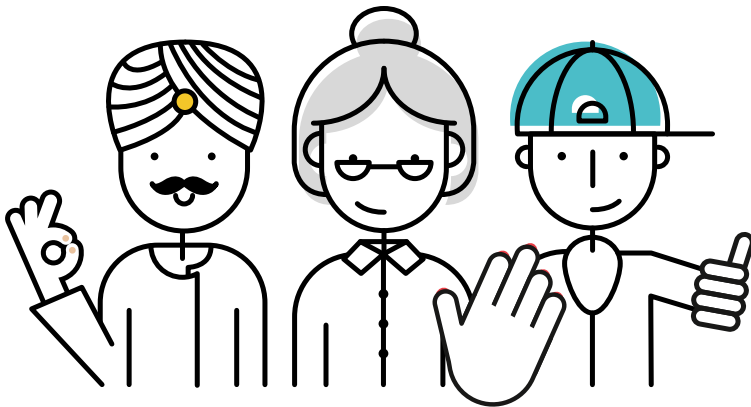


Our Annual Performance Report 2019/2020

Published July 2020



Welcome to our 2019/2020 Annual Performance Report

This is our fifth Annual Performance Report and it covers the period from April 2019 to March 2020. This is the last Annual Performance Report for Asset Management Period (AMP) 6. It tells our customers and stakeholders about the progress we are making to deliver our commitments as well as providing information on our service levels, cost information and financial performance.

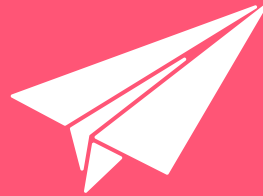
This Annual Performance Report provides information required by Ofwat (the Office of Water Services), the body that regulates the water sector to protect customer interests.



Definition

Asset Management Period (AMP)

An 'Asset Management Period' is the term given to the five-year period covered by a water company's business plan. AMP1 refers to the first planning period after the water industry was privatised and this covers the period from 1990 to 1995. We are currently in AMP7, which covers 2020 to 2025 and we will report on the financial year 2020/2021 in our next APR.



Get in touch with us

We welcome your comments and feedback on our Annual Performance Report.

If you have any questions, comments or would like to give us feedback on our Annual Performance Report or any of our other publications please get in touch with us using the contact details on this page.

Please do not hesitate to get in touch if you would like a paper copy of this report.

You can contact us in the following ways.



Email: publicaffairs@yorkshirewater.co.uk



Sending comments via our website link: yorkshirewater.com/contactus

Facebook message us: [@yorkshirewater](https://www.facebook.com/yorkshirewater)



Or posting them to us:
Regulation Department
Livingstone House
Chadwick Street
Leeds
LS10 1LJ

1

2

Navigating this document

Contents page

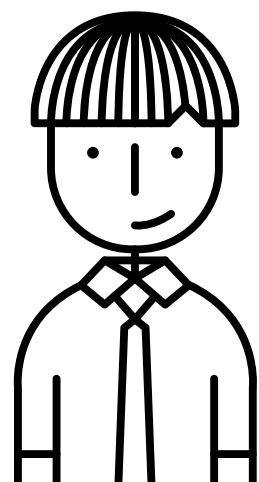
The contents page is linked to every section within this document. Clicking on a specific section will instantly take you to it.

- 1 Click on the contents button to return to the contents page.
- 2 The back button returns you to the last page you visited.
- 3 This button takes you to the previous page.
- 4 This button takes you to the next page.

3

There are also many other clickable links within this document which we've made easy to spot by underlining and highlighting them in **blue**. If you click on one of these links, but then wish to navigate back to the page you were viewing previously, simply click the **'Back'** button at the top of the page.

4



Guide to our Annual Performance Report



Reading our APR

Our Annual Performance Report (APR) is designed to be read on screen using a PDF viewer. You can print our APR if you prefer, but because it's quite a long document you may wish to print in black and white and use the contents page to print the sections you wish to read.



Information is just a click away

To navigate quickly to the section of the APR you are interested in, simply click on the section on the contents page. We have included links like this throughout our APR. Look for the hand icon on your PDF viewer to help you quickly navigate.



Definitions

We have included definitions on the same page as the content to make it easier to understand. You can find our full regulatory glossary on our reports webpage: yorkshirewater.com/reports. An example for outcome delivery incentives is shown below:



Outcome Delivery Incentives (ODI's)

ODIs is a collective term for the financial incentives – positive and negative – that Ofwat has applied to the delivery of our five-year plan. 'Rewards' allow us to charge more over the next five years (in this case, 2020-2025), while 'penalties' require us to charge less. Some of these ODIs measure performance in each of the five years of our current plan, while others apply only to the whole five years.

Help

Throughout our APR we will provide additional help in the form of:



Additional information:

These will provide useful information to help explain our APR.



What does this mean?

We will explain some of the more complicated technical language in plain English, providing helpful examples where appropriate.

Contents

This report is set out into colour-coded sections to help you navigate the report easily. Click on the section you are interested in on the contents page and it will navigate you to that section.

The report is structured as follows:

- | | |
|--|------------|
| 1. Introduction | 10 |
| This section includes information on how to navigate this report and an introduction to what we do here at Yorkshire Water. | |
| 2. Board statements | 20 |
| In this section you can find a Board assurance statement confirming our commitment to publish trusted information and the Board statement on our company direction and performance. | |
| 3. Introduction to our performance | 29 |
| In this section, we explain what our customer outcomes and performance commitments are and how the financial rewards and penalties work. | |
| 4. Review of our performance | 46 |
| In this section, we explain how we are performing against our performance commitments and our methodology for how we calculate outcome delivery incentives. | |
| 5. Our process to provide information you can trust | 106 |
| This section summarises the assurance activities we have completed for the information in this report and the steps we are taking to improve trust in our information. | |

6. Our engagement with our customers and stakeholders	132
In this section, we'll explain how we have engaged with our stakeholders and customers to create our annual performance report.	
7. Our governance	140
In this section, we include information on our company structure and how we are governed.	
8. Regulatory information	152
This section includes the information that we must report to our economic regulator, Ofwat. Information is shown in tables with supporting explanatory commentary.	
9. Risk and compliance statement	279
In this section we set out how we have complied with the statutory, licence and regulatory obligations where Ofwat is our regulator.	
Appendix 1. Financial auditor's opinion	294
This section includes a statement from our financial auditor, Deloitte.	
Appendix 2. Technical assurance statement	299
This section includes a statement from our technical assurance provider, Halcrow.	
Appendix 3. Accounting separation methodology statement	308
This section provides information on the methodology used to produce the regulatory financial information. It includes details on how costs are allocated across different elements of the business.	
Appendix 4. Disclosures	346
This section includes the disclosures required by our regulator, Ofwat.	
Appendix 5. Performance commitments in 2020-2025	396
In this section we provide further information on selected performance commitments for the 2020-2025 period.	

Annual performance report highlights

Section 4 – Review of our performance

This is a summary of our performance throughout the year and includes information on how we have checked and assured this information so that our customers and stakeholders can trust it.

We have included:

- A performance summary
- Outcome performance information on how we are doing in meeting the commitments we made to our customers.

Contents Back

Annual Performance Report 2019/2020 - July 2020

Contents

This report is set out into colour-coded sections to help you navigate the report easily. Click on the section you are interested in on the contents page and it will navigate you to that section.

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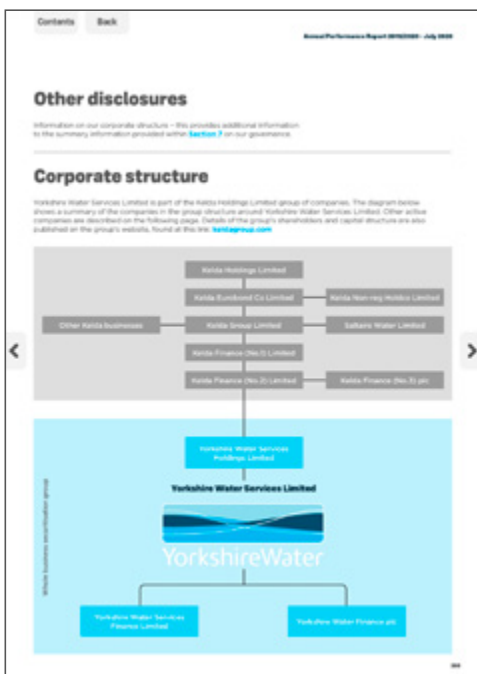
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Section 8 – Regulatory information

This includes all the information that we must report to our economic regulator, Ofwat. Information is shown in tables with supporting explanatory commentary.

It includes:

- Regulatory financial reporting – information on our overall financial position and a breakdown of our costs.
- Price review and additional segmental reporting – financial information by price control and our underlying operational processes.
- Additional regulatory information.



Appendix 4 – Disclosures

Ofwat has specified the requirement of certain disclosures which are included in this report.

Some disclosures are the same as those in the Annual Report and Financial Statements but are shown in full within this document, to enable this report to be a standalone document.

1. Introduction

In this section

01.

We start the introduction by listing the supporting documents that we publish alongside our Annual Performance Report which provide additional information on our services and performance. We also provide links to some useful websites where you can get further information.

02.

We then go over some of the improvements we have made in making this our most accessible APR.

03.

Finally, we include some information on who we are, and what we do.

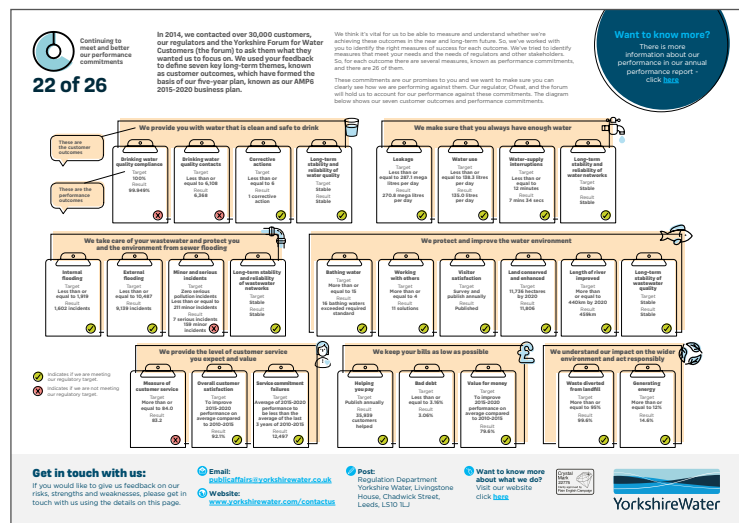
Supporting publications

We publish a suite of documents alongside our Annual Performance Report which provide additional information on our services and performance.

Our performance at a glance

Some of our customers told us they wanted to see a shorter version of our performance summary. So, we have also produced a document showing our performance at a glance. This document shows how we are performing against our 26 performance commitments on a single page.

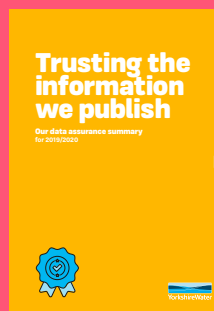
yorkshirewater.com/reports



Risk & Compliance Statement

Our Risk and Compliance Statement provides confirmation that we have complied with the requirements of our licence to operate as a water supplier and the requirements set out in law.

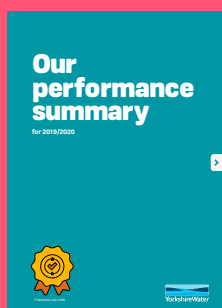
yorkshirewater.com/reports



Data Assurance Summary

Our Data Assurance Summary provides information on the outcome of assurance we carry out throughout the year.

yorkshirewater.com/reports



Our Performance Summary

This is a summary of our Annual Performance Report. We have written our performance summary in collaboration with our customers and the Yorkshire Forum for Water Customers.

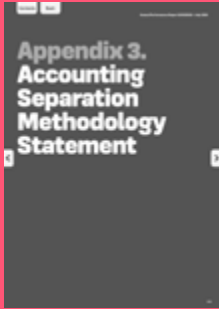
yorkshirewater.com/reports



Yorkshire Forum for Water Customers Statement

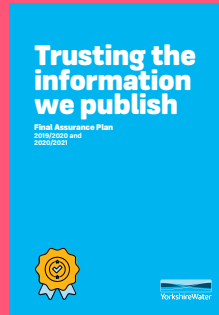
The Yorkshire Forum for Water Customers has published an independent statement on our performance. This report achieves the Plain English Crystal Mark.

You can view the statement here: yorkshirewater.com/yorkshire-forum-for-water-customers



Accounting Separation Methodology Statement

This document includes the enhancements made to processes this year and details the methods of the allocation of totex costs between price controls, as well as the allocations for the upstream services. This is included in **Appendix 3** of this APR.



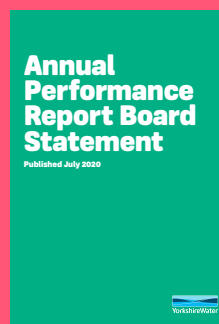
Final Assurance Plan

The Final Assurance Plan explains our approach to how we check our information so that you can have trust and confidence in the information we publish on our website. yorkshirewater.com/reports



Summary of our Risks, Strengths, and Weaknesses Statement

This document provides a summary of our Risks, Strengths and Weaknesses Statement. It includes our approach to gathering information and our targeted areas of assurance. This report achieves the Plain English Crystal Mark. yorkshirewater.com/reports

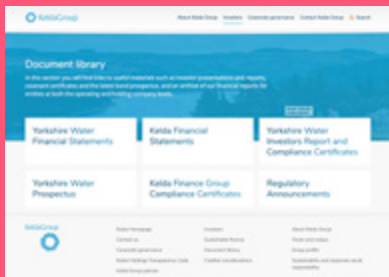


Board Statement on our company direction and performance

This statement sets out how we are delivering for our customers and stakeholders that rely on our service. This is included in **Section 2** of this APR.

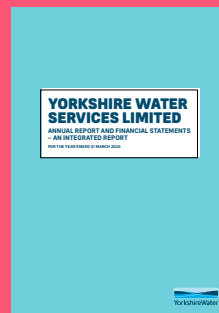
Other publications

To respond to the needs of our many stakeholders we publish a number of other documents on our performance and plans, along with additional information for specialist groups and to fulfil legal requirements.



Kelda Eurobond Co Ltd Accounts

Kelda is the owner of Yorkshire Water. This publication provides information on Kelda's performance. keldagroup.com/investors/document-library



Yorkshire Water Annual Report and Financial Statements

Our Annual Report and Financial Statements (ARFS) provides information on our financial performance and how we are progressing with strategic business objectives. This report is written mainly for our shareholders and investors but is available to everyone. yorkshirewater.com/reports



Definition

Risk

An uncertain future outcome that, if it occurs, will have negative effects on the quality of our publications. A risk is assessed both on the probability of it occurring and, on the impact, should it occur.



Definition

Owat

The Office of Water Services, which is the economic regulator of water services in England and Wales.



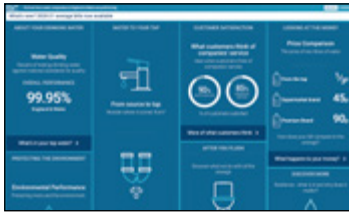
Additional information:

The Risk and Compliance Statement and the Accounting Separation Methodology Statement and included within this APR and also published separately.

Supporting websites

We can't always fit all the information we would like to into our APR, instead we reference websites which contain useful supporting information.

External websites



Discover Water

Some of our information is published on the Discover Water website, allowing customers and stakeholders to see comparative performance between water companies easily.

