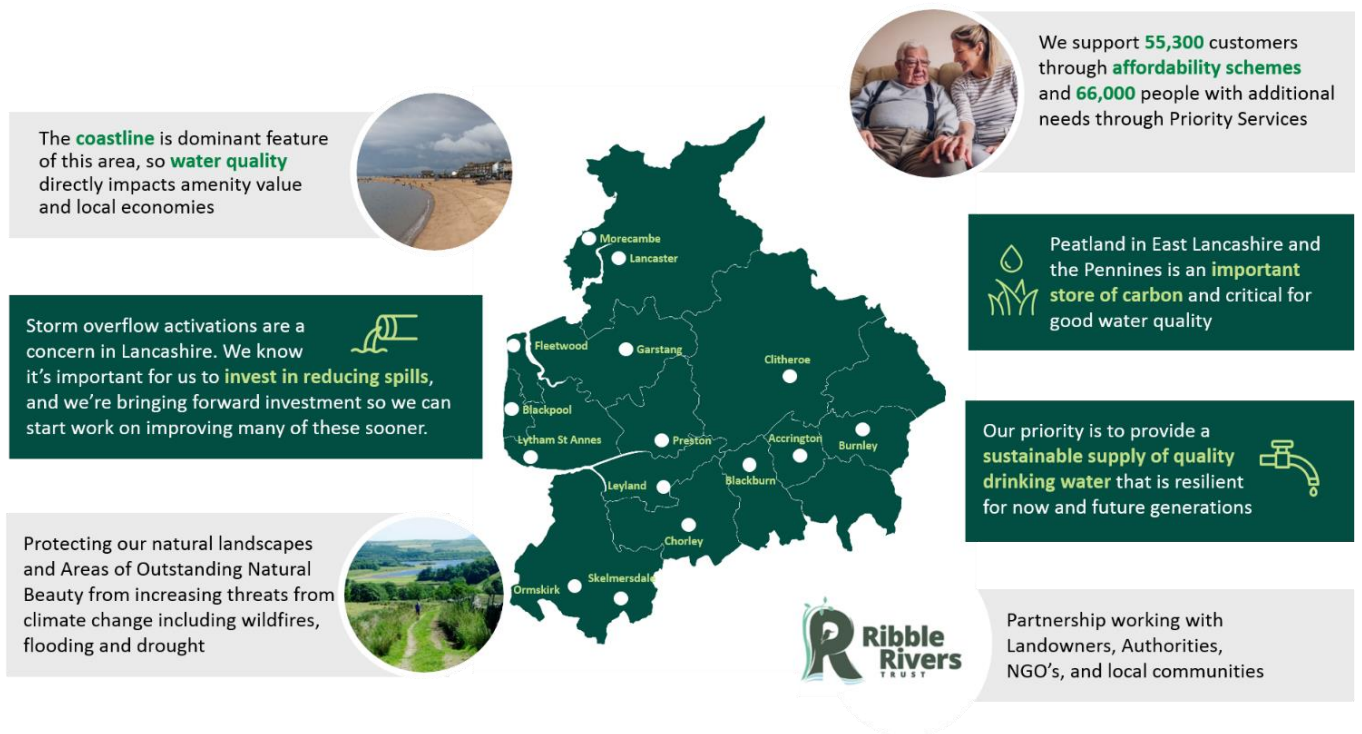
2.7.3 Lancashire

Lancashire’s coastline and popular beaches means that bathing water quality is a priority for both customers and visitors to the region. With multiple coastal towns and cities such as Blackpool, Morecambe and Southport relying on tourism related revenues, it is important that we continue to invest and work with partners to ensure the right solutions to improve and manage bathing water quality.

Lancashire is home to some of the region’s most beautiful natural features. The county is carved by many rivers drained from the Pennines, including the Ribble, Wyre and Lune, all of which drain to the west of the county, and enter the Irish Sea. Protecting the Areas of Outstanding Natural Beauty of Lancashire remains a priority, as is ensuring damaged peatland is restored. We will work in partnership with environmental NGO’s to deliver environmental benefits, and actively prevent the destruction of habitats.

