# Our Contribution to Yorkshire

Annual impact and public value report 2020/2021

**Published October 2021** 

### YorkshireWater

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### **Playing water's role** in making Yorkshire a great place to be now and always

This is our purpose



The capitals represent the essential resources on which we rely and impact, both positively and negatively.



Financial capital



Manufactured capital

Natural

capital



Human

capital





capital

Social capital

## Highlights from 2020/2021



Four-star Industry-leading Environmental Assessment rating



**3.5%** Reduction **in leakage** 



**£11m** Health benefits from visits to our recreational sites



**£3** Value generated from waste or underused resources



Colleagues furloughed or made redundant from Covid-19



**35%** Spend with **local companies** 



>60,000 Customers supported financially



>99% Waste diverted from landfill



Hectares of land conserved or enhanced



**0.21** Lowest annual lost time incident rate



93% Customer satisfaction



>130 open access data releases

### About this report

Yorkshire Water delivers water, sewerage, and environmental services to over 5 million people and 130,000 businesses. We are passionate about delivering great value, both in the quality of our services and through the choices we make to maximise our wider social impact.

This is the main report in a suite of publications sharing the findings and methodology of our latest work applying the six capitals to assess the impacts of our business activities over the 2020/2021 financial year (April 2020 to March 2021). We call this Our Contribution to Yorkshire.

This is our third report of this kind and we will continue to publish our assessment findings annually in the future to help our stakeholders monitor and challenge us. As well as exploring the numeric findings of our latest six capitals analysis we also include lots of case studies to help bring what we do to life. We present our findings in a comparable format to last year's report to help you track our performance over time and plan to follow a similar format in future.

#### **Trusting this information**

We always want to provide information you can trust. This report is unlike our traditional publications because we are sharing latest findings and methodologies from a new approach that uses innovative analytical techniques and which continues to develop. We have taken steps to ensure openness and clarity around the different levels of robustness of the various aspects of this work. We have worked hard to ensure a comprehensive and best practice approach to our assessment. You can read more about the underlying methodology in a separate document that is freely available to view. We also asked an independent third party, DNV, to assure our work and they have provided a report on their findings. Links to these reports can be found on the <u>Contents</u> page.

#### **For our investors**

We raise financing from investors and other lenders to help fund our activities and continuous investments into the business. In early 2019 we introduced a Sustainable Finance Framework in which we committed to follow best practice guidelines that require all debt raised under the framework to be allocated only to activities that benefit people and protect the environment. We will use this framework for virtually all of our debt in the future. As at 31 March 2021 we had raised £850m using the framework, and raised a further £350m in April 2021. This Our Contribution to Yorkshire publication is designed to meet the commitment we made in the framework to report annually on our environmental and social impact. A range of metrics can be found throughout this report, supported with commentary and case studies.

To accompany this main report, which is designed for all interests in Yorkshire Water, we also provide an accompanying investor impact report with further information specifically for the investor community, including details of debt allocations. A link can be found on the <u>Contents</u> page.

#### Get in touch

We welcome your feedback, questions, and ideas in response to this report. Please get in touch using sustainability@yorkshirewater.co.uk

#### Contents

## Contents

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More detail is available in the following supporting reports, all of which are available at **yorkshirewater.com/capitals** 

Methodology report, including a glossary of terms

Sustainable Finance Framework impact report

Assurance report

## 1. Guide to this report

#### Important terminology

#### Six capitals



**Financial capital** Our financial health and efficiency



Human capital Our workforce's capabilities and wellbeing



Manufactured capital Our pipes, treatment works, offices and IT



Intellectual capital Our knowledge and processes



Natural capital The materials and services we rely on from the environment



Social capital Our relationships and customers' trust in us

#### Assets

A stock of resources, such as the land we own. The extent of these resources measures the quantity we own, while the condition measures their ability to provide services over time.

#### Impact

The flow of positive and negative effects resulting from how we have maintained and used our assets, for example the carbon emissions captured in or released from our land.

#### Value

The amount that something is considered to be important or beneficial. We estimate the economic worth of our impact to Yorkshire Water and to wider society, for example the value of health benefits from recreational visits to our land.

#### **Reporting scope**

We focus on the activities directly undertaken by Yorkshire Water. Except where clearly stated, we have excluded activities carried out in Yorkshire Water's supply chain or by others in the Kelda Group of companies in which Yorkshire Water is the largest. In the future we plan to extend the scope to our supply chain and value chain.

#### Timeframe

This report covers the financial year from 1 April 2020 to 31 March 2021.

#### Symbols used in this report

Where appropriate, trend arrows are used to show whether our impact has improved or deteriorated since last year.

Upward trend positive outcome

Upward trend negative outcome

nd Upwa utcome **A** Upwa

Upward trend unclear outcome

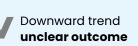
Insufficient data to determine a trend

stable outcome

Broadly stable trend

Downward trend positive outcome



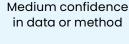


Where appropriate, we show the robustness of data and valuation methods using the following symbols.



M

Low confidence in data or method





in data or method

#### **Find out more**

Visit our capitals webpage to find the previous Our Contribution to Yorkshire reports and a range of case studies on our approach. yorkshirewater.com/capitals

You can also find more information in our other corporate reports: the Annual Performance Report (APR) and Annual Report and Financial Statements (ARFS). yorkshirewater.com/reports



### 2. Foreword

I am pleased to share this publication of Our Contribution to Yorkshire with you. We increasingly recognise that our long-term business success is tied to the wellbeing of the customers we serve and the environment in which we operate. As such, it remains essential that we recognise the many and diverse sources of value on which we depend to ensure we can continue to provide some of life's most important services to our customers and, in doing so, play a key role in our region's health, wellbeing, and prosperity.

This latest publication – the third report of its kind – continues our leadership of using the six capitals to understand the impacts of Yorkshire Water's business activities and investments, both positive and negative, in an integrated and comprehensive assessment.

The results of our assessment demonstrate the numerous ways in which we fulfil our public purpose of playing water's role in making Yorkshire a great place to be – now and always. There are many things to be proud of. These include our support for vulnerable customers, our work to protect and enhance the environment, and our continued focus on colleague safety and wellbeing. However, our results also highlight areas where we know we need to work harder to reduce the negative impacts of our activities, and we expect to be held to account for these in future.

This report is complemented by an accompanying Impact Report, which allows investors to estimate the impacts of their funding across all six capitals. This continues our leading approach to impact reporting by providing far greater breadth, depth, and transparency than usual, helping investors better understand the connection between sustainability and financial risk and opportunity.

As the events of the past year have demonstrated, what we truly value often goes far beyond the financial balance sheet. We are committed to furthering the use of the six capitals approach across Yorkshire Water to help us focus on what really matters and ensure the affordability and resilience of our essential public services for current and future generations. We will continue to refine our assessment approach, drawing on best practices from external organisations where necessary. I welcome your thoughts and feedback to help shape and improve our future reports.

Liz Barber Chief Executive Officer

### 3. About Yorkshire Water

We provide some of life's most essential services to the people and businesses of Yorkshire, playing a key role in the region's health, wellbeing, and prosperity. We do this by supplying water and wastewater services and being custodians of essential infrastructure and the natural environment.