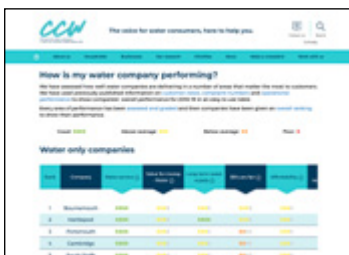
discoverwater.co.uk



Ofwat

Ofwat also publish information about how companies are performing in reports and publications. These can be found by visiting

ofwat.gov.uk



Consumer Council for Water (CCWater)

CCWater have assessed how well water companies are delivering in a number of areas that matter the most to customers. Each area has been assessed and graded and we have been ranked fourth at the time of this publication. You can see the results on the link below.

ccwater.org.uk/households/company-performance

Our websites

Our Performance – How we're doing

We want to let you know about how we're doing in delivering water and waste services and how we're operating as the leading responsible business that we strive to be. Here on this webpage we share lots of information on we are performing against our performance commitments. yorkshirewater.com/our-performance

Yorkshire Forum for Water Customers

This webpage provides details of the membership of the group, minutes of recent meetings and information on the challenges which the Forum have provided during their ongoing customer consultation. It also includes the independent reports published by the Forum. yorkshirewater.com/yorkshire-forum-for-water-customers

Corporate governance and structure

This webpage provides information on the members of the Board, our company structure chart and corporate governance terms of reference and policies.

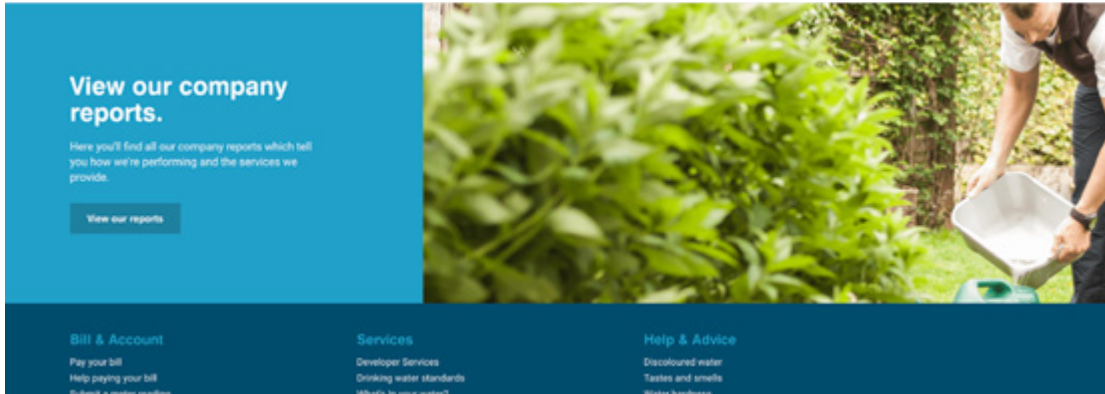
yorkshirewater.com/about-us/what-we-do/corporate-governance-and-structure

These webpages can be found on our 'About us' webpage.



Finding our reports

Our publications can be found on our reports page. You can navigate to our reports page from our Yorkshire Water homepage or by clicking on 'About us' located at the top of our homepage.



Bill & Account

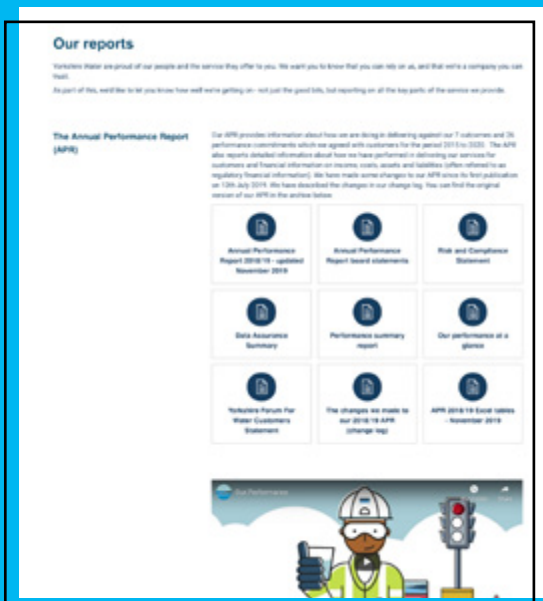
Pay your bill
Help paying your bill
Disputing a payment plan

Services

Developer Services
Drinking water standards
Why's in your water?

Help & Advice

Discoloured water
Tastes and smells
Water hardness



Our reports webpage

At the top of the reports webpage you will find a link to this report and supporting publications. Further down the webpage, there is a video on our performance and governance.



At the bottom of the reports webpage you can find our assurance related publications like our Risks, Strengths and Weaknesses Statement and our Final Assurance Plan. We have also created an archive of our reports from earlier years.

What have we changed in our APR?

We have continued to use the same format for this report that we used in our 2016/2017, 2017/2018 and 2018/2019 APR. We receive feedback from our customers on our APR each year. To continue to meet their expectations we have made a few improvements to our APR.

Finding your way

To improve navigating our APR onscreen, we have added the following functionality:

- Arrow buttons on the page to take you forward to the next page or backwards to the previous page.
- A contents button to return to the contents page.
- A back button to return you to the last page you visited.

Better tables

Some of our customers told us that some of the larger tables in our APR were difficult to read. We have made the following changes:

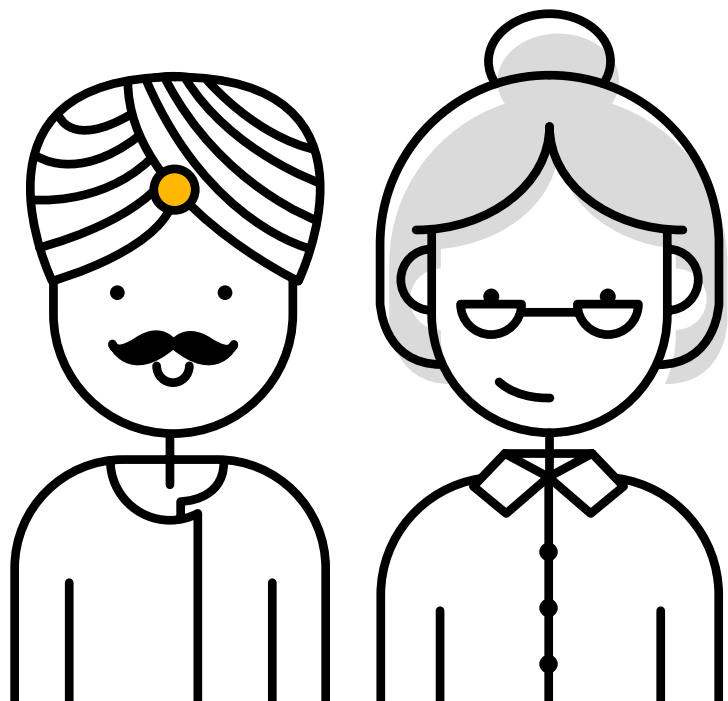
- Redesigned every data table to improve readability.
- Rotated some tables to landscape format.
- Moved tables 4K to 4W out of our APR and made them available in Excel format.
- Included weblinks in our APR to the Excel tables where appropriate.

It's in the balance

Some of our customers told us that we could improve the balance of graphics to text. We have made the following changes:

- Broken up large blocks of text with graphics.
- Enhanced the commentary on our APR tables by making it more succinct where possible.
- Moved the 'Assurance Framework' sub section to **Section 5**. Our process to provide information that can be trusted.

You can read about the other improvements we have made to our reports in [Section 6](#).





About us

Yorkshire Water at a glance



We supply water and wastewater services and are custodians of essential infrastructure and the natural environment. We do all of this for about £1 a day for the average customer, amongst the lowest water and wastewater bills in the country.

-  Operational boundary **Water service**
-  Operational boundary **Sewerage service**

What we do

We provide essential water and wastewater services to the people and businesses of the Yorkshire and Humberside region, playing a key role in the region’s health, wellbeing and prosperity.



Collecting, treating and supplying around **1.3bn litres** of water every day



Investing over **£1m every day** to maintain and enhance Yorkshire’s network of water pipes, pumps and treatment works



Managing **28,000 hectares of land** to protect water quality & enable recreational opportunities



Managing **£1bn of water bills** every year and providing customer service when it’s needed



Collecting, treating, and safely returning to the environment **1bn litres** of water every day



Recycling nutrients and generating energy from leftover human waste



All delivered by around **3,500 employees** using a fleet of over **2,000 vehicles** and increasingly complex technology, delivering for today and planning for the long-term

Find out more about what we do here:

yorkshirewater.com/more-than-water

We're one of Yorkshire's biggest land owners

We collect water from three main sources

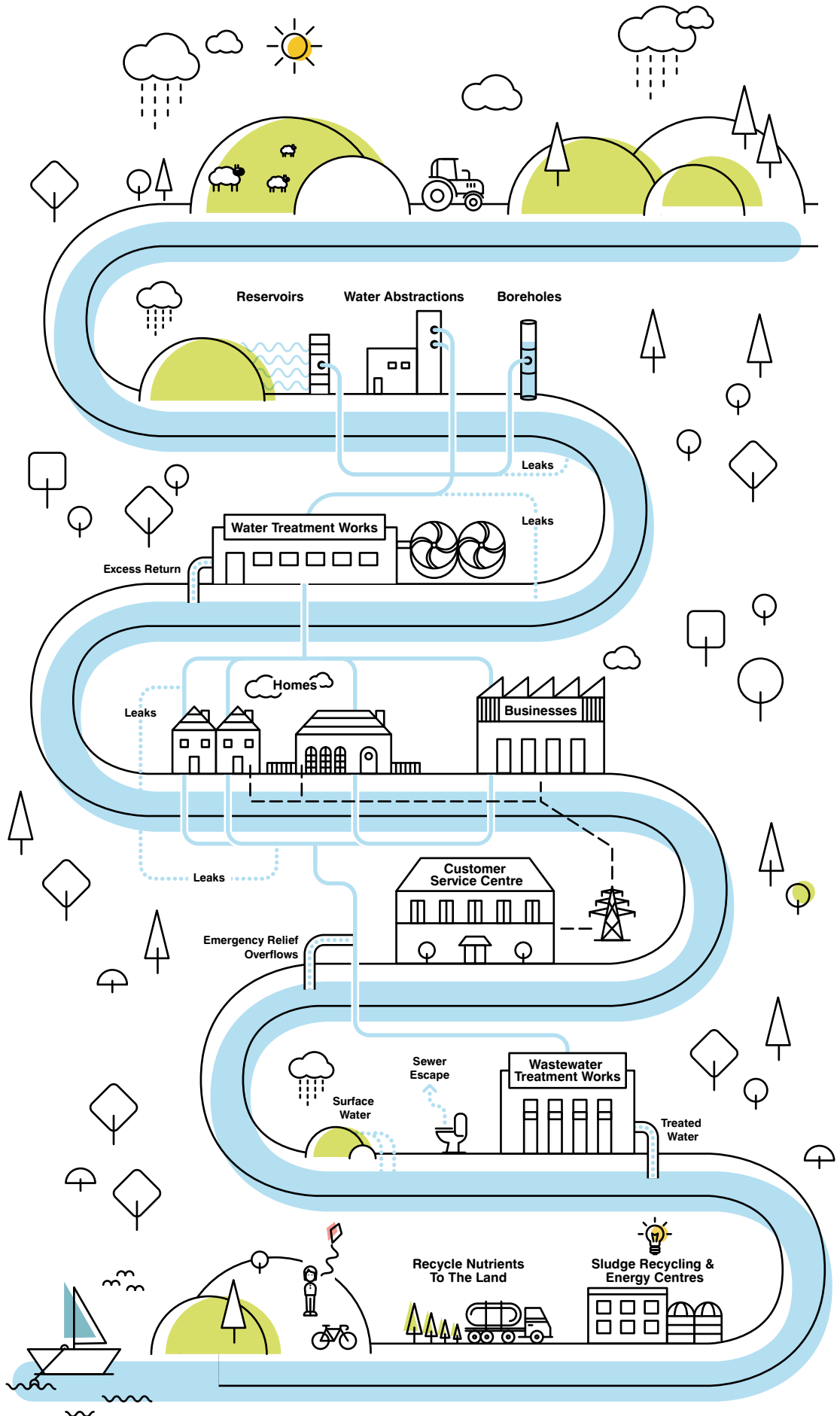
We manage 671 water and wastewater treatment works

We supply water to homes and businesses across the county

Our customer service team supports our 5 million customers

We collect 1 billion litres of wastewater every day

We safely return water back into the environment



2. Board statements

In this section

01.

We start section 2 with an assurance statement from our Board. This is where our Board confirms that the regulatory accounting statements in the APR have been completed in accordance with the Regulatory Accounting Guidelines.

02.

We also include a statement on company direction and performance. This statement shows how our Board sets and reviews our ambitions and targets so that we deliver our goods and services for all our customers and stakeholders who depend on our services.

03.

Finally, we include a link to the statement from the Yorkshire Forum for Water Customers (the independent customer challenge group).

Board assurance statement

Our aim is to produce an Annual Performance Report that covers the key information that our customers and stakeholders have told us they want to see and are interested in, while also meeting the requirements of our regulator, Ofwat.

We believe that good assurance needs to be provided at the right time, proportionate to the level of risk identified, asking the right questions and producing good evidence to support the statements made within this report. Our assurance approach is risk based (this means that we place more focus in areas that are higher risk) and uses a method called 'three levels of assurance'. The first level of assurance is from management controls in our front-line operations which measure performance throughout the year. The second level of assurance consists of line management reviews and reviews by oversight teams with specialist knowledge such as our finance, regulation and legal teams. The third level of assurance is provided through independent assurance which includes our Internal Audit function and external auditors. This approach is best practice and is described in more detail later in this report, in our Assurance Plan and in our Data Assurance Summary.

To satisfy ourselves that the information is accurate and accessible, all elements of the report are subject to an appropriate assurance process. In particular:

- Our assurance processes for annual reporting are certified to the British Standard ISO9001:2015 Quality Management System. This is best practice and externally verified.
- The assurance process includes checks and reviews of data throughout the year then additional audit checks and challenges by Data Providers, Data Managers, Senior Managers and Directors ahead of publication. The assurance process also includes review and challenge by our financial auditor, Deloitte, and our technical auditor, Jacobs. We have reviewed and actioned all findings from these assurance processes.
- We have worked with the Yorkshire Forum for Water Customers, and listened to customer's feedback, to ensure we meet our ambitions for a document that is accessible for all customers.
- The outputs from the assurance processes have been reviewed and challenged by the Board Audit Committee.

The Company is required by the terms of the Instrument of Appointment to prepare regulatory accounts for each financial year in accordance with Condition F of the Instrument of Appointment and the Regulatory Accounting Guidelines. In preparing the regulatory accounts, the Board ensures that appropriate accounting policies have been adopted and applied consistently, that applicable standards have been followed and that reasonable and prudent judgements and estimates have been made.

The Board confirms that the APR sets out how the regulatory accounting statements have been completed in accordance with the Regulatory Accounting Guidelines.

So far as the Directors are aware, there is no relevant audit information of which the company's independent technical and financial auditors are unaware. The Directors have taken all the steps that they ought to have taken as Directors in order to make themselves aware of any relevant audit information and to establish that the company's independent auditors are aware of the information.