Victorian sewer systems are particularly prevalent in the historic towns of East Lancashire, with higher proportions of sewer overflows. We’re investing to reduce the number of storm overflow spills, improving water quality and amenity along the rivers Ribble, Lune and Wyre.

Figure 2-7: Our operation across Lancashire



Iain Pilling
Area Engagement
Lead - Lancashire

Iain is our area engagement lead for Lancashire. His main stakeholders in the county include thirteen local authorities, as well as farmers on owned catchment land and stakeholders impacted by our Haweswater Aqueduct Replacement Programme. With bathing and river water quality a high priority on the Lancashire coast, Iain supports several important partnerships including the Fylde Hub and he is working to build support for an integrated water plan across the county.

Lancashire has a number of challenges and opportunities:

To manage these challenges, we're:

STRONGER

GREENER

HEALTHIER

Affordability and supporting vulnerable customers:

There are a mix of socio-economic levels across Lancashire. It is important we make provision for those who may need more support.

Supporting **over 55,300** people who are struggling to pay their bills and helping **66,600 customers** with additional needs through "Priority Services". Across the North West we are more than **doubling** our support by 2030.

Jobs and growth

There are pockets of significant growth in Lancashire, particularly around cities of Preston and Lancaster. Lancashire's economy is varied including agriculture, manufacturing and tourist economies, all of which rely on resilient water supplies.

We employ more than 860 people across Lancashire and increased future investment will create **more green jobs**. We're working with planners to **promote sustainable development** and ensure water needs are met.

Protecting rivers and catchments:

Lancashire has a diverse geographical landscape. The west has low lying coastal and estuary landscapes, where tidal influences and urban areas contribute to surface water runoff. The uplands in the east have extensive areas of countryside and moorland with two designated areas of outstanding natural beauty: Forest of Bowland and Arnsdale and Silverdale.

We're investing to protect and improve **35km of river**, removing **barriers to fish and eel migration** at Stocks reservoir and the Calder River intake and investing to reduce spills from **91 storm overflows**.

Investing to improve bathing waters at Morecambe and Fleetwood.

Partnerships:

Lancashire has history of innovative partnerships that deliver benefits across a range of challenges.

We're **working in partnership** with the Fylde Hub, Turning Tides, Ribble Rivers Trust, Wyre NFM, RSPB and many more Lancashire stakeholders to improve rivers and coasts. Across Lancashire, we are working with partners to manage catchments and restore peatlands over an area of **620ha**.

Sustainable Water Supplies:

Water sources in Lancashire are sensitive to compounds which affect the taste, smell and appearance of water.

We're facilitating over £1 billion of investment in **the Haweswater aqueduct**, ensuring we can sustain resilient water supplies across the North West, including Lancashire, working in partnership with local stakeholders to minimise the disruption on people and the environment. We're investing in **two water treatment works** to ensure we can continue to deliver great water quality.

Healthier Coastlines:

The coastal waters of Lancashire are important for the economy, in particular tourism and fisheries.

We'll invest to deliver benefits at **four sites** for shellfish waters and **four sites** for bathing waters.

Access and Recreation

A mix of natural environments, including two Areas of Outstanding Natural Beauty, and traditional townscapes make Lancashire a popular tourism destination.

We'll continue to provide **free access at nine sites** across Lancashire to deliver recreational benefits. We'll invest to benefit **four bathing water sites** along the Lancashire coast.

2.7.4 Greater Manchester

Flooding from rivers, sewers and surface water is a significant problem for Mancunian homes and businesses. We will work with partners to deliver integrated water management to minimise the risk of flood and disruption, through using nature-based solutions we aim to deliver more green spaces.