### Yorkshire Water at a glance



#### Our purpose is to play water's role in making Yorkshire a great place to be - now and always.



3,925 employees

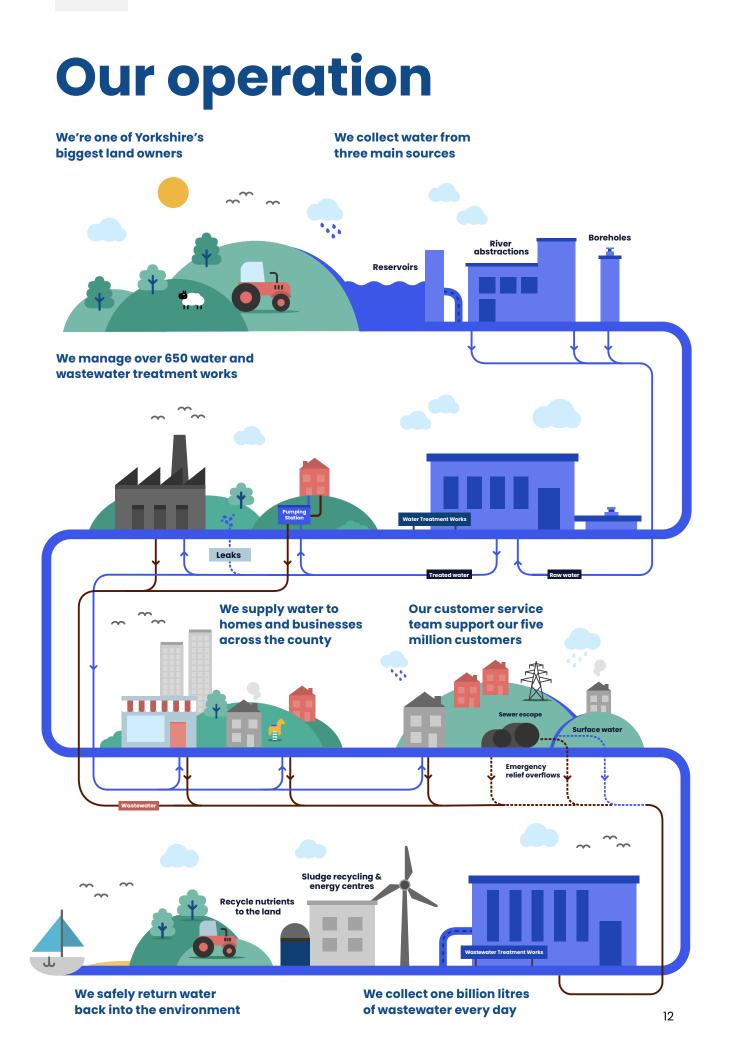


Supplying around 1.3bn litres of water every day

Investing over £1m everyday



Managing 28,000 hectares of land



# Our guiding principles

#### **Our purpose**

We're proud to play water's role in making Yorkshire a brilliant place to be - now and always.

#### **Our ambition**

To put people at the heart of everything we do.

#### **Our behaviours**

We own it. We're always learning. We're better together. We have heart.

#### **Our promise**

You can rely on us. We'll make a lasting impression. We'll lead by example.

### 4. United Nations Sustainable Development Goals

The United Nations' Sustainable Development Goals (SDGs), adopted unanimously by 193 Heads of State in 2015, provide a roadmap towards a better and more sustainable future for all.

At Yorkshire Water, we support the SDGs and are ensuring our strategy and activities contribute towards them. Throughout this report we highlight the SDGs that are of particular relevance to Yorkshire Water's activities and show how we are working to support these across our business.





# 5. Our assets and impacts 2020/2021

Here we provide a visual summary of our 2020/2021 assessment with examples of the extent and condition of the assets on which we rely and the impact we have made through our actions. More detail can be found later in this report with a chapter on each of the six capitals, and also in the accompanying Methodology Report at <u>yorkshirewater.com/capitals</u>

While not everything can be reliably valued in monetary terms, we are finding this a useful aid to our decision making by allowing us to compare very different issues. To strengthen our existing processes, we are maturing and embedding our impact quantification and economic valuation to help inform our strategic and investment choices. We show levels of robustness to recognise that economic valuation is only an estimate based on the best available information and, in many cases, we will not yet have captured the full impact, positive or negative.

Our figures show the overall net estimate for the indicators which we have been able to value. The net position can mask important details in the positive and negative impacts within each indicator. There are gaps and weaknesses that we and others are improving as part of a growing global community working to mature the application of cutting-edge environmental and social economics.

#### **Financial capital**

Assets	Regulatory capital value £7,024m	Total Pensions fur £1,563m ?
Impacts	Taxes £123m	Salaries £169m

#### Manufactured capital

Assets	Length of water mains 32,000km	Length of sewe
Impacts	Change in a £824 V	

#### Natural capital

Assets	Land ownership 28,000ha	Reservoirs
Impacts	Farm tenancies 243 ~	Water abstracte 481,000M A

#### Human capital

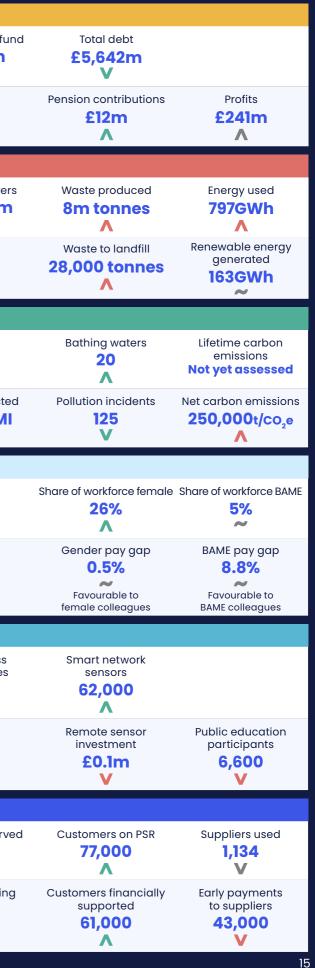
Assets	Total emplo 3,92 A	,
Impacts	Apprenticeships 19 V	LTIR 0.21 V

Intellectu	al capital	
Assets	Innovative partnership projects 7 V	Open access data releases 139 A
Impacts	Employee training 52,000hrs V	Spend on R&D <b>£2.8m</b> V
Social cap	pital	
Assets	Recreational visits £3.4m	Households serve £2.2m
Impacts	Recreational health benefits <b>425 QALYS</b>	Internal flooding incidents <b>778</b>

Λ

V

BAME = Black, Asian and Minority Ethnic PSR = Priority Services Register QALYs = Quality Adjusted Life Years R&D = Research and development LTIR = Lost Time Incident Rate



### 6. The economic value of our impacts 2020/2021

This diagram shows our estimate of the economic value of our impact in 2020/2021. The results of our assessment show we continue to deliver a strong net-positive contribution to society, providing demonstratable evidence of how we are living our purpose to play water's role in making Yorkshire a great place to be - now and always.

While not everything can be reliably valued in monetary terms, it can be a useful aid to allow us to compare different issues. To strengthen our existing processes, we are maturing economic valuation to help inform our strategic and investment choices. We show levels of robustness to recognise that economic valuation is only an estimate and, in many cases, does not yet capture impacts in full.

KEY: A Upward

trend

positive

outcome

V Downward

positive

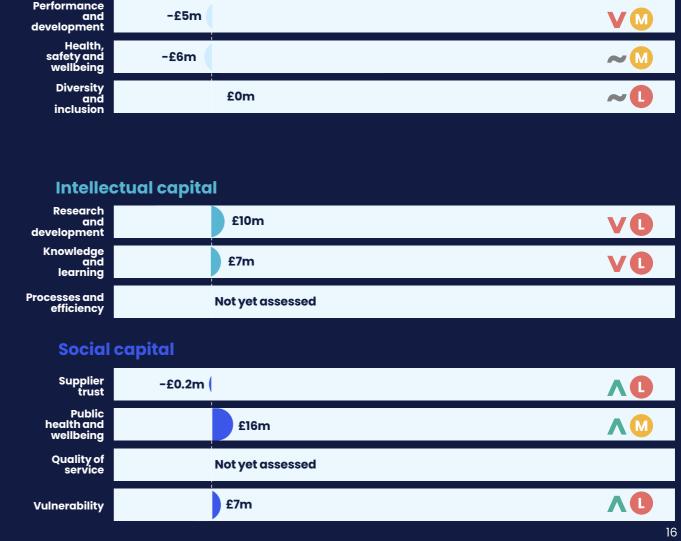
outcome

trend

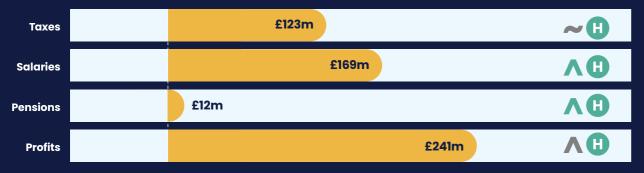


Human capital

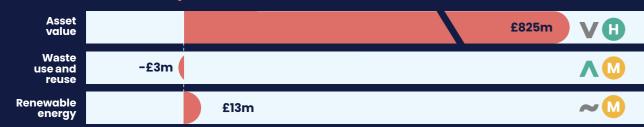




#### **Financial capital**



#### **Manufactured capital**



#### Natural capital

Water use and efficiency		£137m	۸М
Environmental water quality	-£22m		VB
Land, soil and biodiversity		£8m	VŪ
Carbon	-£73m		~ []