The Board of Yorkshire Water understands that it is accountable for the quality and transparency of the information provided within this report. The Board has read the report, reviewed the content and owns the information that is presented. The Board has obtained comfort from the Board Audit Committee that there are appropriate controls and assurance processes in place regarding the information contained within the report.

The Board Audit Committee reviewed the processes and approach to delivery of the APR on 25 March 2020 and then reviewed the completion of the process, including receiving the assurance findings from the independent financial auditor and the independent technical auditor, on 8 July 2020. At these meetings, appropriate enquiries were made on the executive team and the relevant experienced members of staff involved in delivering the APR, in particular the Director of Strategy and Regulation and also the independent financial auditor and the independent technical auditor. In between these meetings, the Board members were provided with draft versions of the developing report and have been able to review and provide comment.

At the Board meeting on 8 July 2020, following feedback from the Board Audit Committee and having made reasonable and relevant enquires, the Board considers that there are appropriate systems, controls and assurance processes in place regarding the information contained within the report. At the Board meeting on 8 July 2020, the Board approved the APR, including the wording of this Board Assurance Statement, and approved the release of the APR for publication. The Board authorised the Company Secretary to sign this Board Assurance Statement on behalf of the whole Board.



Kathy Smith,
Company Secretary

Signed for and on behalf of
the Board of Directors of Yorkshire Water

Board statement on company performance and direction

Our 5 million customers who live in Yorkshire, and the millions of people who visit Yorkshire each year, rely on our services for their basic health and lifestyle. Approximately 140,000 businesses use the water we supply to provide goods and services that support the economy – not only in Yorkshire, but across the United Kingdom, and beyond.

This statement shows how our Board sets and reviews our ambitions and targets so that we deliver our goods and services for all our customers and stakeholders (those with an interest in our business) who depend on Yorkshire Water. Within this statement, we also provide information on the relationship between our financial performance, rewards for our executives and how we deliver our services.

This statement has the following sections.

- How we set our ambitions
- How we monitor performance and make decisions
- How we involve our customers and stakeholders
- How we change and update our commitments
- How we have performed in 2019/2020
- How we balance the relationship between financial performance, rewards for executives and delivering our services.

How we set our ambitions

The water industry works in five-year asset-management periods (AMPs). One of the main aspects of the regulatory framework that supports this five-year planning cycle is called the price review. The price-review process sets the prices we charge, investment we make and services we provide to customers in each AMP. We have just started asset-management period 7 (AMP7), which covers the period from April 2020 to March 2025.

In 2018 we published our plan for AMP7, setting out how we proposed to maintain and improve water and wastewater services in Yorkshire to ensure resilience and sustainability for the short and long term; all at a fair and affordable price to customers in their water bills. We built our plan having engaged with our customers and regulators to understand their priorities. We used the feedback we received to define our big goals and to develop measures that support these goals.

These are known as our performance commitments and these are our promises to you. There are 43 performance commitments in AMP7. We will first report on these in our new quarterly performance report, which will be published in September 2020. The annual performance report of July 2021 will provide performance against the first year of these new performance commitments. You can find our plan for AMP7 at: yorkshirewater.com/ourbusinessplan

It is Ofwat's role, as economic regulator to review the five-year plans prepared by English and Welsh water companies and provide a Final Determination that sets the revenues and service levels for each company for the next five years. In early 2020 we asked Ofwat to refer their final position on our plan to the Competition and Markets Authority (CMA) to carry out a redetermination. We did this because our assessments showed that Ofwat's proposals would not enable us to ensure resilient and best value services for customers in the short and long term. Three other water companies also took this step. The CMA has started their review and has confirmed this will conclude in 2020/2021. In the meantime, we will continue to deliver our plan in line with Ofwat's requirements.

As well as delivering against our regulatory performance commitment targets, we must keep to a range of legal obligations and broader duties to customers, the environment and other stakeholders. You can find more details of how we identify these requirements, and manage the risks of keeping to them, in our risk and compliance statement.

Throughout 2019/2020, we have taken the opportunity to re-set our company purpose, ambition and behaviours to prepare us for the new five-year period and for a period of business transformation. We have spent a lot of time talking to customers and colleagues about what that sense of purpose means and how we should best articulate it for the period ahead. We also looked at how that purpose could be translated into a set of behaviours, setting out how we act, both as an organisation and as individuals.

One of the things which makes Yorkshire Water so distinct is the shared sense of commitment and purpose felt by everyone at the company. This runs very deep in our colleagues, from the front-line teams through to the Board and it helps to guide the decisions which we make.

This process has resulted in a new purpose statement, vision and set of behaviours.

**It sets our purpose as being proud
“to play water’s part in making
Yorkshire a great place to be,
now and in the future.”**

**Our ambition becomes
“to put people at the heart of
everything we do.”**

**Four key behaviours define
the way we act:
we own it, we’re always
learning, we’re better together
and we have heart.**

How we monitor our performance and make decisions

There have been some important changes to the Board in the last year. Richard Flint stepped down as Chief Executive Officer (CEO) at the beginning of September 2019 and Liz Barber, previously Chief Financial Officer, was appointed as our new CEO. Andrew Merrick has also joined the Board as a Non-Executive Director. His extensive financial experience will be invaluable to the Board and equips him perfectly to be chair of the Board Audit Committee. Over the last six months, the leadership team has been reshaped to ensure we have the right skills to lead the company into the new five-year asset management period. To start with this involved changing some existing roles, with Jenni Morris becoming Chief People Officer and Nevil Muncaster taking on the role of Chief Strategy and Regulation Officer. We have now made some additional external appointments, with Andy Haywood joining as Chief Technology and Information Officer, Mark Horrobin joining as Chief Operating Officer and Chris Johns becoming Chief Financial Officer.

The Board makes all decisions with a view to the longer term. The long-term strategy of the business was published in 2018 and is due to be reviewed and updated as appropriate over the next 12 to 18 months. This strategy looks 25 years ahead and takes into consideration the long-term forecasts for Yorkshire in many areas such as population growth, water consumption and climate change. Each year the Board considers the long-term viability of the business and makes a statement on this.

Throughout 2019/2020, the Board had seven scheduled meetings, with five additional ad-hoc meetings held; three to consider matters in relation to the Price Review, one concerning the appointment of the new CEO and one specifically to hear from Liz Barber, as the new CEO, on her initial thoughts and plans in her new role.

At each meeting, the Board considers health and safety, financial performance and non-financial business performance, including past performance and expected future performance.

To make sure all Board members have a full picture of our company, monthly reports on financial performance, our employees, governance, keeping to our standards and health and safety are sent to the Board members. We do this whether or not a Board meeting is scheduled.

The Board meets both formally and informally with senior management across the business, gaining insight into the day-to-day operations and the main risks and opportunities facing each part of the business. Members of the Yorkshire Water Leadership Team and senior managers are regularly invited to go to meetings with the Board to provide updates and give the non-executive Board members regular direct access to the senior management team.

There is a schedule of matters reserved for the Board which sets out the specific matters that must be referred to the Board for approval. These include matters relating to the structure of the company, our policy on dealing with dividends, significant issues to do with regulations and press releases, along with significant operational matters.

In 2019/2020, the Board created a Colleague Engagement Forum, with membership from across the organisation. This is regularly attended by members of the Board. The forum is one of the ways that the Board has, to allow it to understand the culture of the business directly from those experiencing it on a daily basis and allows the Board to gauge whether the vision and values are appropriately embedded.

Decision-making will inevitably involve some trade-off to make sure we take a fair and reasoned approach to delivering our services. To help us with our decision-making, we are using the concept of the ‘six capitals’. The six capitals are shown below.

1. **Financial capital** – our financial health and efficiency
2. **Manufactured capital** – our pipes, treatment works, offices and information technology (IT)
3. **Natural capital** – the materials and services we rely on from the environment, for example water
4. **Human capital** – our workforce’s abilities and wellbeing
5. **Intellectual capital** – our knowledge and processes
6. **Social capital** – our relationships with our customers and stakeholders and our customers’ trust in us.

Companies traditionally tend to focus mainly on financial capital. Our decision-making is improved by considering the positive and negative effects and links between all of the six capitals. This means that our decisions have a balanced effect, which takes account of risk and value, so that we can look at long-term approaches.

As well as using the concept of the six capitals in our decision-making, we need to keep our long-term plans up to date. As a result, the Board has put in place a PESTLE, which is a tool companies use to view, in different ways, the environment that a company is working in.

How we involve our customers and stakeholders

We need to continue involving our customers and stakeholders to make sure our ambitions and priorities match our customers' priorities. Understanding from our customers what matters most to them about the services we provide shapes both our immediate targets and our long-term plans.

We know that our customers' expectations are changing. We want our services to be flexible so that we can tailor them to match our customers' needs. For example, some people want to talk to us on the phone to report a problem, but other customers prefer to report and deal with problems online. No two customers are the same and the way customers want us to contact them, or ways to get in touch with us, varies greatly.

We are committed to continuing to involve our customers to make sure that we always understand their priorities and take account of them in our plans, now and in the future.

Over the past year a new Customer Experience strategy has been produced, built from customer and colleague insight aligned to the new purpose, ambition and behaviours of the organisation.

The strategic intent is to become one of Yorkshire's most customer valued organisations generating high satisfaction through brilliant people and achieving greater productivity and effectiveness as a result. This will be achieved by focusing on the customer needs throughout their relationship with us at every touchpoint, gaining an understanding of their emotional response throughout that experience and designing journeys and business capability around the customer. Regardless of how customers interact with Yorkshire Water, their experience will be designed according to their needs to ensure customers can access us appropriately. Most notably our focus remains on supporting vulnerable customers and ensuring they receive a valued and supported experience through the priority services register, social tariffs and strengthening the accessibility of our channels.

We have a Board committee with a focus on the social purpose and public accountability of the organisation. We call this the Social Value Committee. We recognise our role as an anchor institution in Yorkshire and that we provide an essential public service, as well as playing a key role in the health, wellbeing and prosperity of the region. For more information on the Social Value Committee, please see the report in the Annual Report and Financial Statements.

Over the past year we have been developing our social contract. A Social Contract represents a two-way agreement between Yorkshire Water and the people of Yorkshire. For Yorkshire Water, the Contract goes above and beyond the everyday responsibilities of a water company and clearly demonstrates the financial, social and environmental benefits it brings to the region. In return, the people of Yorkshire will be willing to show their support by making some simple but positive changes to the way that they use our water and wastewater services. We have held workshops with colleagues, undertaken a number of customer focus groups, and completed in depth interviews with different external stakeholders. This has provided us with some great direction and suggestions for initiatives. Every group recognised that the image and level of trust in Yorkshire Water could be enhanced if we are able to deliver aspects of the social contract which the public can support easily and which provide some form of benefit. The broad themes and ideas that have been identified through the engagement activity are now being developed into potential initiatives, which can be tested with customers and these then might form the basis for a social contract. This will be developed further over 2020/2021.

We continue to regularly discuss our performance with the independent Yorkshire Forum for Water Customers (the Forum).

How we change and update our commitments

Although we set our regulatory performance commitments using a five-year cycle, our commitments can change.

As well as the ambitions we set ourselves during price reviews, our ambitions are also influenced by best practice throughout the world. The United Nations Development Programme (UNDP) has formally adopted a set of 17 sustainable development goals (SDGs) which are backed up by 169 targets. We have assessed where we can make the most substantial contribution to these goals by increasing the value we create for communities in Yorkshire and by reducing our carbon footprint. You can find out more about the SDGs at sustainabledevelopment.un.org. Further information on our progress with these goals is provided within our Annual Report and Financial Statements.



PESTLE

An acronym for political, economic, social, technological, legal and environmental. We use it so our decisions consider all the different stakeholders involved.

In April 2019, the water industry published six stretching goals called Public Interest Commitments. All of these goals go beyond planned commitments within our current business plan. We actively helped the industry to shape these commitments and they work alongside our plans for AMP7 and beyond. You can find the public interest commitments at [water.org.uk/wp-content/uploads/2019/04/Public-Interest-Commitment.pdf](https://www.water.org.uk/wp-content/uploads/2019/04/Public-Interest-Commitment.pdf)

The rapid onset of the Covid-19 pandemic in the last months of the financial year meant that we needed to make major and rapid changes to the company's operations to ensure that we could continue to provide an essential service whilst protecting the health and safety of our colleagues and customers. Recognising the financial impact on our customers of the lockdown period, we have actively promoted our special tariffs and payment breaks to ensure that those who needed help could get it.

How we have performed in 2019/2020

On their own, our performance numbers do not really reveal either the operational challenges we have faced during the year or indeed the significant achievement of our colleagues in maintaining and improving the service to our customers. In the course of the year, we have dealt with three major storms and consequent flooding events which have had a significant impact on the lives of our customers and the communities we serve. At the very end of the financial year the emergence of Covid-19 meant that we had to adapt our ways of working quickly to protect our colleagues and our customers and continue to deliver our essential services safely.

The Annual Performance Report provides more information on our performance. We explain our latest performance, including where we have been successful in meeting or going beyond our performance commitments, and why some commitments did not meet the targets we set.

We have met 22 out of 26 performance commitments this year. You can find more information on our performance against all 26 of our performance commitments within the Annual Performance Report.

We and the other water companies in England and Wales provide information to a central hub so you can compare how we are performing against each other and how the water industry compares with other sectors. Visit [discoverwater.co.uk](https://www.discoverwater.co.uk) to find the latest information on water quality, environmental performance, customer service and water bills.

We have made strong progress during the first year since making the commitment to the Public Interest Commitments. Further information is available within the Annual Report and Financial Statements.

Over the last year, it has also been a priority for us to build closer relationships with the organisations we work with in Yorkshire. We have spent the last year looking to create new partnership arrangements or to create new networks united behind common purpose. We have become part of the Leeds anchor network, a group of the anchor institutions in Yorkshire which work with Leeds City Council to develop an inclusive growth agenda for the city. We have joined the Bradford Sustainable Development Commission which was created shortly before the Covid-19 lockdown and are pleased to be playing our part in the West Yorkshire Economic Recovery Board set up by the local authorities in the area. The Living with Water Partnership in Hull is starting to make a demonstrable contribution to the reduction of flood risk in the city and we are in dialogue with stakeholders in the Sheffield city region to create a similar collaborative network to make the Don catchment more resilient to flooding.

As one of Yorkshire's largest landowners we are very aware of the potential contribution that the county's land could make towards carbon reduction and climate adaptation. We have therefore worked with partners such as the National Trust, Forestry Commission and Crown Estates to establish the Yorkshire land network with an initial objective to establish a functioning Yorkshire carbon market to help fund peatland restoration and other carbon sequestering projects. This project is in its early stages.

We committed to a policy of being 'open by default' by 2020. In November 2019, we prepared a summary of the last five years of performance across our performance commitments, up to the most recent 2018/2019 APR. This release served to act as an anchor point for future releases. Over the following six months, we would go on to prepare and release the supplementary data relating to all 26 performance commitments from the latest 2018/2019 report. This release delivered on our commitment to being open by default and will act as the benchmark for all future releases. The information released has already enabled us to identify new and emerging trends on a much more granular level both by working with external partners, but also by revealing new insights that are empowering our business leaders to take more decisive actions to improve and enhance the service we provide. It is allowing us to demonstrate how being open and transparent is good for driving improvements and good for building customer trust. To find out more visit our open data section on our website: [yorkshirewater.com/news-media/open-data](https://www.yorkshirewater.com/news-media/open-data)

How we balance the relationship between financial performance, rewards for executives and delivering our services

We believe in the importance of being open and transparent about paying our directors and we try to make sure we pay our directors fairly in relation to their experience, their performance, the demands and complexity of their role and the experience our customers have. We strive to ensure the reward received by our directors is market competitive, consistent, simple, value-based and balanced, as well as ensuring it is reflective of the pay and employment conditions across the rest of the business and in the communities we serve. During 2019/2020 we have undertaken a comprehensive review of the remuneration policy for our executive directors. We want to ensure we remunerate fairly; we are able to attract and retain the right calibre of talent; and we want to ensure the reward structure drives the right behaviours, appropriately rewarding strong performance whilst not rewarding poor performance. You can find full details of our directors' pay in our Directors' Remuneration Report, which is published in our Annual Report and Financial Statements.