River water quality in the Irwell and Mersey catchments requires significant improvement due to the legacy of the industrial revolution and the impact of transferring and treating wastewater from over 2.8 million people. We will invest more than ever before to reduce our impact on rivers and drive improvements from others to protect the local environment and improve water quality.

We recognise that affordability is a challenge for many customers across Greater Manchester. We will offer sector leading support to customers who face difficulty when paying their water bill and have put in place extra support for vulnerable customers with additional needs.

Customers in and around Greater Manchester receive their water supply from Haweswater in the Lake District. This is supplied through the Haweswater aqueduct, a gravity fed pipe. We will invest in our water supply pipeline to secure a long-term resilient supply from Haweswater in the Lake District for future generations.

Figure 2-8: Our operation across Greater Manchester





Shelina Begum
Area Engagement Lead - Manchester

Shelina is our area engagement lead for Greater Manchester. Her main stakeholders include the Greater Manchester Combined Authority (GMCA), the devolved administration led by metro mayor Andy Burnham, and local councillors active on several topics including river water quality and flooding. Shelina is focused on realising the wide range of opportunities arising from the trilateral agreement with GMCA and the Environment Agency to better manage water issues in the city region.

Greater Manchester has a number of challenges:

To manage these challenges, we're:

<p>Affordability and supporting vulnerable customers:</p>	<p>We're supporting over 113,000 people who are struggling to pay their bills and helping 96,700 customers with additional needs through "Priority Services". Across the North West we are more than doubling our support by 2030.</p>	<p>STRONGER</p>
<p>Jobs and growth:</p> <p>Greater Manchester is rapidly growing, with it being projected that over 3 million people will live in the region by 2040. The city of Salford is the fastest growing metropolitan district in the UK, with the population growing by 15.4% since 2011.</p>	<p>We're investing to rebuild Salford wastewater treatment works to meet fast growing demand and developing our cutting-edge, low-energy carbon hub at Davyhulme.</p> <p>We're employing 1,300 people in Greater Manchester. Our investment will support the development of more high skilled green jobs.</p>	
<p>Protecting rivers and catchments:</p> <p>Greater Manchester's rivers are impacted by agriculture, industry, runoff from roads and sewage.</p> <p>Above Greater Manchester, in the Pennines and Peak District, sits 18,000ha of catchment land, the quality of which impacts water quality and biodiversity.</p> <p>The county receives an average of 1,047mm of rain a year, creating challenges for flooding from rivers, sewers and surface water.</p>	<p>We're protecting and improving 82km of rivers along the Mersey, Irk, and Irwell.</p> <p>We're restoring 369ha of peatland to improve biodiversity and raw water quality.</p> <p>We're investing to reduce spills from 105 storm overflows. 25% of our action on overflows during AMP8 is in Greater Manchester.</p> <p>Driving £132 million in sustainable rainwater management solutions to reduce the need of future grey storage tanks.</p>	<p>GREENER</p>
<p>Partnerships:</p> <p>There are numerous organisations across Greater Manchester working to improve flood risk and water quality.</p>	<p>We're developing the first city region Integrated Water Management Plan through collaboration with GMCA, the EA and other local stakeholder groups.</p> <p>We're collaborating with the National Trust and other landowners to deliver improvements through partnerships across the Mersey Catchment.</p>	
<p>Sustainable water supplies:</p> <p>Some customers on the south east fringe of Greater Manchester are not well connected to the rest of the strategic integrated distribution network, increasing risk of supply interruptions.</p>	<p>We're facilitating over £1 billion of investment in the Haweswater aqueduct, ensuring we sustain resilient water supplies for Greater Manchester. We're also improving water supplies from the Peak District, replacing water mains serving Wybersley and increasing available groundwater supplies.</p>	<p>HEALTHIER</p>
<p>Access and recreation:</p> <p>Manchester is largely urban. Green space provides social value and improves health and wellbeing.</p>	<p>We are maintaining and protecting 10 freely accessible sites for people to enjoy including Dove Stone reservoir, Jumbles Country Park and Davyhulme Millennium Nature Reserve.</p>	

2.7.5 Merseyside

River water quality in the Mersey catchments needs improvement. Liverpool has some of the highest proportions of combined sewers and consequently a high number of overflows. Tackling overflows requires re-plumbing the sewer system and we have a long-term plan for this. We’re resolving 19 overflows straight away and beginning the first phase of our Cleaner Mersey project to plan for significant separation of rainwater and sewerage systems across Liverpool.