Upward trend negative outcome	Upward trend unclear outcome	<ul> <li>Broadly stable trend</li> <li>stable outcome</li> </ul>
V Downward	V Downward	Insufficient
trend	trend	data to
negative	unclear	determine
outcome	outcome	a trend

Our figures show the net estimate for the indicators we have been able to value. This can mask details within each indicator. As part of a growing global community, we are working to address gaps in our assessment through the application of cutting-edge environmental and social economics. We provide more detail later in this report and the full methodology is provided in an accompanying report at yorkshirewater.com/capitals

### 7. The six capitals concept

#### What

Our six capitals approach is designed to help us become more sustainable and resilient by considering value in the broadest sense. Capital is often thought of only as money, but in fact capital describes any resource or asset that stores or provides value to society. Our business activities depend on, and impact, many different types of capital (e.g. natural, social, etc), yet these are often overlooked or undervalued in financial accounting and analysis. Our six capitals approach helps us to better understand, and therefore better manage, the economic, environmental, and social impacts of our actions. This approach is shaping our thinking, decisions, and investments to help us focus on what really matters.

#### Why

Knowledge: Growing understanding of our positive and negative impacts, and the things we depend on.

**Engagement:** Sharing this knowledge to help customers and stakeholders shape our approach and hold us to account.

**Service:** Applying this knowledge to become more efficient, resilient, and sustainable.

**Public value:** Using this knowledge to grow our contribution to society, the economy, and the environment.



**Financial capital** Our financial health and efficiency



Manufactured capital Our pipes, treatment works, offices and IT



**Natural capital** The materials and services we rely on from the environment



Human capital Our workforce's capabilities and wellbeing



Intellectual capital Our knowledge and processes



**Social capital** Our relationships and customers' trust in us

#### How

To understand Our Contribution to Yorkshire we completed a six capitals assessment of our impacts and dependencies. We developed annual accounts for each of the capitals for the period April 2020 to March 2021. These included a range of indicators showing the extent and condition of our assets, as well as the negative and positive impact of our activities.

This assessment follows our previous assessment for the 2015-2020 period and continues to evolve to align with business priorities and the latest global and national best practice. You can find a breakdown of our data and process in the accompanying Methodology Report at <u>yorkshirewater.com/capitals</u>

#### **Results**

The capitals approach is helping us to protect and grow the public value we create for customers, investors, and other stakeholders. You can find practical examples of how we are doing this throughout this report, including through our work to protect and enhance our catchment land, our drive to reduce carbon emissions across the business, and our response to Covid-19.

Our assessment confirms that we have continued to make a strong net-positive contribution to society over the past year by delivering value across all six capitals. Many of our impacts are positive, particularly those related to our work to protect public health and the environment. However, it is also clear that we need to work harder in other areas – such as carbon emissions, waste management, and how we are trusted by our suppliers – to reduce our negative impacts and ensure the long-term resilience and sustainability of our business, communities and environment.

In future we will aim to report principally on the topics where we have the greatest impacts, as well as those considered of most importance by our stakeholders, to ensure our reporting remains relevant and focused on the most material issues.

#### **Find out more**

We openly publish our work on the capitals. You can find previous reports, detailed methodologies, and case studies at yorkshirewater.com/capitals



**Financial capital** Our financial health and efficiency



Manufactured capital Our pipes, treatment works, offices and IT



**Natural capital** The materials and services we rely on from the environment



Human capital Our workforce's capabilities and wellbeing



Intellectual capital Our knowledge and processes



**Social capital** Our relationships and customers' trust in us

### 8. Governance

Sustainability sits at the core of Yorkshire Water's long-term strategy. The six capitals concept is embedded throughout our business and is used to underpin decisionmaking in many operational areas.

We recognise that we provide an essential public service and act as an anchor institution within Yorkshire, thus playing a key role in the health, wellbeing, and prosperity of the region. In 2017, we set-up a Social Value Committee with a focus on the social purpose and public accountability of the organisation. The Social Value Committee, which is a formal Board Committee chaired by a non-executive director, provides oversight of Yorkshire Water's business activities and the resulting impacts, both positive and negative, on the environment and society.

We have strong ethical standards of both corporate governance and business conduct to ensure we operate with honesty and integrity. Our Code of Ethics helps our colleagues and contractors make the right ethical choices and provides information on our Speak Up (Whistleblowing) policy to anonymously report matters of concern.

You can read more about our approach to corporate governance in our Annual Report and Financial Statements at **yorkshirewater.com/reports** 

### 9. Ensuring accuracy and transparency

We have taken steps to ensure openness and clarity about the different levels of robustness in this work because we are sharing latest findings and methodologies from a new approach that uses innovative analysis techniques and which continues to develop.

It can be challenging to assign economic values to things which are not usually expressed in monetary terms, and to quantify impacts that are not tangible or in our direct control. As a result, our processes have used assumptions and estimations. In our work to date we have prioritised the impacts which we understand to be the most significant. Our figures do not yet represent the entire 'value' of nature, people, or society. For example, while we might express a value to the Company of our colleagues' wellbeing in terms of reduced sickness rates, this does not reflect the entirety of its importance to individuals and neither does it reflect the total scope of our business interests or responsibilities.

To ensure openness and clarity in this report, we have:

- Rounded our final figures so as not to imply misleading levels of accuracy
- Published our data and methodology in a report accompanying this one available at <u>yorkshirewater.com/capitals</u>
- Used robustness ratings to show the reliability and maturity of each measure
- Asked for independent expert assurance on our work from DNV.
   Their report on our work can be found at <u>yorkshirewater.com/capitals</u>

# I. Financial capital

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## Financial capital

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#### What is financial capital?

Financial capital is the common way in which society measures something's value. It includes those things with a cash value, such as money or stocks and shares. Financial capital cannot exist without the other five capitals; it is a way of representing parts of the value inherent in the other capitals. With the dominance of finance in traditional decision making, it is this partial representation that can lead to unsustainable approaches. This runs to the heart of the capitals concept for the need to take a broad view of value. We consider our total impact and value in our new financial capital account by including the components of a common measure of financial contribution called Gross Value Added (GVA). This includes salaries, profits, and taxes. We also add other indicators of our financial resilience including our credit rating, gearing ratio and the proportion of our debt that is classed as sustainable. This year, we have included new information on the size of our pension funds and in future will look to provide a measure of the extent to which these are invested sustainably.

#### Why is financial capital important?

For Yorkshire Water, strong financial foundations are critical to our ability to reliably maintain the region's public water and wastewater infrastructure and our essential services to current and future customers and the environment.

For society and the economy, we play an essential role as a local anchor organisation due to our fixed regional presence and large employee base. Water and wastewater infrastructure underpin the economy and we generate further impacts through our large supply chain. We also make a significant and direct financial contribution through the salaries, pension contributions, and taxes we pay, and the profits we generate.