Statement approval

At the Board meeting on 8 July 2020 the Board approved this statement on our direction and performance. The Board authorised the Company Secretary to sign this statement on behalf of the whole Board.

Signed on behalf of the Board

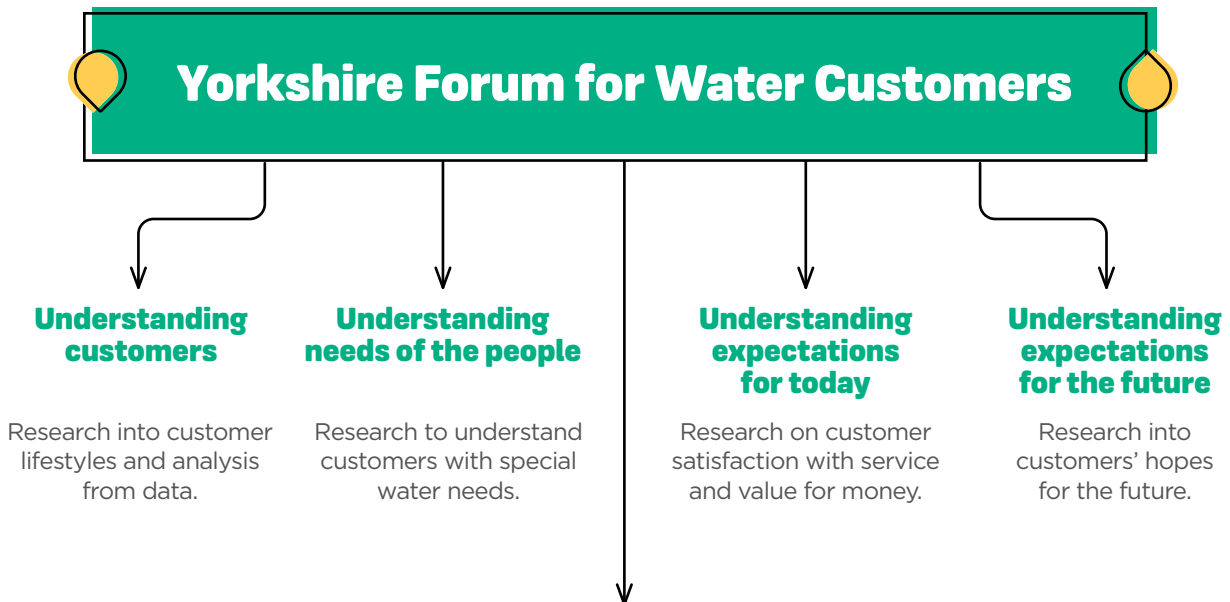


Kathy Smith
Company Secretary

Statement from the Yorkshire Forum for Water Customers

We regularly engage with the Yorkshire Forum for Water Customers (the Forum), which gives us valuable insight into what our customers want from us now and into the future. The Forum is an independent challenge group that is responsible for making sure our customers' views are fairly reflected in our business plan and ensuring we meet the performance commitments we have made to customers. You can read more about how we have engaged with the Forum in [Section 6](#) of this APR.

The Forum has published a statement on our performance. You can view the statement here: yorkshirewater.com/yorkshire-forum-for-water-customers

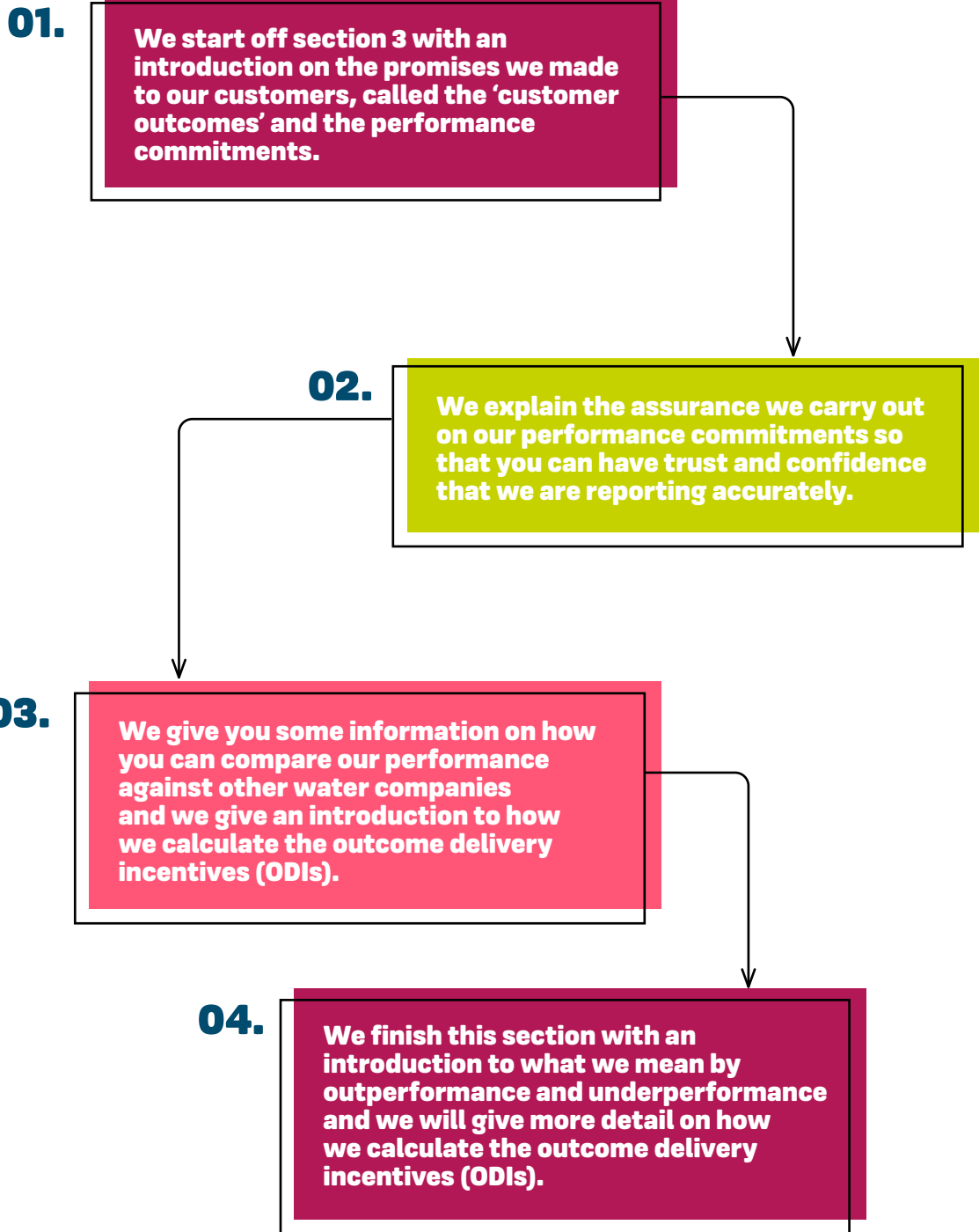


Holding your Company to account

Challenging Yorkshire Water to improve and making sure it works for you.

3. Introduction to our performance

In this section



Links to more information

We have provided more information on our performance than ever before. Click on the links below to view our other publications and webpages on our performance.

Visit yorkshirewater.com/yorkshire-forum-for-water-customers to see the Yorkshire Forum for Water Customers independent report on our performance

Want a summary of our performance? Visit yorkshirewater.com/reports to view our Performance Summary report

To see a video on our performance visit 'our performance – how we're doing' at yorkshirewater.com/our-performance

Already know what our performance commitments are? Go to **Section 4** of our APR – which provides a review of our performance

Want to see the Ofwat performance tables? Go to **Table 3A** and **Table 3B**








Want to know how our performance compares with other water companies? Visit discoverwater.co.uk to view the Discover Water website

What are the customer outcomes and performance commitments?

In 2014, we contacted over 30,000 customers, our regulators and the Yorkshire Forum for Water Customers (the Forum) to ask them what they wanted us to focus on. We used your feedback to define seven key long-term themes, known as customer outcomes, which have formed the basis of our five-year plan, known as our AMP6 2015-2020 business plan. We think it's vital for us to be able to measure and understand whether we're achieving these outcomes in the near and long-term future. So, we've worked with you to identify the right measures of success for each outcome. We've tried to identify measures that meet your needs and the needs of regulators and other stakeholders. So, for each outcome there are several measures, known as performance commitments, and there are 26 of them.

These commitments are our promises to you and we want to make sure you can clearly see how we are performing against them. Our regulator, Ofwat, and the Forum will hold us to account for our performance against these commitments. The diagram below shows our seven customer outcomes and performance commitments.

These are our customer outcomes

						
We provide you with water that is clean and safe to drink	We make sure that you always have enough water	We take care of your wastewater and protect you and the environment from sewer flooding	We protect and improve the water environment	We understand our impact on the wider environment and act responsibly	We provide the level of customer service you expect and value	We keep your bills as low as possible

These are our performance commitments

Drinking water quality compliance	Leakage	Internal flooding	Length of river improved	Energy generation	Quality of customer service (SIM)	Number of people who we help to pay their bill
Corrective actions	Water use	External flooding	Visitor satisfaction		Waste diverted from landfill	Service commitment failures
Drinking water quality contacts	Water supply interruptions	Pollution incidents	Working with others	Stability and reliability factor - Wastewater quality		Overall customer satisfaction
Stability and reliability factor - Water quality	Stability and reliability factor - Water network	Stability and reliability factor - Wastewater network	Bathing water quality			
			Land conserved and enhanced			

 These performance commitments have an outperformance or an underperformance payment attached to them



What does outperformance and underperformance mean?

To make sure we deliver against the performance commitments, we have developed a number of rewards (outperformance) and penalties (underperformance) in consultation with our customers. For example, if we fail to deliver on our promises, this could affect our reputation, customers could view us negatively and we may have to pay a financial penalty. We explain this in more detail later in this section.

The performance commitments in more detail

We provide you with water that is clean and safe to drink

There are four performance commitments under this outcome

- Drinking water quality compliance
- Corrective actions
- Drinking water quality contacts
- Stability and reliability factor – Water quality.



You told us you need a continuous supply of clean, safe water for drinking and business use

Corrective actions

Any significant incident where the Drinking Water Inspectorate (DWI) has required us to take corrective action to maintain compliance or protect public health. Essentially, this refers to the number of times that the DWI feels that we haven't dealt with a situation appropriately when we've had to notify customers that the quality of our water is not up to acceptable standards.

This is a calendar year measure.

Drinking water quality contacts

The number of times that customers contact us each year because of taste, odour or discolouration issues with our water, and perceived illness as a result of drinking our water.

This is a financial year measure.

Drinking water quality compliance

This measures the quality of our water at the customers' taps. We take water samples based on the DWI sampling programme, and the results are used to determine the percentage of samples that are at or above pre-defined standards.

This is a calendar year measure.

Stability and reliability factor – Water quality

An overall assessment of the long-term stability and reliability for water quality. It's based on a series of measures which include non-compliance of our water treatment works sites and reservoirs due to coliform bacteria, turbidity and the number of reactive equipment failures.



Calendar year

The year starting from January 1st to December 31st.

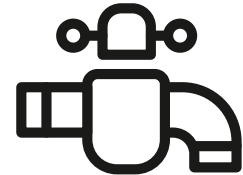
Financial year

The year starting from April 1st to March 31st.

We make sure that you always have enough water

There are four performance commitments under this outcome

- Leakage
- Water use
- Water supply interruptions
- Stability and reliability factor – Water network.



You told us you need a continuous supply of clean, safe water for drinking and business use

Leakage

The total amount of water lost, in distribution and through supply pipes. This includes any losses between the treatment works and the customer’s stop tap but doesn’t include internal plumbing losses.

This is a financial year measure.

Water use

The average daily water consumption per person of population in a dry year. This is only for household consumption.

This is a financial year measure.

Water supply interruptions

The number of minutes lost per property served due to supply interruptions of three hours or longer (irrespective of whether it’s planned, unplanned or caused by a third party).

This is a financial year measure.

Stability and reliability factor – Water network

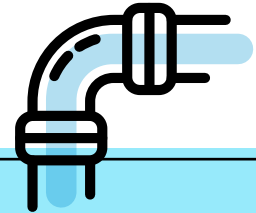
An overall assessment of the long-term stability and reliability for the water networks. It’s based on a series of measures which include burst mains, supply interruptions of more than 12 hours, low water pressure, customer contacts for discolouration and reactive equipment failures.

This is a calendar year measure.

We take care of your wastewater and protect you and the environment from sewer flooding

There are four performance commitments under this outcome

- Internal flooding
- External flooding
- Pollution incidents
- Stability and reliability factor – wastewater network.



You want us to remove your wastewater and maintain the sewer network

Internal flooding

The total number of incidents of internal sewer flooding of homes and businesses during the year.

This is a financial year measure.

External flooding

The total number of incidents of areas affected by external flooding during the year.

This is a financial year measure.

Pollution incidents

The total number of pollution incidents caused by our wastewater assets which have been classified as having a minor or serious effect.

This is a calendar year measure.

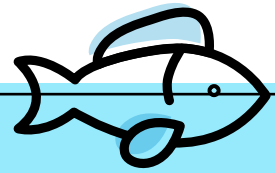
Stability and reliability factor – Wastewater network

An overall assessment of the long-term stability and reliability for the wastewater networks. It's based on a series of measures which include sewer collapses, sewer blockages, properties flooded due to overloaded sewers and other causes, certain types of pollution incidents and reactive equipment failures.

We protect and improve the water environment

There are six performance commitments under this outcome

- Length of river improved
- Visitor satisfaction
- Working with others
- Bathing water quality
- Land conserved and enhanced
- Stability and reliability factor – wastewater quality.



You want us to take very good care of the environment

Length of river improved

The length of river (kilometres) in the Yorkshire Water region improved through our investments during 2015-2020.

Visitor satisfaction

An assessment of customers' satisfaction with our current facilities, access and use of recreational sites, for example, walks around our reservoirs.

Working with others

The number of solutions we deliver through working with multi-agencies, organisations or individuals.

Bathing water quality

The number of Yorkshire's bathing waters (for example, beaches) where the requirements of the EU Bathing Water Directive are exceeded based on bathing water samples taken at designated beaches.

Land conserved and enhanced

The amount of land (hectares) that we conserve and enhance. This includes land within the region and includes both Yorkshire Water and non-Yorkshire Water land.

Stability and reliability factor – Wastewater quality

An overall assessment of the long-term stability and reliability for wastewater quality. It's based on a series of measures which includes the number of wastewater treatment works failing to meet compliance and reactive equipment failures.

We understand our impact on the wider environment and act responsibly

There are two performance commitments under this outcome

- Energy generation
- Waste diverted from landfill.



You want us to take very good care of the environment

Energy generation

The amount of energy (electricity) Yorkshire Water generates through renewable technology expressed as a % of total energy consumption.