Merseyside has significant coastline, making parts of the coast vulnerable to coastal erosion and flooding which are forecast to become more frequent with climate change. We will invest to ensure assets are resilient to climate change and the impacts of coastal erosion and protect up to 169 homes.

Customers in Merseyside receive their water supply from sources in Cheshire and Lake Vyrnwy in Wales. We will invest in our water supply pipeline to secure long-term resilient supplies from Lake Vyrnwy for future generations.

Affordability is a real challenge for some customers in Merseyside, there are concentrations of extreme deprivation and 2 of the 10 most deprived areas in England are in the area. We will continue to offer sector leading support to customers who face difficulty when paying their water bill and have put in place extra support for vulnerable customers with additional needs.

Figure 2-9: our operation across Merseyside



Mark Booth
Area Engagement Lead - Merseyside

Mark is our area engagement lead for Merseyside, including Halton. Given his area receives much of its water from Wales, Mark leads our engagement with Water Resources West and stakeholder matters arising from water transfers. His main stakeholders include the Liverpool City Region, the devolved administration led by metro mayor Steve Rotherham, and local councillors active on several topics including flooding and affordability. Mark is especially focused on Sefton where we work closely with the local authority on Crosby’s coastal protection.

Merseyside has a number of challenges:

To manage these challenges, we're:

Affordability and supporting vulnerable customers:

People in Merseyside are concerned about the cost of living, two of the top five deprived areas in the UK are in Merseyside. Customers want to know how we're supporting those most in need.

We're supporting over 86,300 people who are struggling to pay their bills and **helping 63,900 customers** with additional needs through "Priority Services". Across the North West we are more than **doubling** our support by 2030.

Jobs and growth:

Formerly known for its rich maritime history, the present day economy of Merseyside is diverse and growing quickly. People in Merseyside want high skilled jobs and a greener economy.

We employ more than **1,580 people** across Merseyside and this increased future investment will create more green jobs.

Coastal erosion:



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Protecting the rivers and catchments:

Of all the North West counties, Merseyside is the most predominantly urban. Such a densely urban composition can have implications on water quality.

The nature of the sewer system across Merseyside and the rapid development of Liverpool presents substantial challenges in reducing storm overflow spills and further improving river water quality.

People in Merseyside care about the environment, and want to know what we're doing about water quality in the Mersey and Dee Estuaries and the coast.

We're investing to improve the **26km** of river environment in Merseyside.

We're investing to reduce spills from **20 storm overflows**.

We're investing in 'Cleaner Mersey' investigations to agree the best way to deploy the **significant investments** that will be required in the next 10 to 15 years. We're working with Liverpool City Region to develop a collaborative and place based approach to water management.

Sustainable water supplies:

People in Merseyside want confidence that we'll continue to provide great quality drinking water and that we'll be able to meet future demand.

We're investing to improve 65km of the Vyrnwy aqueduct so we can sustain resilient water supplies for people across Merseyside. At the same time we're investing in two of our largest treatment works to protect the quality of our drinking water for current and future generations.

Healthier coastlines:

The coastal waters of Merseyside are important for the economy, in particular tourism and fisheries. However, the urbanised landscape and population size of Merseyside means that local bathing waters are increasingly at risk to storm overflow spills.

We'll invest across the Merseyside coastline to benefit bathing and shellfish waters.