#### Assessment findings for 2020/2021

Our financial capital indicators over the past year were broadly positive compared to the previous year. While our gearing ratio and tax contribution did not change substantially, our Regulatory Capital Value, salary and pension contributions, and profits all increased compared to 2019/2020.

The extent of total debt decreased slightly over the year from £5,670m to £5,642m as no new debt was raised and existing cash balances were used to fund amortisation of certain debt contracts and pay down a small amount of accretion on some index-linked derivatives. With no new sustainability debt being raised this meant the share of debt with a sustainability label increased marginally by 0.1%. In April 2021, Yorkshire Water's primary financing subsidiary, Yorkshire Water Finance, issued its third sustainability bond taking the total sustainability debt issued off the Sustainable Finance Framework to £1.2bn.

This year we have reported information on Yorkshire Water's pension funds as part of our impact and value assessment. Although we do not currently report the extent to which pension assets are invested sustainably, we aim to analyse this area in future. Pension fund assets are managed by third parties and held in trusts with independent governance arrangements, ensuring any direct influence by Yorkshire Water as a company is limited. However, given the size of the funds and their potential to contribute to a more sustainable future, we hope that through exploration and discussion with the independent trustees and investment managers we can move further towards investment portfolios that unlock significant environmental, social and financial benefits to the broader economy and safeguard members' assets for the long term. You can read further details about this topic in the subsequent case study.

Further information about our financial performance and resilience can be found in our statutory Annual Report and Financial Statements available at <u>yorkshirewater.com/reports.</u>



● 2015/2016 ● 2016/2017 ● 2017/2018 ● 2018/2019 ○ 2019/2020 ● 2020/2021

#### **Case study**

# Sustainable pension fund investments

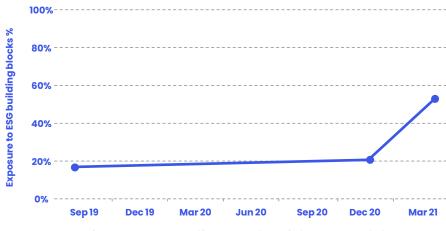


Yorkshire Water is a contributing member to two pension schemes administered through our parent company Kelda Group Limited. Other group companies also use these schemes however Yorkshire Water is by far the largest contributor.

As of 31 March 2021, Kelda Group's pension assets within the Kelda Group Pension Plan, a defined benefit scheme which closed to new entrants in 2007, were £1,563m with an accounting surplus of £95m. In addition, the Kelda Stakeholder Scheme, a defined contribution scheme with funds in the names of members, had assets of £88m.

Whilst the Kelda Group Pension Plan is not mandated to invest in explicit sustainability focussed holdings, the Trustee is working to explore alternative investments available, including those that more explicitly reflect sustainability goals, whilst maintaining their fiduciary duty to invest in the best interests of the scheme's members. Pension assets within the Kelda Stakeholder Scheme are administered by Aegon, who are committed to placing sustainability issues at the core of their strategy. Aegon's default offering for Yorkshire Water colleagues (Aegon BlackRock LifePath) has shifted recently towards integrating environmental, social and governance (ESG) factors into its investment approach. For example, the average carbon emissions intensity of Aegon BlackRock LifePath portfolios is now 24% lower than non-ESG benchmark portfolios. BlackRock plans to further embed sustainability into pension investments by refining expectations of company boards to shape and monitor management approaches to material sustainability factors, disclose plans for how business models will be compatible with a low-carbon economy, and explain how they promote a culture of diversity and inclusion within their workforce.

We will continue to report on progress in future reports.



Exposure of Aegon BlackRock LifePath Flexi portfolios to ESG building blocks

### **11. Manufactured** capital

150

### Manufactured capital



#### What is manufactured capital?

Manufactured capital represents the humanmade physical objects that are owned or controlled by an organisation. Yorkshire Water uses, maintains, and enhances a vast infrastructure of pipes, pumps and treatment works to provide water and wastewater services to customers. Manufactured capital also includes a wide range of goods such as tools and vehicles, as well as energy generation facilities.

#### Why is manufactured capital important?

The stewardship of Yorkshire's water and wastewater infrastructure is essential to the region's health and prosperity. It is Yorkshire Water's core duty to efficiently and effectively use, maintain, and enhance its water and wastewater infrastructure to ensure that communities and businesses can continue to rely on safe and affordable water and wastewater services, today and long into the future.

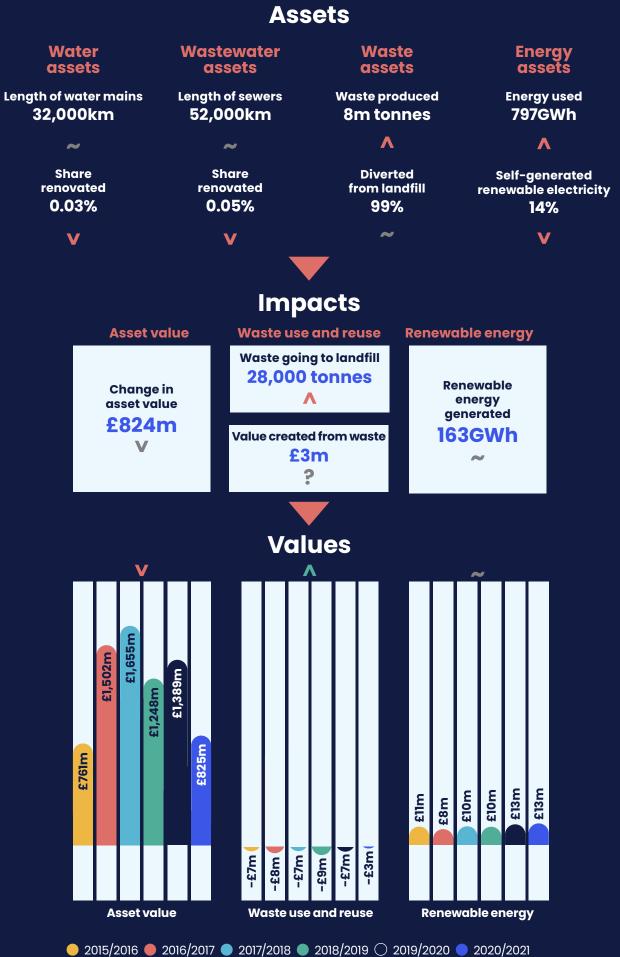
We are investing and innovating to reduce waste from our operations to be financially efficient, minimise environmental impacts and to support resilience. We are introducing 'circular' approaches that create new value by keeping resources in continual reuse and avoiding the creation of waste. For example, we are an increasingly large generator of renewable energy from human waste and other under-used resources.

#### Assessment findings for 2020/2021

We operate extensive networks of clean water pipes and wastewater sewers across Yorkshire. As in previous years, only a very small proportion of this infrastructure was replaced or repaired over the past year (0.03% and 0.05% for clean and waste networks, respectively). In addition, while we continued to grow the total value of our infrastructure by £824m during 2020/2021, this increase was lower than that seen in the previous year.

The total estimated amount of waste produced by our business activities increased by 1m tonnes compared to last year, which was driven largely by higher customer water demand and the associated waste produced during the water treatment process. However, the proportion of waste we were able to divert from landfill remained high at 99%. There is currently low confidence in our estimates of waste production due to the number of waste streams and the complexity of the reporting process. Further details can be found in the accompanying Methodology Report (available at yorkshirewater.com/capitals) and we are targeting improvements in this area to improve the accuracy of waste reporting in future. This year we were able to generate new sources of value from waste and under-used resources. As a result, we estimate the overall negative impact of our waste generation has reduced from -£7m last year to -£3m this year.