Waste diverted from landfill

The amount of waste from all Yorkshire Water activities (office, operational or construction) that's recycled or re-used as a % of total waste produced.

We provide the level of customer service you expect and value

There are three performance commitments under this outcome

- Quality of customer service (SIM)
- Service commitment failures
- Overall customer satisfaction.



You want good customer service and acceptable prices

Quality of customer service (SIM)

The Ofwat qualitative measure of customer service satisfaction called Service Incentive Mechanism (SIM).

Service commitment failures

The total number of events where the company has failed to meet the Guaranteed Standards of Service (GSS).

Overall customer satisfaction

The reported value (%) for overall customer satisfaction determined by the annual Consumer Council for Water tracking survey.



What's Guaranteed Standards of Service (GSS)?

All customers of water and sewerage companies are entitled to guaranteed minimum standards of service, as laid down by the Government. These rights are known as the guaranteed standards scheme (GSS). Where a company fails to meet any of these standards of service then it is required to make a specified payment to the affected customer.

We keep your bills as low as possible

There are three performance commitments under this outcome

- Number of people who we help to pay their bill
- Bad debt
- Value for money.



You want good customer service and acceptable prices

Number of people who we help to pay their bill

The number of customers who are assisted to pay their bill. This includes, but isn't limited to: Water Sure, Resolve and the Community Trust, plus customers who take up a water meter as a result of targeted advice following identification of an affordability issue.

Value for money

The reported % for value for money as determined by the annual Consumer Council for Water tracking survey.

Bad debt

The cost to bill paying customers to cover the cost of interest on revenue that's not collected, debt written off and debt management costs, expressed as a % of the average annual bill.



Who is the Consumer Council for Water?

The Consumer Council for Water support thousands of customers with free advice and support on every aspect of their water and sewerage services.

Assuring our performance

Like all of the information we publish, our performance information has been checked by our three levels of assurance described in [Section 5](#) of this report. We want to make sure you can trust and have confidence in the information we publish.

The results of our performance are presented to the Yorkshire Forum for Water Customers (the Forum), a customer challenge group. Our technical assurance providers, Jacobs, attended a meeting of the Forum to present its views on our performance. The Forum then challenged us on our performance and how we are delivering against our commitments. Here is a link to the statement from the Forum reflecting on our performance: yorkshirewater.com/yorkshire-forum-for-water-customers

You can view the independent assurance statement from Jacobs in [Appendix 2](#) of this report.

Comparing our performance

All water companies have their own set of performance commitments which have been individually developed to meet the needs and concerns of each company's customers. This can make it difficult to compare performance across different water companies, even similar sounding performance commitments can have different definitions.

Discover Water

In recognition of this, Discover Water (discoverwater.co.uk) was launched in 2016 to bring key water company information together in one place for customers. The dashboard provided by Discover Water is a clear and simple source for trustworthy and factual information including how companies are performing against each other in key areas.

Ofwat

Ofwat publish a 'Monitoring financial resilience' document each year using the information published by water companies in their Annual Performance Reports. This report compares the financial resilience and performance of the water sector. ofwat.gov.uk/regulated-companies/company-obligations/monitoring-financial-resilience

For a number of our performance commitments we can compare our performance against that of other water companies. See how we're performing relative to other water companies in [Section 4](#) of this APR. We've shown comparisons for the following performance commitments:

- Drinking water quality compliance
- Drinking water quality contacts
- Water use
- Water supply interruptions
- Leakage
- Internal flooding
- External flooding
- Measure of customer service.



Outperformance and underperformance

To make sure that we deliver the performance commitments, there are penalties when we fail to deliver for you which we will refer to as ‘underperformance’, and rewards if we are able to deliver more which we will refer to as ‘outperformance’. We have designed these incentives to reward performance that beats a particular target and to penalise us if our performance falls short. We believe it’s important that we focus on delivering these outcomes. As a result, the penalties for underperformance are always greater than the rewards we could earn for outperformance. Not all of our performance commitments have financial incentives, some have only reputational incentives based on how we perform against a target that reflects customers’ views of us.

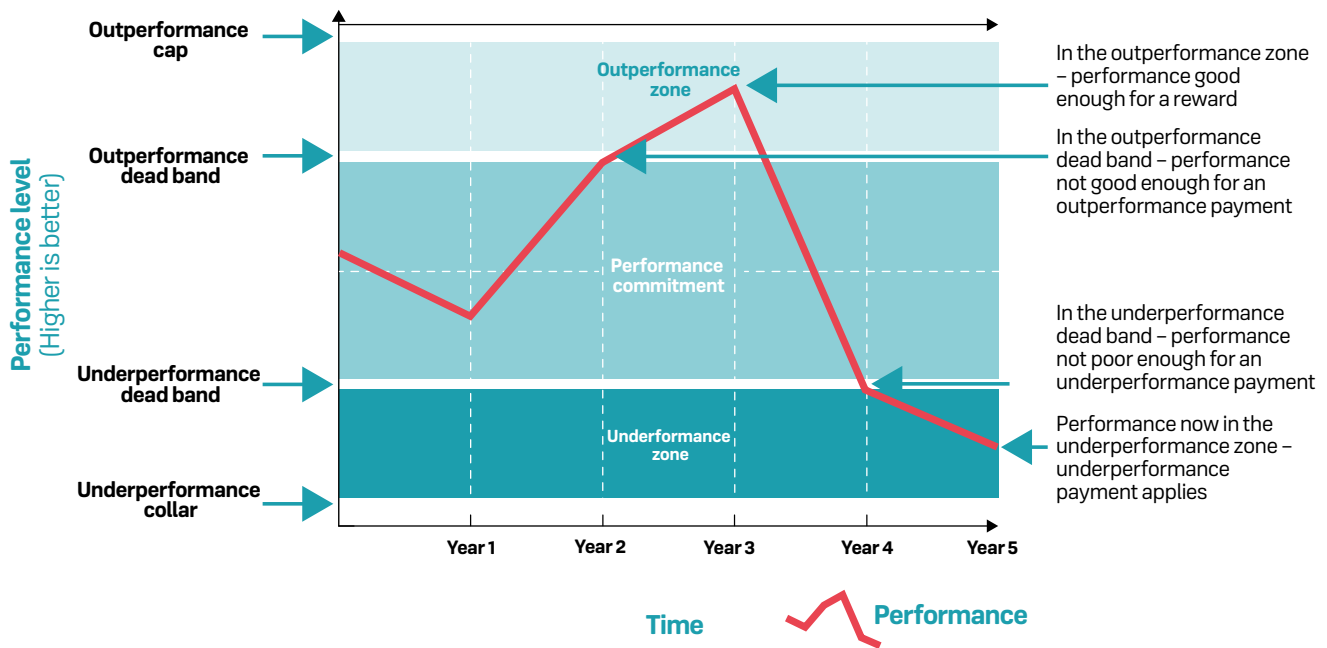
Although performance commitments with a reputational incentive don’t offer a reward or penalty, poor or good performance can affect how we are seen as a company, making them just as important.

So, how does it work?

For performance commitments which have a financial incentive, if we outperform (beat the target), we can earn a financial reward (where the performance moves into the outperformance zone as shown on the diagram below) or receive a financial penalty if we underperform (where the performance moves into the underperformance zone).

There is an outperformance cap, which is the maximum outperformance we can achieve in any given year for each performance commitment, and an equivalent limit on underperformance, called a ‘collar’, which is the most we can be penalised.

There is also an outperformance and underperformance ‘dead band’. This acts as a buffer between the target and the outperformance and underperformance zones. This is so that we aren’t immediately rewarded or penalised for small moves away from the target, which in some cases can be caused by natural factors, such as the weather.



This graph is an example only. It does not reflect the actual performance of Yorkshire Water.

How do we calculate the outcome delivery incentives?

We explained earlier how some of our performance commitments carry a financial reward or penalty, also known as outcome delivery incentives or 'ODI'. Here, we will explain through flow diagrams how they are calculated.

We have three forms of financial ODI; two sided (outperformance and underperformance), one sided (outperformance only) and one sided (underperformance only).

Performance commitments with two sided incentives – outperformance and underperformance

- Drinking water quality contacts
- Leakage
- Water supply interruptions
- Internal flooding
- Pollution Incidents (Category 3 only)
- Length of river improved
- Land conserved and enhanced
- Quality of customer service (SIM).

Performance commitments with one sided incentive – underperformance only

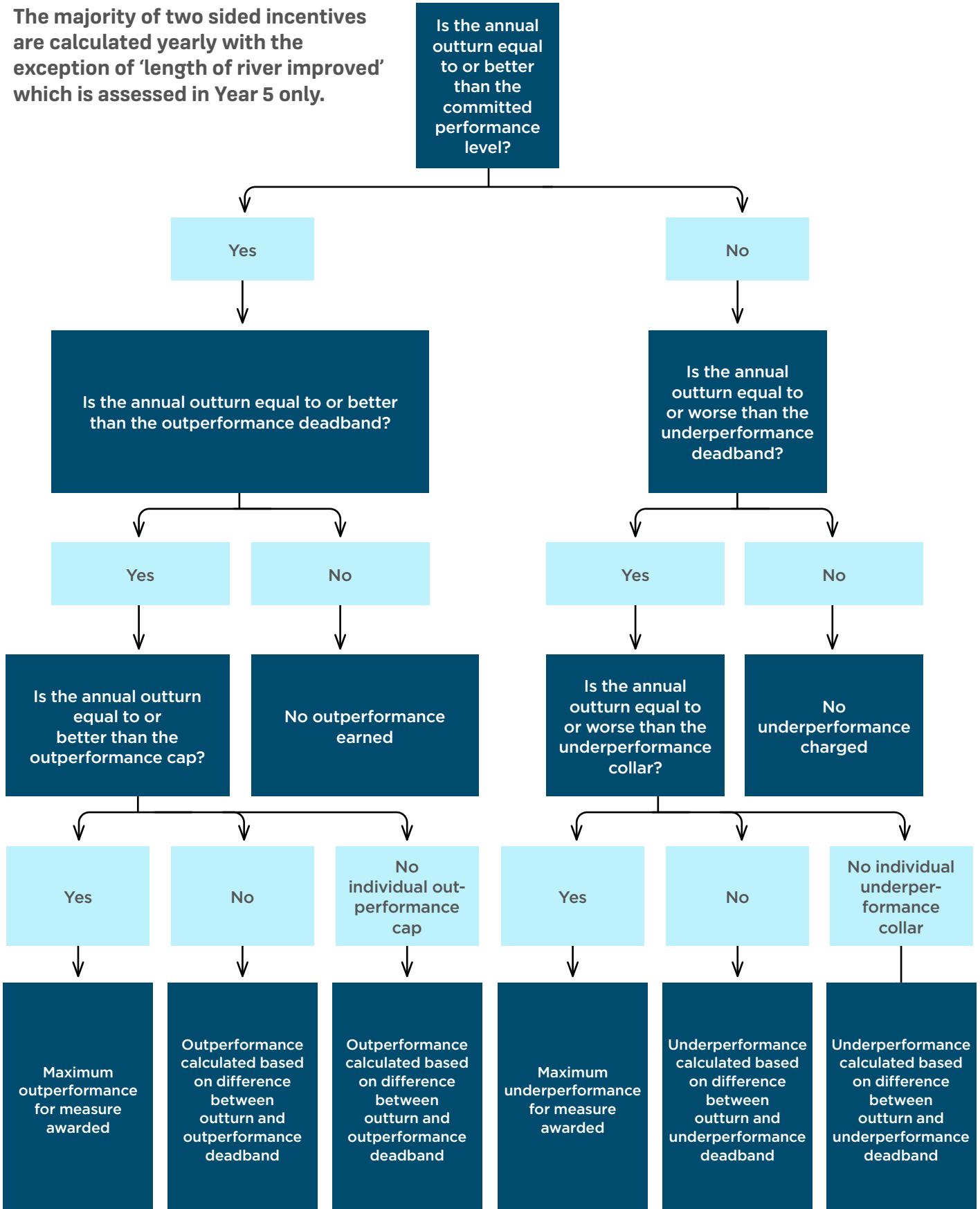
- Drinking water quality compliance
- Stability and reliability factor – water quality
- Stability and reliability factor – water network
- Stability and reliability factor – wastewater network
- Stability and reliability factor – wastewater quality.

Performance commitments with one sided incentive – outperformance only

- Working with others.

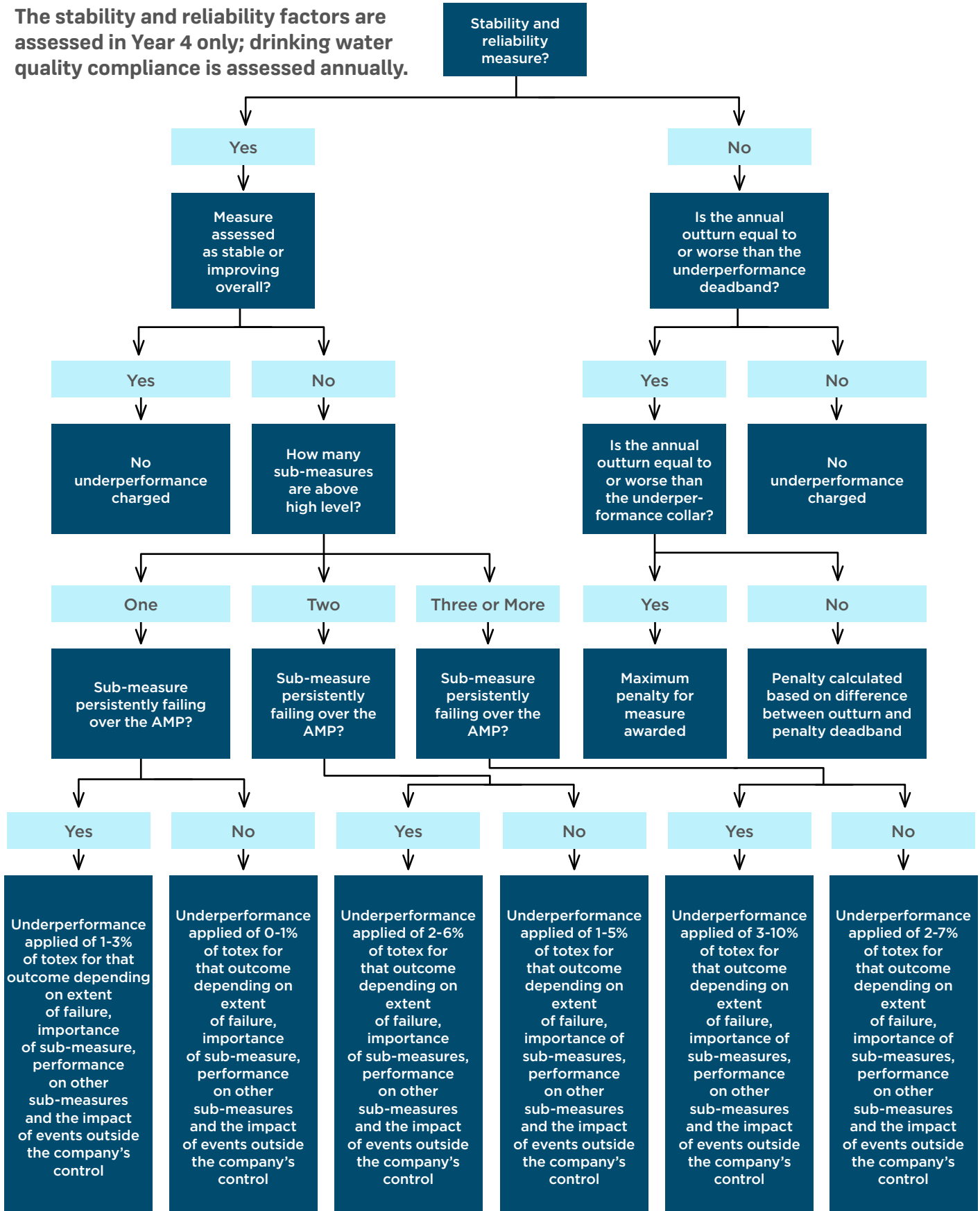
Two-sided incentives calculation methodology – outperformance and underperformance

The majority of two sided incentives are calculated yearly with the exception of 'length of river improved' which is assessed in Year 5 only.