STRONGER

GREENER

HEALTHIER

2.7.6 Cheshire


River water quality is important for Cheshire. We will work with partners, building on our innovative Cheshire Hub partnership to identify opportunities to work collaboratively and deliver nature-based solutions to improve our rivers.

With farming a dominant industry across both the Cheshire environment and economy, it is important that we works closely with local farmers to ensure practices do not impact on water quality. We employ our Catchment Systems Thinking approach, also known as CaST to collaborate with farmers to take a joined-up and holistic approach to farming and the protecting of water quality.

We recognise that it is important for an ageing population across Cheshire having a service which is tailored to customers’ individual needs. We will offer sector leading support for vulnerable customers with additional need through our priority service schemes. Many customers in and around Cheshire receive their water supply from Lake Vyrnwy in Wales. This is supplied through the Vyrnwy aqueduct. We will invest in our water supply pipeline to secure a long-term resilient supply from Vyrnwy for current and future generations.

Figure 2-10: Our operation across Cheshire





Emma Birch
Area Engagement Lead - Cheshire

Emma is our area engagement lead for Cheshire, which includes parts of Derbyshire, where we own and manage catchment land for water quality purposes. Her main stakeholders in the county include three local authorities, Cheshire East, Cheshire West and Chester, and Warrington, as well as farmers on non-owned catchment and stakeholders involved in HS2. Emma supports several important partnerships including with the National Trust at Quarry Bank Mill and partners improving water quality in the river Dee catchment.

Cheshire has a number of challenges and opportunities:

To manage these challenges, we're:

Affordability and supporting vulnerable customers:

Cheshire has an ageing population and, whilst average incomes are higher than other parts of the North West, pockets of deprivation exist, particularly in urban centres.

We're supporting **20,000 people** who are struggling to pay their bills and helping **34,000 customers** with additional needs through "Priority Services". Across the North West we are more than **doubling** our support by 2030.

Jobs and growth:

Population growth is 1.5% lower than the UK average, creating challenges with skills gaps in the area.

Cheshire is the centre for the North West's planned hydrogen production and storage.

We're employing **1,500 people** across Cheshire and our increased future investment will create more green jobs. In addition, we're providing **award winning training schemes** to drive skills development.

We're planning ahead, to ensure the North West can support the water requirements for hydrogen production, **enabling economic growth**.

STRONGER

Protecting rivers and catchments:

Cheshire's rivers are impacted by many different activities including agriculture, industry and runoff from roads as well as sewage.

Investing to improve **24km** of rivers in Cheshire, including removing barriers to **fish and eel migration** at one location.

We're also investing to reduce spills from **63 storm overflows**.

Partnerships:

Agriculture plays a key role in Cheshire's economy, and is important for North West food production.

Challenges of river water quality and flooding are complex and are impacted by the actions of many organisations.

We're collaborating with farmers and partner organisations to promote sustainable farming practices across the River Dee catchment to **protect drinking water quality**.

We're working with the National Trust to trail leaky dams at Lyme Park, **improving water quality and slowing flows** to deliver natural flood management.

We're partnering with local authorities to **address flooding** for example, Northwich flood defence scheme.

Catchment management partnership to protect the river Dee from diffuse pollution sources.

GREENER

Sustainable water supplies:

Many customers in and around Cheshire receive their water supply from Lake Vyrnwy in Wales, this is supplied via the Vyrnwy aqueduct.

We're investing to improve 65km of the Vyrnwy aqueduct, to ensure **resilient water supplies** for people across Cheshire.

We're investing in three water treatment works to ensure we can continue to deliver **great quality water** into the future.

We're delivering additional borehole supplies for **drought resilience**.

HEALTHIER

Access and recreation:

Whilst much of Cheshire is rural, we recognise the importance of green spaces for health and wellbeing for residents and visitors.

We have **three beautiful sites** in Cheshire that people can visit – Macclesfield Forest, Lamaload reservoir and Errwood reservoir.