Energy use across the business increased by 155GWh compared to last year. This apparent increase is due largely to improvements in our data reporting capabilities that now allow us to capture the heat we consume, rather than a true increase in energy use. The amount of renewable energy we generated through our assets remained stable. We are making further investments in renewable energy technology through our bioresources and solar programmes to increase our share of self-generated renewable electricity and meet our goal of net zero by 2030. We are also implementing an energy efficiency programme to reduce electricity use by 28% by 2030. 26



### Creating value from under used resources

The six capitals approach is helping us to embrace circular approaches that grow value from under-used resources. What was previously something to be disposed of, is now seen as an important resource. We consistently send less than 1% of our waste to landfill and we have committed to creating at least £65m of new value from under-used resources by 2025. This will be measured using our six capitals approach. We give some examples below.



#### Human waste to renewable energy

We use anaerobic digestion to treat almost all of our wastewater sludge, which is the organic residue that accumulates at our wastewater treatment works. Anaerobic digestion is an oxygen-free process that breaks down organic matter to produce biogas and fertiliser, which are used for energy generation and on farmland, respectively. We opened our latest anaerobic digestion facility in Dewsbury in July 2020, which has a treatment capacity of 31 tonnes dry solids/day. In combination with our other anaerobic digestion facilities across the region, we now use 98% of all wastewater sludge for renewable energy generation. In 2020/2021 we used biogas from wastewater sludge to generate 72GWh of renewable electricity internally, which was enough to meet 12% of our total electricity demand.





#### **Solar energy generation**

Moving, managing, and treating water and wastewater are energy intensive processes. As part of our drive to reach net zero carbon emissions by 2030, we are developing an ambitious large solar programme to change the way we generate renewable energy. The first phase of the programme aims to install photovoltaic arrays on spare areas of land on Yorkshire Water's operational sites using a long-term private power purchase agreement, with surplus exported to the grid. These arrays will allow us to maximise the value of otherwise unused land, whilst providing a valuable source of renewable energy to offset the consumption of existing onsite assets. We are also considering the potential for innovative floating arrays at some of our reservoir sites. Development of the first 28 sites is expected to commence shortly. When fully operational, the proposed sites are expected to generate 80GWh/year, deliver financial savings in the region of £3m/year and carbon savings of 20,000 tonnes  $CO_2$ -eq/year, and increase Company resilience through reduced exposure to volatility in grid energy costs.

#### **Case study**

### The future of wastewater treatment

Wastewater treatment facilities are often carbon-intensive due to their high energy demands and will come under increasing pressure in future in the face of climate change, population growth, aging assets, and new tighter environmental water quality standards. We are exploring alternative treatment technologies that can deliver the same level of water quality but with reduced environmental impacts compared to traditional, carbon-intensive treatment processes.



#### 1. Ultra-low carbon wastewater treatment works

Withernsea is a small town on the east coast of Yorkshire. Coastal erosion rates on this coastline are amongst the highest in the world and our existing wastewater treatment facility was at risk of collapse. Rather than opt for a standard replacement, we have opted to invest in a state-of-the-art Aero-Fac® treatment process, which is currently under construction and on track to be commissioned later this year. The largest installation of its kind in the UK, the system uses minimal energy, requires very low levels of maintenance, and yet is capable of treating wastewater to meet the required legal water quality standards. Not only does this equate to a whole-life cost saving of £7m compared to a standard treatment works, it also results in significant carbon savings to support our commitment to net zero carbon emissions by 2030.





#### 2. Nature-based wastewater treatment works

Yorkshire Water's wastewater treatment works at Clifton, near Doncaster in South Yorkshire, required upgrading to meet new phosphorous water quality standards. Instead of a traditional chemical treatment facility, we are trialling one of the first integrated constructed wetlands in England for municipal wastewater treatment.

This nature-based solution will provide a natural, sustainable, and low-carbon way to treat water to a high standard before returning it to the environment. The wetland will feature three interconnected pools containing over 20,000 wetland plants, which will deliver a suite of benefits including minimal operating costs, a 58% reduction in carbon savings, a net gain in biodiversity, and less dependency on supply chains for chemicals. Furthermore, we are engaging with the local community to offer environmental education opportunities for local groups and schools to assist with the planting process.

We anticipate that this trial will act as a template to inform similar nature-based solutions in future, particularly at our smaller rural sites, and support our ambitions to become net zero by 2030.

Our vision for the integrated constructed wetland for wastewater treatment at Clifton

# 12. Natural capita

### Natural capital



#### What is natural capital?

Natural capital is the stock of environmental resources that people manage, use, and depend on. We all benefit and rely on a wide variety of 'ecosystem services' that nature provides. These services can be considered in four categories:

<b>Provisioning</b> services such as water, food, and timber.	<b>Regulating</b> <b>services</b> such as carbon absorption to regulate the climate.
Supporting	<b>Cultural</b>
services	<b>services</b>
such as soil	such as recreation,
formation and	tourism, and
nutrient cycling.	spiritual value.

#### Why is natural capital important?

Public water services fundamentally rely on water and other resources from nature, and also have substantial impacts upon it, both positive and negative. Our core duties involve taking water from the environment to supply customers, taking their wastewater away, and treating it for safe recycling back to the environment. The transport and treatment of water and wastewater relies on large amounts of energy and chemicals produced from different forms of natural capital, and results in a large carbon footprint. Our pipes, pumps, and other equipment are all made from materials taken from the environment.

Yorkshire Water is a large landowner with an estate covering approximately 28,000 hectares. We own and manage this land with our farm tenants and other partners to protect sources of water while delivering other benefits for flood management, recreation, farming, wildlife, and carbon storage. We also work closely with many other landowners and influencers as we don't own most of the land from which we source water for public supplies. Understanding how natural and human landscapes, habitats and processes interact, and how we can preserve and enhance them for future generations, is vital for the sustainability and resilience of our business.

#### Assessment findings for 2020/2021

As the second largest landowner in Yorkshire we own around 28,000ha of land, the majority of which is in upland areas surrounding our reservoirs. We manage this land primarily to protect the quality of our precious water resources. However, we are increasingly exploring how more effective management of our land can deliver additional benefits through natural flood management, carbon storage, recreation opportunities and biodiversity improvements. We currently have 243 farm tenancies that manage 20,000ha of farmland. Ten of these farms (representing about 5,000ha) are involved in our Beyond Nature™ initiative. This initiative focuses on supporting our farm tenants to optimise the value of their land for different uses, such as storing carbon, providing a home for nature, and delivering natural flood risk management. You can find out more about Beyond Nature™ at yorkshirewater.com/beyond-nature.

Although the reported value provided by land has decreased compared to last year, we note that this was due in the large part to the unavailability of third-party datasets on which we based our assessment during previous years. We are currently carrying out a detailed biodiversity mapping exercise across many of our sites and hope that in future this will yield more consistent, richer insights into the value of our land holdings than were previously available.

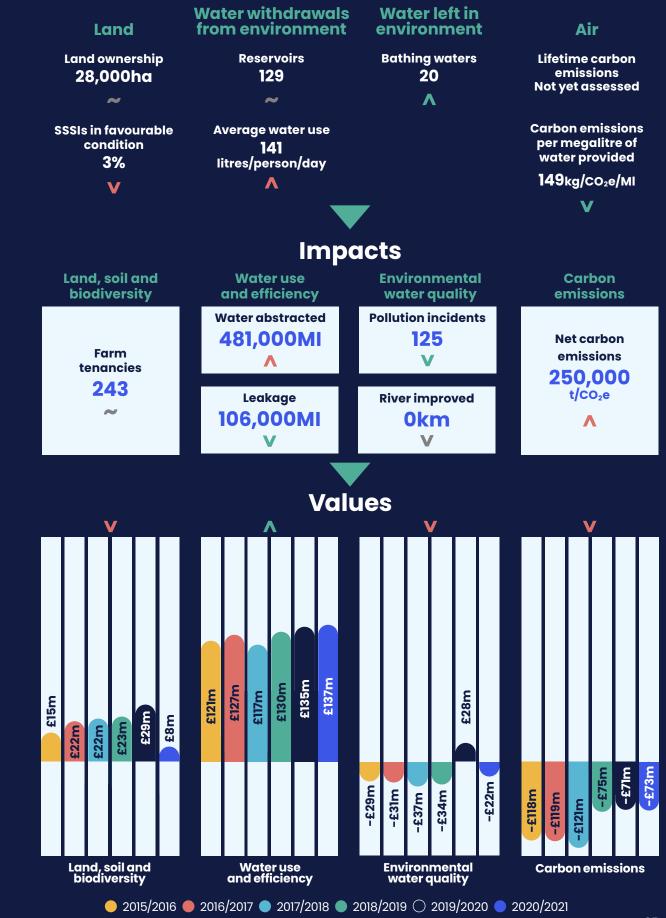
Average customer water use increased substantially to 141 litres/person/day in 2020/2021 compared to 127 litres/person/day the previous year. This was related partly to the warm, dry weather in spring and summer 2020. However, we've also seen customer water use change dramatically as a result of the Covid-19 pandemic as many people spent more time at home and away from offices. Although abstraction increased compared to last year, reflecting increased customer demand, leakage levels reduced by 3.5% from our three-year baseline (covering 2017/2018, 2018/2019, and 2019/2020). We have focused resources on targeting reductions in leakage recently and are pleased that these have resulted in significant leakage reductions, particularly on our trunk main network.