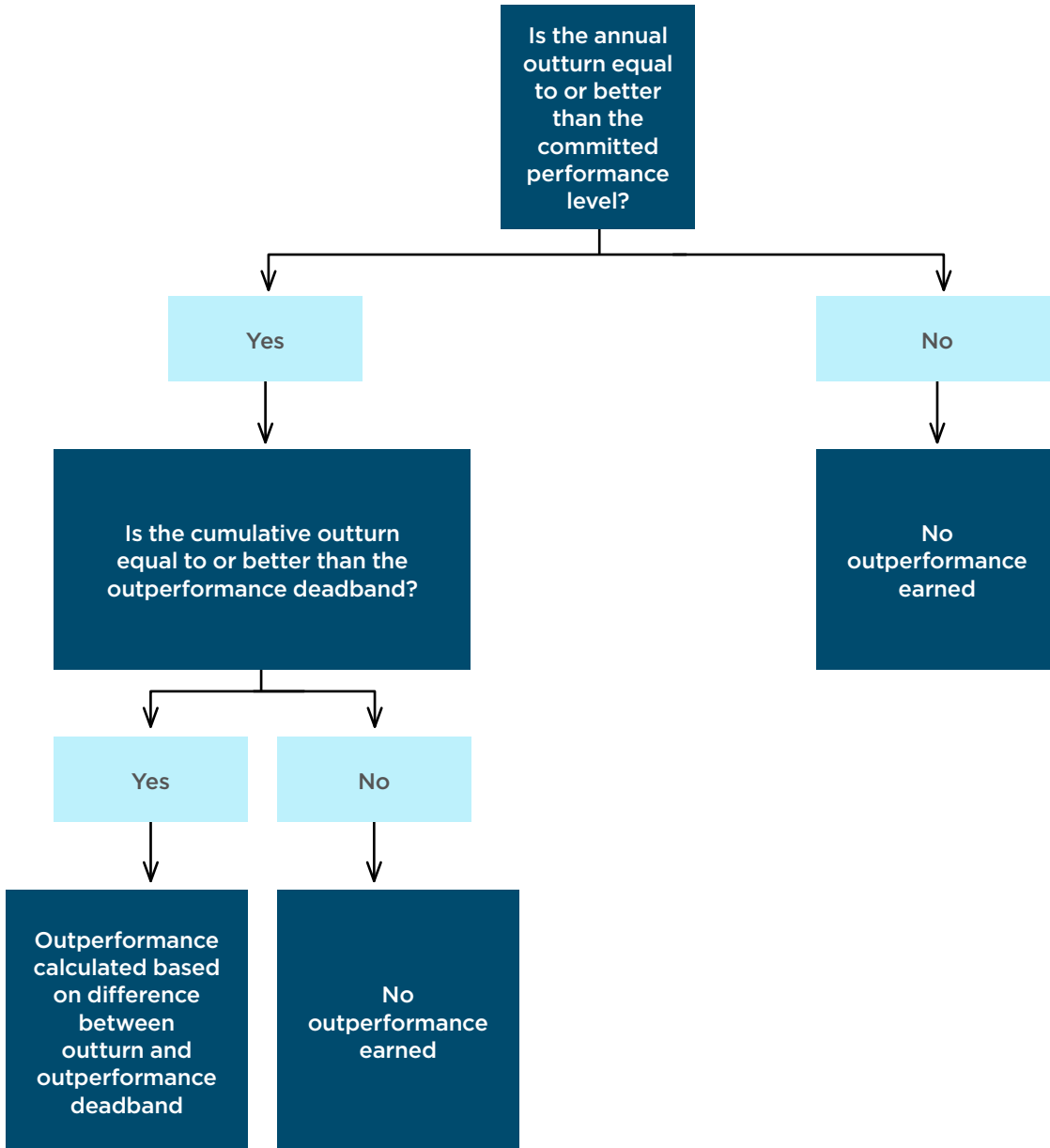
One sided incentive – underperformance only calculation methodology

The stability and reliability factors are assessed in Year 4 only; drinking water quality compliance is assessed annually.



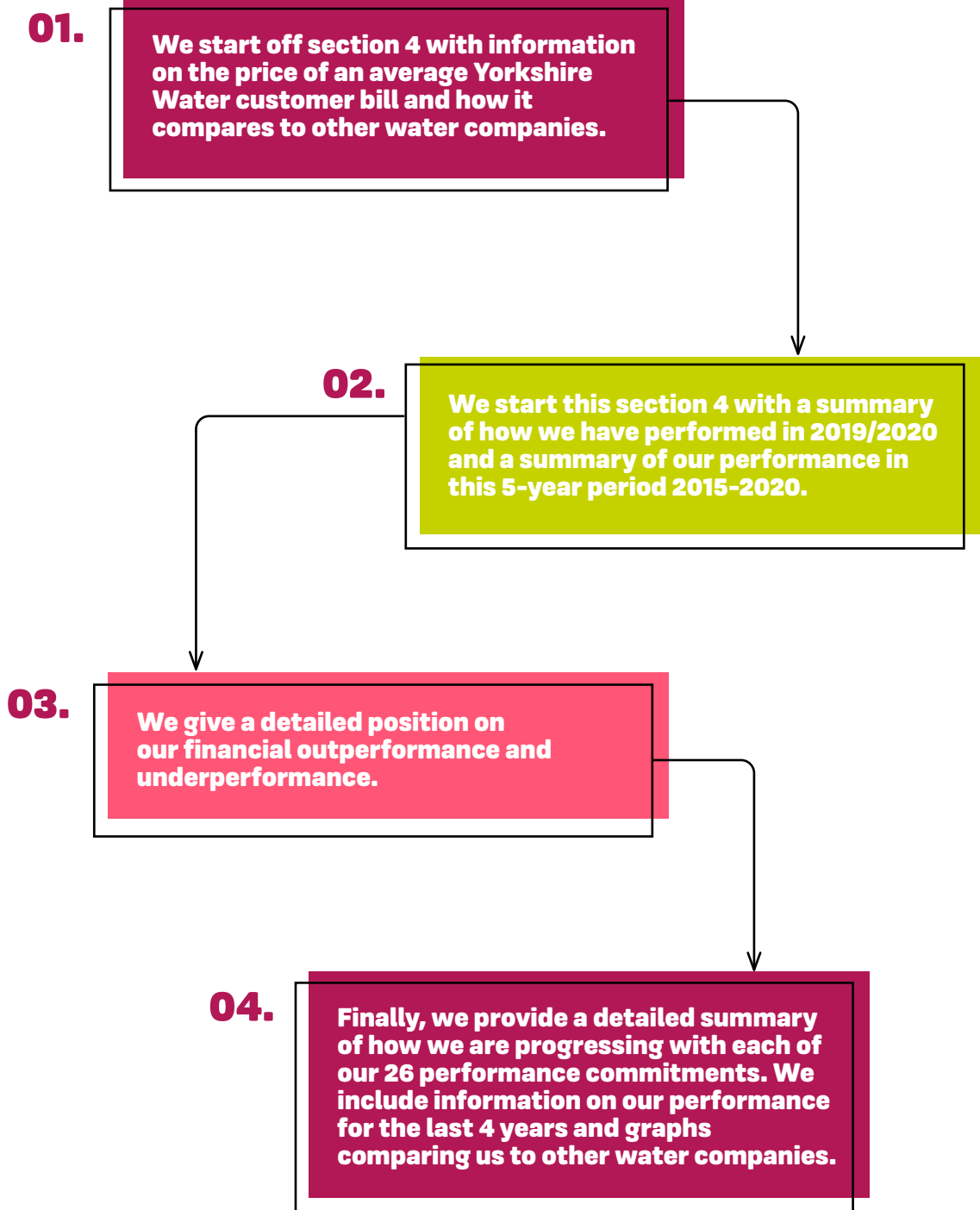
One sided incentive – outperformance only calculation methodology

This is calculated annually.



4. Review of our performance

In this section



Links to more information

We have provided more information on our performance than ever before. Click on the links to below to view our other publications and webpages on our performance.

Visit yorkshirewater.com/yorkshire-forum-for-water-customers to see the Yorkshire Forum for Water Customers independent report on our performance

Want a summary of our performance? Visit yorkshirewater.com/our-performance to see our Performance Summary report.

To see a video on our performance visit 'our performance – how we're doing' at yorkshirewater.com/our-performance

Would you like an introduction to what our Performance commitments are? Go to **Section 3** of our APR for this information

Want to see the Ofwat performance tables? Go to **Table 3A** and **Table 3B**

Want to know how our performance compares with other water companies? Visit discoverwater.co.uk to view the Discover Water website.

Performance highlights



AVERAGE BILLS SECOND LOWEST IN THE COUNTRY, INCREASED BY LESS THAN INFLATION

(2018/2019: £387)



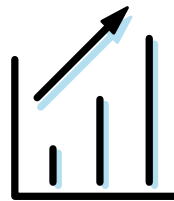
OPERATING PROFIT £212.4m*

(2018/2019: £229.5m) *Including exceptional items



TOTAL TAX CONTRIBUTION £145.2m

(2018/2019: £131.5m)



JOINT THIRD HIGHEST PERFORMING COMPANY OUT OF ALL THE UTILITIES IN THE UK CUSTOMER SATISFACTION SURVEY.

73.7 POINTS OUT OF 100

(2018/2019: 76)



CONTINUING TO MEET AND EXCEED OUR PERFORMANCE COMMITMENTS

22 OF 26

(2018/2019: 22 out of 26)

REDUCED EMISSIONS BY 80% SINCE 2004/05. 83 KT CO₂E



(2018/2019: 89 kilotonnes of carbon dioxide equivalent KT CO₂E)



FIVE NATIONAL AWARDS FOR INNOVATIVE CUSTOMER ENGAGEMENT CAMPAIGNS



MADE FURTHER IMPROVEMENTS IN OUR DIVERSITY PAY GAP REPORT

Customer bills

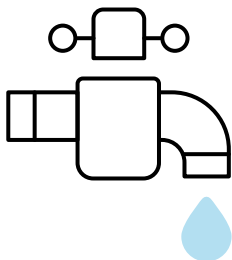
During 2015 to 2020 the average bill will not increase by any more than the rate of inflation.

When we developed our five-year plan for 2015-2020, we involved customers every step of the way and asked customers to choose the level of investment that was right for them. Overall, customers told us that they wanted us to keep bills fair and affordable. We've worked hard to keep bills low while still delivering the great service our customers expect.

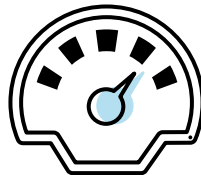
So, by the end of the five-year period, in 2020, bills will have reduced by 2.5% in real terms (i.e. increased by less than the rate of inflation).

Our average annual household combined water and wastewater bill for 2019/2020 was £392 (compared to a forecast of £401).

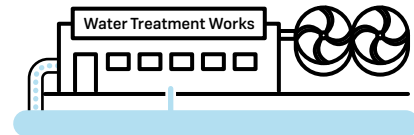
The industry average for 2019/2020 was £413.



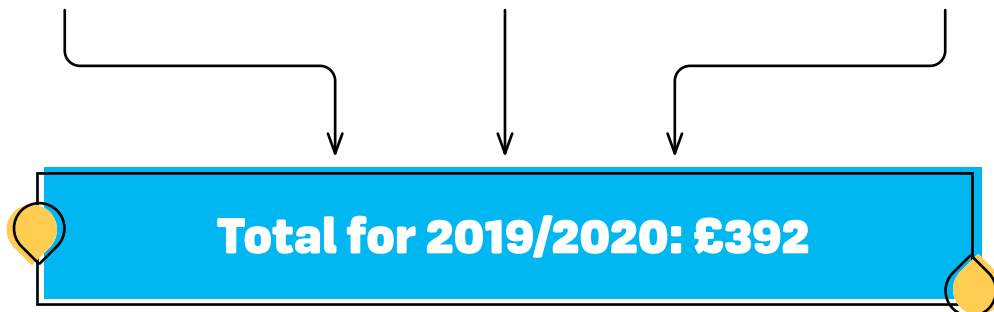
Providing safe drinking water
£159



Meter reading and billing services (retail services)
£32



Collecting and treating wastewater
£201



Additional information:

Our average annual household combined water and wastewater bill was £21 less than the water industry average.



Retail

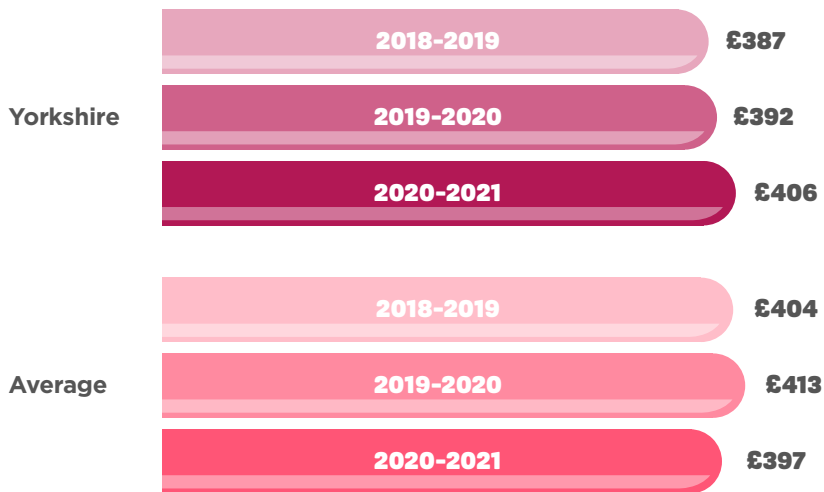
Retail services are customer-facing activities such as billing, account handling (payments, debt management, meter reading), customer queries, as well as water-efficiency advice and tackling leaks on customers' pipes.

How does the bill compare with others?

This chart shows how the forecast average bill for water and wastewater services in Yorkshire compares with the UK average.

We have the third cheapest combined water bill this year. (Source: Discover Water).

Visit the Discover Water website for more information. discoverwater.co.uk/annual-bill



Forecast average annual household combined water and sewerage bills (£)
Source: Water UK.

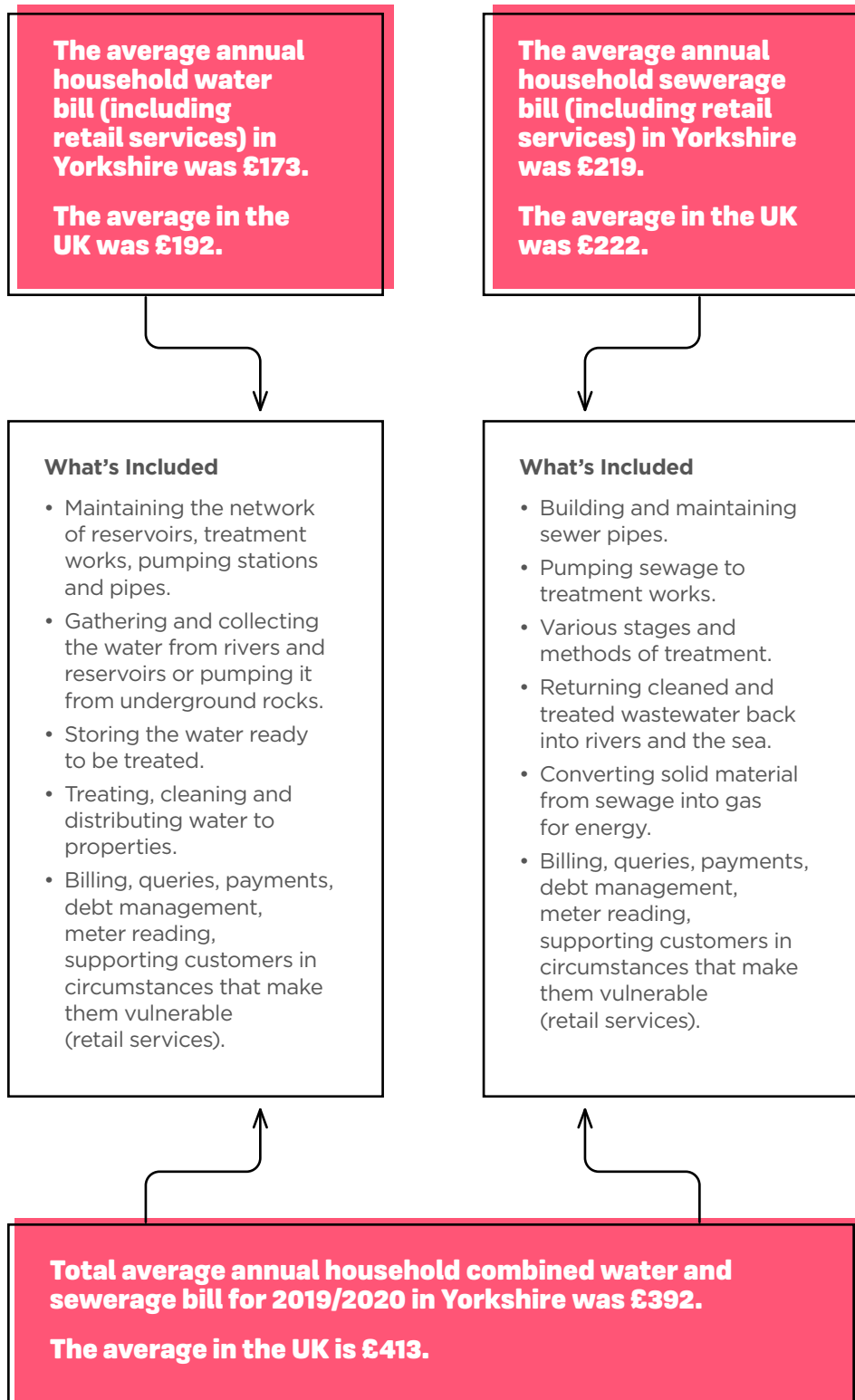
What's the forecast bill for 2020/2021 and how do we compare?

The chart shows our average household combined water and wastewater bill for 2020/2021 and how we compare with other water companies in the UK.



Forecast average annual household combined water and sewerage bills (£)

What services are included in your bill?



Summary of our performance this year

The last twelve months have provided a combination of challenges, despite these we can report good performance for the year and a very strong end to AMP6. There have been some unprecedented external challenges, a significant change in the leadership team and re-orientation of the company behind a new purpose, vision and behaviours, whilst delivering on plans to provide a step up in customer and operational performance in preparation for the next price review period.

In the course of the year, we have dealt with three major storms that have unfortunately again led to flooding events which have had a significant impact on the lives of our customers and the communities we serve. At the very end of the financial year the emergence of Covid-19 meant that we had to adapt our ways of working quickly to protect our colleagues and our customers and continue to deliver our essential services safely.

At the same time, we had to make a robust assessment of the impact of Ofwat's final determination on the company, our customers, and on Yorkshire's resilience to decide whether we could accept it. Our analysis showed that we could not, and our Board unanimously agreed that we needed to ask for a redetermination by the Competition and Markets Authority. This is currently in progress.

We have also taken the opportunity to refresh our company purpose, ambition and behaviours to prepare us for the new five-year period and for a period of business transformation. Our executive team has been strengthened in important areas to ensure we have the right expertise to transform the way we deliver our services.

Also during the year, we have implemented a significant IT upgrade, and have outperformed our planned improvement in operational performance and our regulatory commitments in some important areas.

Delivery for our customers

I am delighted, but not surprised, by the way in which our colleagues in Yorkshire Water have responded to this unprecedented period of challenge and change and have delivered a good year of operational performance.

We reached the year end on target to meet 22 of the 26 performance commitments made to our customers.

They tell us that leakage is the measure which matters most to them and we have achieved a position of 270.8 ml/day, well below our regulatory target of 287.1 ml/day. The measure used to show how long our customers experienced interruptions to their water supply also reduced from an average per property of 10 minutes 28 seconds to 7 minutes 34 seconds; this is 4 minutes 26 seconds below our regulatory target of 12 minutes. The reduction in supply interruptions has been driven by new ways of working which has meant that we are able to ensure that customers' supplies are restored much more quickly.

As we move towards the new customer service methodology, the shadow measure bridging the gap between AMP6 and AMP7 resulted in a score of 83.2, compared to 84.0 in 2018/2019, meaning we just missed our commitment to improve year-on-year. However, our comparative ranking on the new AMP7 measure, C-Mex (Customer measure of experience) is showing improvement already and our focus remains on a strategy that meets the needs of our customers.

We have always known that we would be unlikely to meet our regulatory target of 6,108 or fewer drinking water contacts (regarding water quality concerns), achieving 6,368. However, an improvement of nearly 40% over the past five years is very pleasing and significantly outperforms our initial plan, setting us up well for AMP7.

The improvement in leakage performance has largely come from the application of acoustic devices (that "listen" for leaks) and satellite technology (to spot leaks that we cannot see on the surface) to the water network combined with smart network management techniques. A large-scale deployment of acoustic loggers to the water network is now generating volumes of data which our analytics team can use to speed up the identification of leaks and more effectively direct resources.

Increasing automation of network management is giving us greater control of pressure and flow and helps to reduce the variations in pressure, which is a significant cause of leakage.

Our wastewater performance was also strong. Internal sewer flooding is a specific challenge for Yorkshire given the number of cellared properties in the county. We are pleased that the number of times this happened to our customers (1,602 incidents) was lower than in the previous year (1,692 incidents), despite the weather challenges, and well below our regulatory target (1,919 incidents). Category 3 pollution incidents showed an improvement of 29 incidents compared to last year and outperformed our regulatory target of 211. There has been a reduction in our category 1 and 2 pollution incidents from 11 to 7, but we did not meet our performance target of no more than two incidents, and we know we need to do better.

During the year 150 colleagues from Amey have transferred across to Yorkshire Water, we have recruited a further 170 in the wastewater teams and invested £23m in sewer cleaning vehicles.

Overall a significant increase in proactive sewer cleansing, defect rectification and use of monitoring to enable predictive interventions has meant that our service and environmental performance has improved. This means that we are predicted to regain our three-star rating in the Environment Agency's Environment Performance Assessment.

Financial performance for the year has been impacted by unexpected costs for the flooding events and the impact of Covid-19 on our customers, resulting in a reduction in our operating profit to £212.4m (2018/2019: £229.5m). Due largely to the movement in the valuation of our financial instruments this has resulted in a reported loss after tax of £1.7m (2018/2019 loss of £129.2m).

Finally, our capital delivery programme has been completed with 99% of our regulatory outputs met, and within £5 million of its target outturn. Given that the programme involves investment of more than £2bn over the five years, this is a considerable achievement.

The combined result of this performance means that we end the AMP6 regulatory period in a net reward position of £64m, improved from our 2018/2019 cumulative AMP6 position of £36m, and a good result against our five-year target for AMP6 target of net £nil reward.

What has the Covid-19 pandemic meant for us?

The rapid onset of the Covid-19 pandemic in the last months of the financial year meant that we needed to make major and rapid changes to the company's operations to ensure that we could continue to provide an essential service whilst protecting the health and safety of our colleagues and customers.

We have already experienced disruption to the way we work and in some cases, there were activities that had to be delayed or stopped where we were not able to work within Government guidelines. We have had increases in costs due to additional equipment needs to support safe working. We have also seen a difference in customer behaviour regarding water use because they are at home and the weather has been warm.

We moved into incident management mode from early March and took an early decision to switch to home working for as many colleagues as possible to test the resilience of our IT systems. This meant that we were able to make the necessary improvements to ensure that we could make the home working transition for all but essential field-based colleagues, quickly and safely. This involved the procurement and configuration of 500 laptops and provision of 350 screens to ensure that our customer contact centre could be largely home based, with a similar transition for our operational control room.

Our field teams stopped entering domestic customer properties other than for emergency work and we introduced new working practices to ensure that they could work safely and ensured that the appropriate personal protective equipment (PPE) was available and correctly used.

Partnership with our suppliers and contractors has also been essential and we have been able to safely maintain around 70% of our capital delivery programme. Special measures to ensure instant payments for small and medium-sized enterprises (SMEs) have been introduced and around 250 of our suppliers have benefited from this.

Customers were assured that our colleagues had essential worker status and we made sure that we communicated clearly with them to explain why we were still operating in public spaces. The response to our teams from customers has been superb.

We are already seeing changes in customer circumstances which may impact on the levels of customers who need support through our social tariff.

We have prioritised helping customers experiencing financial problems in the current climate by increasing the promotion of schemes which are in place to provide financial assistance, either through social tariffs or help with payment terms. We continue to provide support to customers and will continue to do so throughout the period customers are impacted by Covid-19 or any consequent economic downturn. Activities include:

- Offering payment breaks or payment holidays for anyone in financial difficulties as a result of Covid-19.
- Offering payment plans to help spread the payments over time.
- Promoting alternative payment methods for those who cannot pay by traditional routes.
- Making applying for help simpler, making it as easy as possible for customers to get the help they need.
- Signposting customers for advice on benefits and managing debts.
- Paused or reduced bill reminders and debt recovery and enforcement action.

Throughout the crisis we have maintained close relationships with our stakeholders and partners in Yorkshire to ensure that we are part of the local and regional response. As the region starts to look ahead to the longer term economic recovery, these relationships will play an important part in rebuilding Yorkshire's economy and we are determined to play our part in this.

It is still too early to know what the longer term impact on the company might be whether in terms of operational performance or the financial effects of potential revenue reductions. For now, our priority remains protecting our colleagues and customers and carrying on delivering the service expected of us. We are however gathering data which will give us more indication of the impacts and we will be sharing that within our reporting through 2020/2021.

How did we perform against our performance commitments?

We achieved 22 out of 26 performance commitments this year. The table below summarises the target and actual performance for each performance commitment.



Performance commitment target failed



Performance commitment target met

Customer Outcome	Performance Commitment	Unit	2015/2016 Performance Achieved	2016/2017 Performance Achieved	2017/2018 Performance Achieved	2018/2019 Performance Achieved	2019/2020 Performance Achieved	2019/2020 Target	Impact/ Position in 2019/2020	Reward/ Penalty Value for 2019/2020	Reward/ Penalty Value for AMP6
We provide you with water that is clean and safe to drink	Drinking water quality compliance	%	99.954%	99.962%	99.953%	99.962%	99.949%	100%	Penalty collar and penalty deadband	-£0.89m	-£0.89m
	Corrective actions	Number	5	3	4	5	1	Less than or equal to 6	Reputational	-	-
	Drinking water quality contacts	Number	10,007	9,093	8,100	7,964	6,368	Less than or equal to 6,108	Penalty	-£0.86m	-£13.56m
	Stability and reliability factor - Water quality	Classification	Stable	Stable	Stable	Stable	Stable	Stable	-	-	-
We make sure that you always have enough water	Leakage	Megalitres per day	285.1	295.2	300.3	290.1	270.8	Less than or equal to 287.1 MI/d	Reward	£0.16m	£0.16m
	Water use	Litres per household per day	141.7	137.4	135.9	133.7	135.0	Less than or equal to 138.3 l/h/d	Reputational	-	-
	Water supply interruptions	Minutes	12:53 (mins:secs)	9:47 (mins:secs)	6:58 (mins:secs)	10:28 (mins:secs)	7:34 (mins:secs)	Less than or equal to 12 minutes	Reward	£10.23m	£30.26m
	Stability and reliability factor - Water network	Classification	Stable	Stable	Stable	Stable	Stable	Stable	-	-	-
We take care of your wastewater and protect you and the environment from sewer flooding	Internal flooding	Number	1,842	1,769	1,682	1,692	1,602	Less than or equal to 1,919	Reward	£9.03m	£25.18m
	External flooding	Number	9,037	9,145	9,296	9,116	9,139	Less than or equal to 10,487	Reputational	-	-
	Pollution Incidents (Cat 1 & 2)	Number (Cat 1 & 2)	5	4	3	11	7	Zero category 1-2 pollution incidents	Reputational	-	-
	Pollution Incidents (Cat 3 Only)	Number (Cat 3)	180	207	202	188	159	Less than or equal to 211	Reward	£9.63m	£22.03m
	Stability and reliability factor - Wastewater network	Classification	Stable	Stable	Stable	Stable	Stable	Stable	-	-	-
We protect and improve the water environment	Bathing water quality	Number	18	17	18	17	16	More than or equal to 15	Reputational	-	-
	Working with others	Number	4	5	12	11	11	More than or equal to 3	Reward	£0.07m	£0.18m
	Visitor satisfaction	Survey	Survey published 98%	Survey published 97%	Survey published 96%	Survey published 99%	99%	Survey and publish annually	Reputational	-	-
	Land conserved and enhanced	Ha.	11,466	11,492	11,479	11,524	11,806	11,736 hectares by 2020	Reward deadband	£0m	£0m
	Length of river improved	km	Programme commenced	Programme continues	Programme continues	Programme continues	459km	More than or equal to 440km by 2020	Reward	£0.31m	£0.31m
	Stability and reliability factor - Wastewater quality	Classification	Stable	Stable	Stable	Stable	Stable	Stable	-	-	-
We understand our impact on the wider environment and act responsibly	Waste diverted from landfill	%	98.9%	99.3%	99.4%	99.6%	99.6%	More than or equal to 95%	Reputational	-	-
	Energy generation	%	11.3%	10.4%	11.4%	11.3%	14.6%	More than or equal to 12%	Reputational	-	-
We provide the level of customer service you expect and value	Quality of customer service (SIM)	Score out of 100	82.6	83.4	84.3	84.0	83.2	More than or equal to 84 (year-on-year improvement)	Reputational	-	-
	Overall customer satisfaction	%	95% (Water), 92% (Wastewater)	93% (Water), 91% (Wastewater)	94% (Water), 89% (Wastewater)	95% (Water), 88% (Wastewater)	94% water 90% sewerage	To improve 2015-2020 performance on average compared to 2010-2015	Reputational	-	-
	Service commitment failures	Number	10,567	10,356	12,203	14,221	15,140	Average of 2015-2020 performance to be less than the average of the last 3 years of 2010-2015	Reputational	-	-
We keep your bills as low as possible	Number of people we help to pay their bill	Number	22,735	26,902	28,853	31,606	35,939	Publish annually	Reputational	-	-
	Bad debt	%	3.05%	2.94%	3.10%	3.02%	3.06%	Less than or equal to 3.16%	Reputational	-	-
	Value for money	%	82% (Water), 83% (Wastewater)	79% (Water), 82% (Wastewater)	76% (Water), 79% (Wastewater)	77% (Water), 79% (Wastewater)	79% water 80% sewerage	To improve 2015-2020 performance on average compared to 2010-2015	Reputational	-	-
Summary			24 out of 26 performance commitments met	24 out of 26 performance commitments met	22 out of 26 performance commitments met	21 out of 26 performance commitments met	22 out of 26 performance commitments met				

Financial outperformance and outcomes

Outperformance

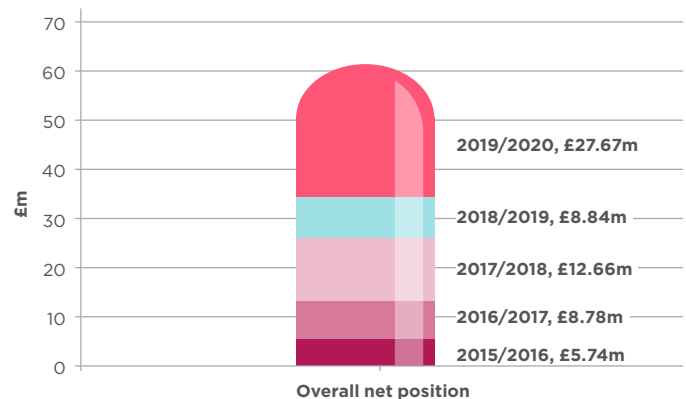
In 2014 Ofwat allowed a level of total expenditure (totex), to deliver the performance commitments for customers. We seek to beat those allowed costs as this produces short term savings for the company and long-term savings for customers through Ofwat's incentive sharing mechanisms.