This year we achieved a four-star industryleading rating in the Environment Agency's Environmental Performance Assessment. This reflects improvements in the performance of our assets and the increased use of data and technology to target and reduce pollution incidents, which fell from 166 last year to 125 this year. Despite this, we have seen decisive changes in public expectations of environmental water quality, and it is increasingly clear that further efforts are required to protect and enhance the health of our rivers. Furthermore, while the value we deliver through environmental water quality work has decreased since last year, this is due largely to our being at the start of the current five-year business cycle; right now we are focused on planning the next round of river improvements, which will deliver strong positive value to society in future years.

Our carbon emissions were broadly similar to last year. Delivering our services is traditionally carbon intensive because of the energy required to move and treat water, and the concrete and other resources needed to maintain and improve our pipes, pumps, and treatment works. Within the water sector, we are one of three lead companies that co-created a plan to deliver a net zero water supply for customers by 2030. We now have a dedicated carbon leadership team and are implementing a range of measures to help reach this challenging goal, including switching to a 100% renewable energy tariff, moving towards a zero-emissions vehicle fleet, developing a solar framework, and storing carbon in land across our estate.

You can read more information on our carbon strategy at yorkshirewater.com/environment

#### Assets



#### **Case studies**

### **Natural capital**



#### **Tree planting**

Trees are essential for people, biodiversity, and the environment. Planting trees across our land helps to protect and enhance our upland water resources, whilst also providing a range of other benefits. These include offsetting our carbon emissions, slowing the flow of water to reduce the risk of downstream flooding, and providing recreational opportunities that improve health and well-being. We have now planted over 250,000 trees across our estate and are on track to meet our target of one million trees by 2028. We are also working in partnership with other organisations to explore further opportunities for woodland creation across the region in future. Putting nature-based solutions in the ground now means long-term benefits to our customers and society. In particular, tree planting forms part of our strategy to reach carbon net zero by 2030 and will also contribute to the creation of a new Northern Forest.



#### **Healthy Wharfe**

Covering a stretch of 65 miles from its source in the Yorkshire Dales through to its confluence with the River Ouse, the River Wharfe represents an important water source for Bradford and Leeds. In December 2020, a stretch of the River Wharfe at Ilkley was designated as the UK's first inland bathing water site following a campaign by a local community group. Yorkshire Water subsequently established the River Wharfe Partnership to bring together key stakeholders from across the catchment - including landowners, NGOs, and other public authorities to work collaboratively to deliver both ecological and public health improvements along the length of the river. We know there are growing public expectations of what is expected from water companies in terms of delivering greater environmental value, and we want to support these. Working in partnership with Bradford Council and the Environment Agency, we have now started investigating parts of the River Wharfe's catchment to inform the planning of data-led, sustainable solutions to tackle these water quality challenges and ensure we play our role in protecting and enhancing the Wharfe's natural capital effectively.



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## 13. Human capital

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### Human capital



#### What is human capital?

Human capital relates to people's wellbeing and the value they bring to society. For an organisation, human capital encompasses their workforce's health, productivity, and experience. Human capital is not 'owned' by an organisation but is rather 'leased' in exchange for salaries and other employment benefits. Human capital is closely related to intellectual capital, which we examine in the next section.

While it can be useful to monetise the value of human capital to help inform decision making and the business case for investment, this is not about seeing people as a commodity. Quite the opposite; by understanding the value of human capital and the things that affect this value, more effective action can be taken to protect and grow people.

#### Why is human capital important?

Our people are the heart of Yorkshire Water; without them we would not be able to function. Ensuring that we have a safe, healthy, happy and skilled workforce is essential for us to continue providing our services. Additionally, as a large employer in Yorkshire, our approach to human capital has a role to play in social cohesion and we are committed to increasing our diversity to reflect more closely the society we serve.

Assessing our human capital helps us to understand and manage risks and opportunities presented by factors such as an ageing workforce, sickness rates, and diversity and inclusion programmes. We have of course been considering and managing these matters for many years. However, through our work in this area we have now been able to value issues and interventions to aid our decision making. This has helped shape our new corporate ambition 'to put people at the heart of everything we do'.

#### Assessment findings for 2020/2021

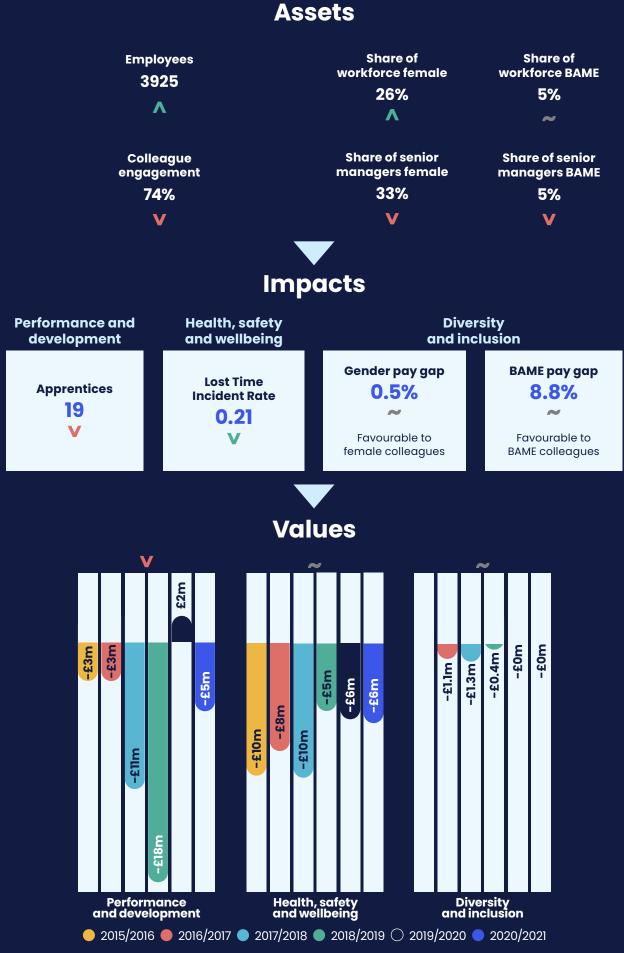
We have grown our workforce by 13% over the past year to a total of 3,925 employees. This increase was related to department structure changes combined with insourcing activity within the clean and wastewater networks. We are pleased to report that no colleagues were furloughed or made redundant as a result of Covid-19.

Our colleague engagement score decreased slightly compared to last year and the number of apprentices we recruited also decreased. This is reflected in an overall reduction in performance and development value. We plan to increase the number of apprenticeships offered in future with potential for up to 60 new recruits over the next year.

Our continued focus on health and safety resulted in a reduction in injuries compared to last year and our lowest ever lost time incident rate of 0.21. The value generated through health, safety, and wellbeing showed a slight improvement relative to last year (linked to increased employee numbers and colleague wellbeing programmes) but remained negative overall driven largely by sickness-absence costs, of which around two-thirds were related to Covid-19.

Over the last year the proportion of female colleagues in our workforce increased, although at a senior manager level this trend reversed. Similarly, the proportion of Black, Asian, and Minority Ethnic (BAME) colleagues was largely stable, the proportion of senior BAME managers decreased slightly compared to last year. We know there are improvements to make in this area as our workforce does not fully represent the diversity of the communities we serve at present. Through our diversity and inclusion strategy, we have set up a number of initiatives to address this shortfall. For example, we are increasingly using a wider variety of recruitment channels, including social media tools, to reach more potential candidates and attract a wider and more diverse talent pool than was previously accessible. We are also investing in Women in Leadership and BAME Leadership programmes to address the current underrepresentation of these groups in leadership roles.





BAME = Black, Asian and Minority Ethnic

#### **Case studies**

### **Human capital**

#### Our response to Covid-19

Over the last year most of our office-based employees worked from home, in line with government guidelines, to reduce the spread of Covid-19. While this major change to usual working practices was not without its challenges, our recent investments in digital technology (particularly cloud-based IT infrastructure) combined with a strong culture of resilience among our colleagues, played a key role in facilitating this change. The impacts of the pandemic affected our colleagues in different ways: emotionally, physically, and financially. We sought to ease these impacts by providing office equipment to ensure suitable and safe work environments for homeworkers, as well as procuring extra vehicles for operational colleagues to ensure only one person per vehicle. We also offered a range of support services to colleagues during this period including remote home-schooling sessions, financial and childcare support, workshops to tackle anxiety and other mental health issues, and a 24/7assistance helpline for employees and their families.

#### **Seeing the light**

The health, safety, and well-being of our colleagues is integral to our Company values. Light plays a key role in setting our circadian rhythms and therefore can have a major impact on our alertness, productivity, and sleep quality. Over the past year, some of our colleagues have taken part in a trial to measure their exposure to light brightness and colour levels throughout the day using portable sensors. The results of the trial show 75% of colleagues perform at their best cognitively during morning hours, while peak physical performance occurs in the early afternoon. Following the trial, colleagues were given personalised recommendations on how to schedule their daily routines to improve their sleep and energy levels. As a result, most participants subsequently reported improvements in sleeping patterns, energy levels, and general well-being. In future, we hope to carry out further work in this area to explore the impact of light availability on colleagues in different business areas (e.g. office-based, field-based, shift-workers).

# 14. Intellectual capital

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### Intellectual capital



#### What is intellectual capital?

Intellectual capital is knowledge and information: our people's skills and know-how, the data and information we manage and generate as an organisation, and the technologies and innovations that we use and share with society. Intellectual capital is closely related to human capital, since knowledge, skills, and experience are often characteristics of, or 'owned' by, individual people. However, it goes beyond our employees, and includes the intellectual capital we share outside of the organisation through information disclosures, partnership working, investments in research and development (R&D), and education programmes.

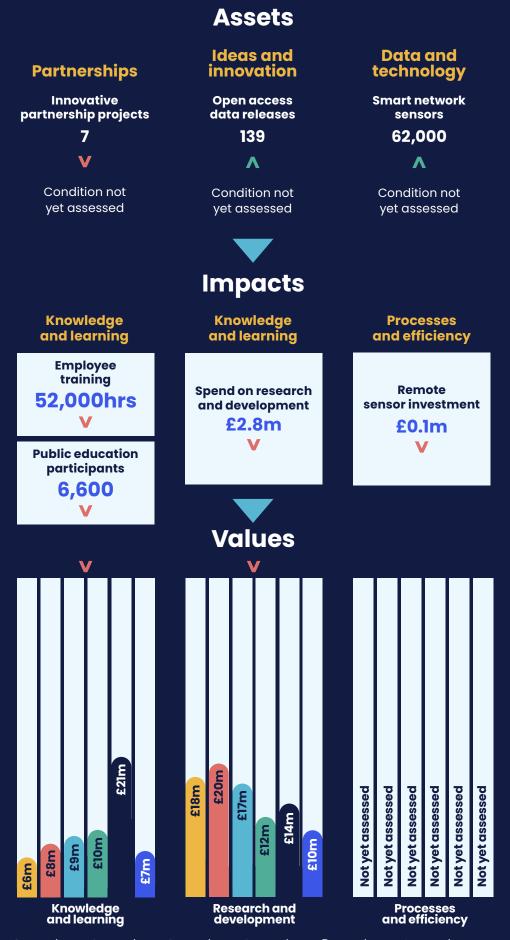
### Why is intellectual capital important?

We maintain, advance, and deploy our knowledge through our people, systems, and processes in order to deliver efficient and reliable water and wastewater services. Furthermore, we are continually improving our ways of working and finding quicker, cheaper, or better approaches to save money and keep bills low for customers while delivering and improving the service we offer.

#### Assessment findings for 2020/2021

The value of our intellectual capital decreased this year compared to last year. Many of our colleague training and development courses had to be cancelled or postponed due to Covid-19, and similarly our public educational programme was significantly curtailed as a result of school closures. We also spent less on research and development than in previous years, which is in line with our five year business cycle. In future, we aim to work more in partnership with other organisations to leverage external R&D funding and deliver increased value for money for customers. More positively, our continued drive for open data resulted in our highest ever number of open data releases over the last year. This includes data on our storm overflows, which vou can read about in more detail in the case study overleaf.

The measurement and reporting of intellectual capital is still relatively immature and we recognise there are improvements to be made in this space. For example, we want to develop measures to help us better understand the efficiency and maturity of our processes. We are monitoring external developments in this area and will continue to refine our assessment methods in future.



● 2015/2016 ● 2016/2017 ● 2017/2018 ● 2018/2019 ○ 2019/2020 ● 2020/2021

#### **Case studies**

### Intellectual capital



#### **Education**

Yorkshire Water's Education team work hard to teach our community the value of water through lessons, workshops, talks, and school assemblies. The Covid-19 pandemic has had a significant impact on our Education team's usual programme of activities. Closures of schools and visitor centres following the national lockdown in March 2020 resulted in a significant reduction in face-to-face educational engagement throughout the year.

In response to these challenges, we adapted quickly to produce a range of innovative digital educational offerings. We created and launched a series of online lessons for teachers (including notes and handouts), delivered virtual outreach sessions to primary school classes, ran live events during British Science Week, and achieved over 30,000 hours of online educational sessions via social media.



#### Storm overflow data

Storm overflows play an important role in our wastewater system, acting as relief valves to release excess stormwater to rivers or the sea. They protect properties from flooding and prevent sewage backing up into homes during periods of heavy rainfall.

We have installed monitoring equipment on 96% of our 2,241 permitted storm overflows (one of the highest coverage levels in the industry) to record the frequency and duration of intermittent storm overflow discharges to the environment. Last year we collected over 80 million data points. Given increased public awareness of the operation of storm overflows recently, and in line with our commitment to a transparent and open data approach, we have published our 2020 monitoring data online as an interactive map, which can be accessed at yorkshirewater.com/ environment. We hope the data can be used in conjunction with other environmental and social datasets to help drive collaborative approaches to improve river health.

Going forwards, we will be investing £137 million by 2025 in storm overflow improvements, investigations, and increased monitoring. In addition, we're working in partnership with Siemens and the University of Sheffield and have developed an innovative AI pollution prevention solution utilising data from the storm overflow monitors to alert us to emerging blockages that can be cleared before they cause pollution incidents.



# Social capital

# Social capital



#### What is social capital?

Social capital is the value of an organisation's relationships with people, society, and other organisations, and the trust placed in it by its customers and suppliers. It also relates to the impacts that an organisation can have on people and society; for example, by providing a valuable service, or through contributions to charities and the local community.

#### Why is social capital important?

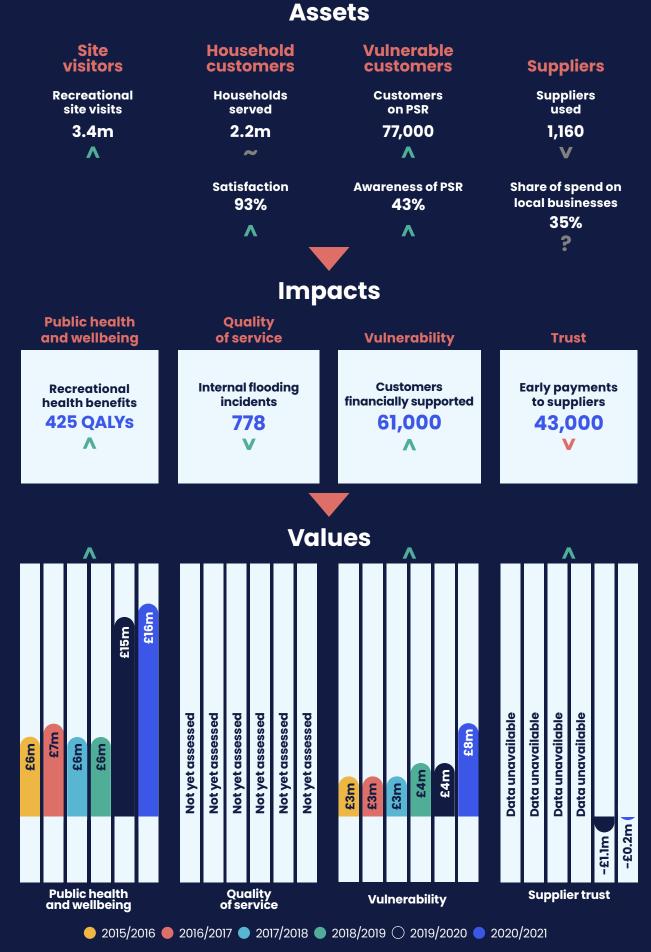
As a private company providing a public service, our social capital is essential - our 'social license' to operate is every bit as important as our legal one. Maintaining strong levels of trust and integrity is a priority for us at a time when surveys show that public confidence in large organisations is low. We achieve this by doing the right things for our customers and other stakeholders, by looking after those in vulnerable circumstances, and by consistently delivering our high quality, highly reliable services. We also pay close attention to our wider impacts on the region and the world, such as through our volunteering programme and our charitable work with WaterAid which works for a world where everyone has safe water and sanitation.

#### Assessment findings for 2020/2021

Our assessment shows that we've grown the value we provide to public health and wellbeing over the past year. In response to long-distance travel restrictions related to Covid-19, we have seen increased visitor numbers at many of our recreational sites. We estimate the recreational health benefits associated with these visits have a value of £10.6m. See the following case study for further details on this topic.

The number of customers on our Priority Services Register has increased markedly this year. Our customers contacted us more than usual recently, partly because people working at home used more water which fed through to higher bills for metered customers. We offered customers flexible payment terms and delayed payments where necessary, as well as providing financial support to 61,000 customers facing difficulty with their bills. We estimate the value of mental wellbeing benefits to vulnerable customers supported financially was worth £7.7m last year.

Within our supply chain we calculate that approximately 35% of our total spend in 2020/2021 was on local suppliers, demonstrating our support for the regional economy. Over the past year we have worked to ease the impact of Covid-19 on our smaller suppliers by offering shorter payment terms than usual. However, our assessment shows that, while the value we generate through our interactions with suppliers is improving, we need to do more to build trust within our supply chain in future.



QALYs = Quality Adjusted Life Years

#### **Case studies**

### **Social capital**



#### **Recreational exercise**

We have a large number of reservoir sites across Yorkshire. Many of these are accessible to the public and provide opportunities for mindfulness, outdoor exercise, wildlife watching, beautiful natural views, and access to open spaces and fresh air. With Covid-19 restrictions in place over the past year, the importance of our sites to local communities has never been greater as people sought out safe outdoor activities close to home. This is reflected in increased site visitor numbers: almost half of all Yorkshire Water customers visited a local reservoir at some point during 2020/2021 and visitor numbers increased by 35% compared to the previous year. These visits generated approximately 425 QALYs of health benefits to society with an estimated value of £10.6m.

To manage the impacts of increased visitor numbers across our estate, we have been working in partnership with a number of stakeholders. Through our common cause partnership with the National Trust we have developed a new Countryside Ranger team to keep a close eye on our sites, engage with our visitors and stakeholders as well as improve our pro-active maintenance and management across our estate.

To help us ensure as many of our sites as possible remain accessible, to as broad a range of our customers as is feasible, we are continuing to work in partnership with the community interest company, Experience Community, who specialise in enabling disabled people to access the great British countryside. They will be helping mixed groups of both able-bodied and disabled people access some of our sites.

#### **Quality Adjusted Life Years (QALYs)**

is a commonly used economic measure showing the change to the quality and quantity of people's health. One QALY equates to one year in perfect health.

They also plan to survey some of the walks we have on offer, with a view to grading these against a colour-coded scale that will indicate how easy or hard a site is to access. This should provide our customers with additional information to allow them to make an informed decision on whether our site is suitable for their ability or not. Working with Experience Community, we also hope to identify opportunities to improve access to enable more people to access our land. For example, at our Tophill Low Nature Reserve we are procuring mobility equipment to allow visitors with limited mobility to access the site and are planning to build accessible access ramps to some of the bird hides on site.





### Supporting our vulnerable customers

It is a priority for us to help those who are struggling to pay their water bill. Our Priority Services Register offers free extra services for our vulnerable customers who need them. Over the last year we helped 61,406 customers with direct financial support. This is an increase of 71% from 2019/2020, which represents both the activity we've undertaken to raise awareness of the support available and also the impacts of Covid-19 on our customers. For example, people working at home used more water which fed through to higher bills for metered customers. We estimate that our ability to help has reduced stress and improved mental health among our customers to a value of £7.7m. This represents an increase of over £3m since 2019/2020.

To further help our customers, we recently launched a vulnerability fund to help raise awareness of Yorkshire Water's priority services and support like-minded projects. We have awarded grants to seven community groups and charities to support them in delivering their services and encourage those who would benefit from our priority services to sign up to our register. By working together to raise awareness of our priority services, we hope to be able to reach more customers and deliver our services to those who need them most.

## 16. Conclusions

This report demonstrates the impact and value, both public and private, generated by Yorkshire Water's business activities during the 2020/2021 financial year. Our assessment highlights many examples of strong and improving performance over the past year, as well as areas where further action is needed.

The six capitals approach helps us to put being purpose-led at the heart of decision making. Not only does it allow us to understand the positive and negative impacts of our activities, but it also enables us to articulate these impacts to our stakeholders and understand trends over time.

As we mature our thinking around the six capitals, we aim to embed the approach further into our operational business decision-making processes. Ensuring we take a balanced view of competing priorities by considering their full range of costs and benefits will allow us to make more informed decisions when prioritising investment schemes. In turn, this will lead to measurable differences in shaping what we do to grow positive outcomes for the region and to reduce our negative impacts. We will continue to report on our progress and performance in future 'Our Contribution to Yorkshire' reports. To enable scrutiny and build trust with interested parties, we will also continue to provide the underlying data and methodology that supports our public value reporting. Finally, we will seek to improve our assessment process through the development of new metrics and measurement approaches, drawing on best practices from the wider multi-capitals community where necessary.

#### Get in touch

We welcome your feedback, thoughts and questions on this report Please get in touch using **sustainability@yorkshirewater.co.uk** 



### yorkshirewater.com

Yorkshire Water Services Limited, Western House, Halifax Road, Bradford, BD6 2SZ. Registered in England and Wales No.02366682



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