We are also incentivised, through the Outcome Delivery Incentives (ODI), to outperform on the service we deliver, by bettering the performance commitments agreed with customers. As described previously we are financially rewarded when we beat the performance commitment and are penalised when we fall short. This year we have assessed our performance for the whole AMP to the end of 2019/2020.

ODI underperformance/ outperformance position

Overall our programme of delivering our commitments remains positive in delivering improved service levels for customers. The chart below illustrates the balance of ODI outperformance and underperformance up to the end of 2019/2020.

Overall, we have a net outperformance position of £63.68m. This will be incorporated into prices for the period 2020-2025.



The table below shows the outperformance and underperformance figures for each performance commitment across the five years as well as the cumulative position at each year. Numbers in brackets represent a negative (or penalty) position.

Performance commitment	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
Leakage (WB1)	-	-	-	-	£0.16m	£0.16m
Water Supply Interruptions (WB2)	-	£5.79m	£10.23m	£4.02m	£10.23m	£30.26m
Internal Sewer Flooding (SA1)	-	£2.24m	£7.24m	£6.67m	£9.03m	£25.18m
Pollution Incidents (SA3) (Cat 3 Only)	£5.74m	£0.74m	£1.67m	£4.26m	£9.63m	£22.03m
Drinking Water Quality (WA1)	-	-	-	-	(£0.89m)	(£0.89m)
Drinking Water Contacts (WA3)	-	-	(£6.57m)	(£6.12m)	(£0.86m)	(£13.56m)
Length of River Improved (WC1)	-	-	-	-	£0.31m	£0.31m
Length of River Improved (SB4)	-	-	-	-	-	-
Working with Others (WC2)	£0.00m	£0.00m	£0.05m	£0.01m	£0.07m	£0.14m
Working with Others (SB3)	£0.00m	£0.00m	£0.04m	£0.01m	-	£0.04m
Overall net position	£5.74m	£8.78m	£12.66m	£8.84m	£27.67m	£63.68m
Cumulative position	£5.74m	£14.52m	£27.17m	£36.01m	£63.68m	£63.68m

In the current year 2019/2020, we earned an indicative net outperformance of £27.67m. This is made up of good all-round delivery of the performance commitments, with outperformance and underperformance occurring as follows:

- £9.63m outperformance for Category 3 Pollution Incidents
- £10.23m outperformance for Water Supply Interruptions
- £9.03m outperformance for Internal Flooding Incidents
- £0.07m outperformance for Working with Others
- £0.16m outperformance for Leakage
- £0.31m outperformance for River Length Improved
- £0.86m underperformance for Drinking Water Contacts
- £0.89m underperformance for Drinking Water Quality.

Now that our investment programmes for AMP6 have completed, we can confirm the outturn performance against the commitments. This yields a net outperformance position of £63.82m over the AMP6 period, made up of:

- £22.03m outperformance for Category 3 Pollution Incidents
- £30.26m outperformance for Water Supply Interruptions
- £25.18m outperformance for Internal Flooding Incidents
- £0.18m outperformance for Working with Others
- £0.16m outperformance for Leakage
- £0.31m outperformance for River Length Improved
- £13.56m underperformance for Drinking Water Contacts
- £0.89m underperformance for Drinking Water Quality.

Looking ahead – our Performance Commitments for 2020-2025

In developing our business plan for the 2020-2025 period (known as AMP7), we put our customers at the heart of everything we do. We engaged with 30,000 customers, along with the Yorkshire Forum for Water Customers (the Forum), to understand individual lifestyles and how they shape what customers want, need and expect from us.

In response to customer feedback, we developed a package of 43 performance commitments for AMP7 which align with our ambitions and that challenge us to change the way we work to meet both customers' expectations and the complex long-term challenges that we face as a business.

The diagram on the next page shows how these 43 performance commitments in AMP7 cover every aspect of what we do, from water source to sea.

As we have explained, following a detailed review of the Final Determination from Ofwat our Board unanimously agreed to refer it to the Competition and Markets Authority (CMA) because of the impact the final determination had on the company, our customers, and on Yorkshire's resilience.

The CMA expects to complete its redetermination in 2020/2021. If there are any changes to our performance commitments as a result of this, we will publish an update soon afterwards.

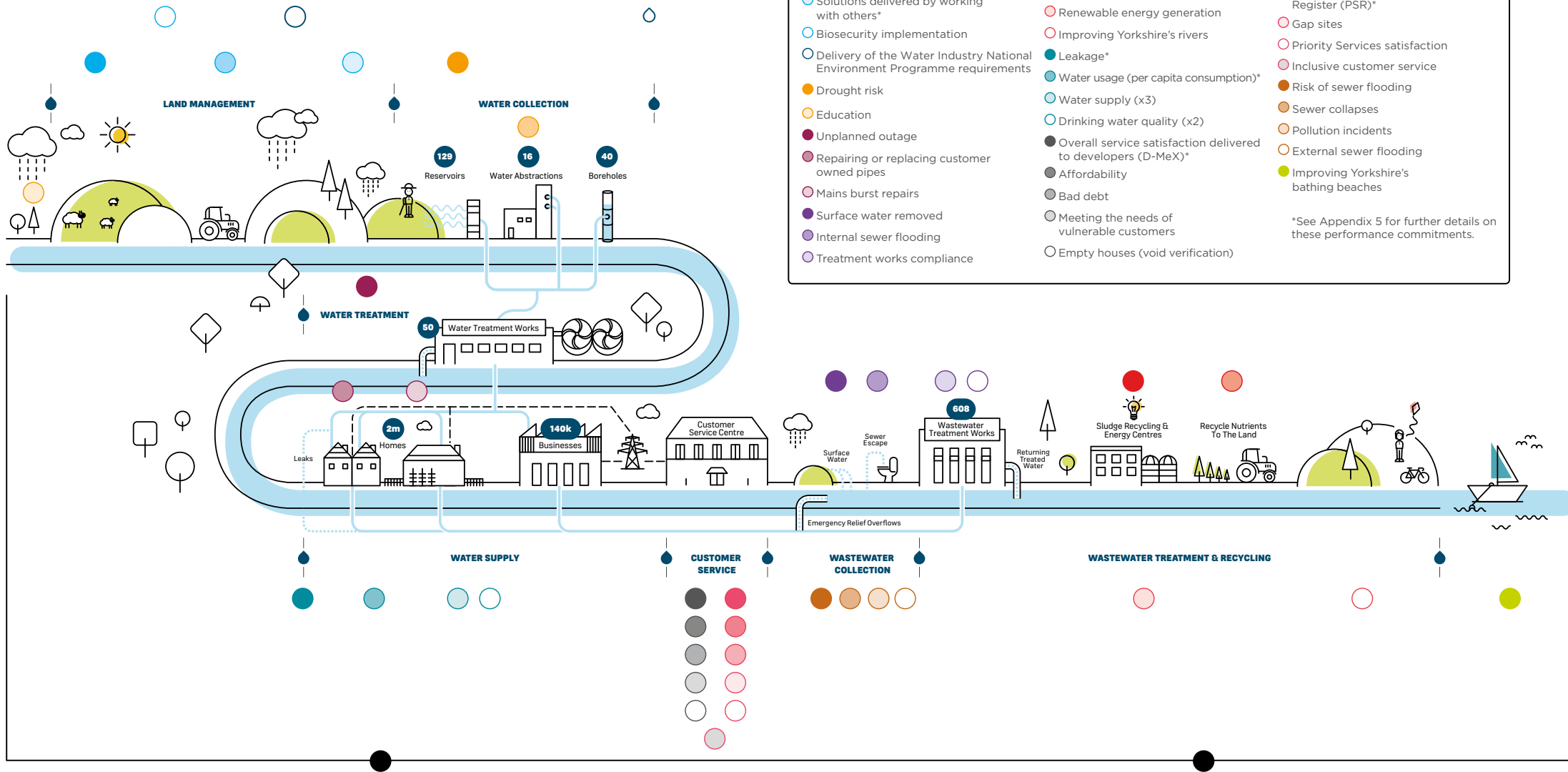
We will provide you with updates on our progress towards delivering these performance commitments every quarter to make sure you can see the levels of

service we are delivering. Our regulator, Ofwat, and the Forum will hold us to account for our performance against these commitments.

Details on our plans for AMP7 and our performance commitments can be found on our website yorkshirewater.com/our-business-plan and on Ofwat's website ofwat.gov.uk/regulated-companies/price-review/2019-price-review/final-determinations/

As required by the PR19 Final Determination, [Appendix 5](#) provides confirmation on baseline performance for a number of our AMP7 performance commitments.

Our source to sea operation



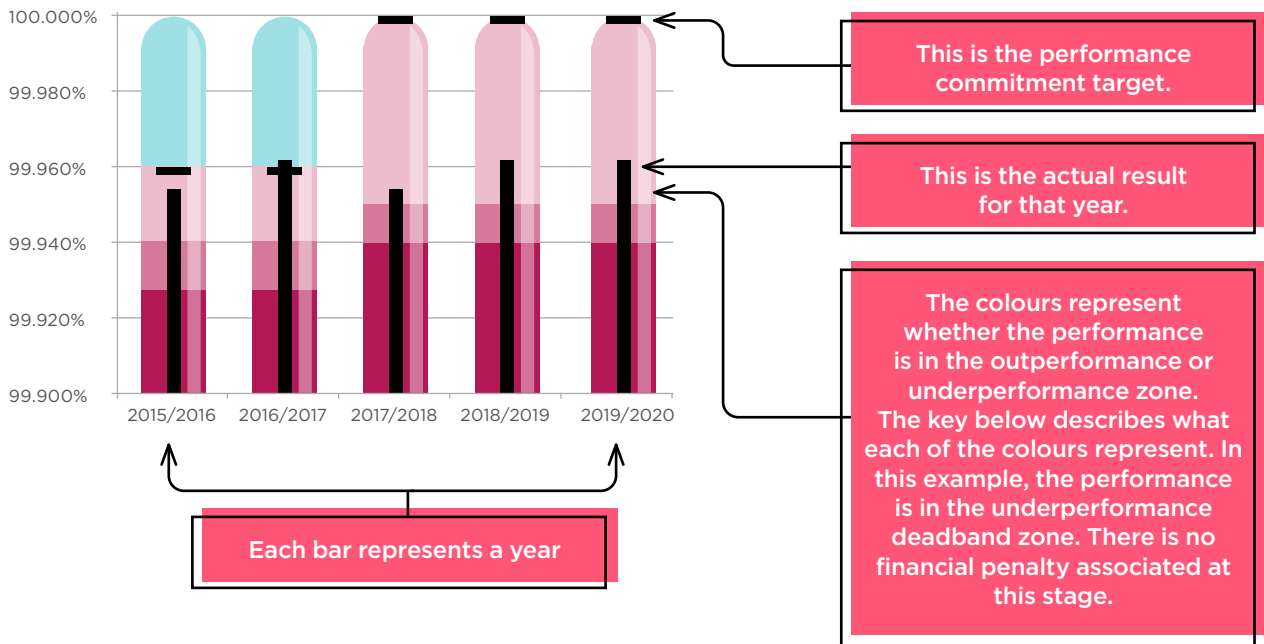
Key to our performance commitments

● Reducing our carbon footprint (x2)	○ Water recycling	● Overall service satisfaction to household customers (C-MeX)*
● Integrated Catchment Management	● Creating value form under-used resources	● Direct support given to customers
● Land conserved and enhanced	● Quality agricultural products	● Awareness of the Priority Services Register (PSR)*
● Solutions delivered by working with others*	● Renewable energy generation	○ Gap sites
● Biosecurity implementation	○ Improving Yorkshire's rivers	○ Priority Services satisfaction
○ Delivery of the Water Industry National Environment Programme requirements	● Leakage*	○ Inclusive customer service
● Drought risk	● Water usage (per capita consumption)*	● Risk of sewer flooding
● Education	● Water supply (x3)	● Sewer collapses
● Unplanned outage	○ Drinking water quality (x2)	● Pollution incidents
● Repairing or replacing customer owned pipes	● Overall service satisfaction delivered to developers (D-MeX)*	○ External sewer flooding
○ Mains burst repairs	● Affordability	● Improving Yorkshire's bathing beaches
● Surface water removed	● Bad debt	
● Internal sewer flooding	○ Meeting the needs of vulnerable customers	
○ Treatment works compliance	○ Empty houses (void verification)	

*See Appendix 5 for further details on these performance commitments.

Understanding the charts

We will show how we are performing against our performance commitments using charts like the example below. The chart shows past performance, current year performance, the targets for each year and whether we are in the outperformance or underperformance zone for each year - all in a single chart.



Key

- Performance better than reward cap
- Performance between reward cap & reward deadband
- Performance in reward deadband/ no financial reward associated with good performance
- Performance worse than penalty collar
- Performance between penalty collar & penalty deadband
- Performance in penalty deadband/ no financial penalty associated with poor performance

Customer Outcome: We provide you with water that is clean and safe to drink

There are four performance commitments under this outcome.

Drinking water quality compliance	
Measure	Drinking water quality. This is the mean zonal percentage compliance from the regulatory sampling programme, as calculated by the Drinking Water Inspectorate (DWI).
Unit	Percentage
Definition	Based on the DWI's Mean Zonal Compliance (MZC) as set out in 'Calculation and composition of indices published in the Chief Inspector's Report', DWI, May 2013.
Period	Calendar year measure - reported in the following year i.e. 01 Jan 2015 - 31 Dec 2015 and would be reported in 2015/2016.
Target	99.960% (Years 1 and 2) and 100% (Years 3-5) Reported to 3 decimal places.
Incentive	Both reputational and financial incentive The DWI can take enforcement action if performance deteriorates. Penalty is calculated annually.

Result: 99.949%

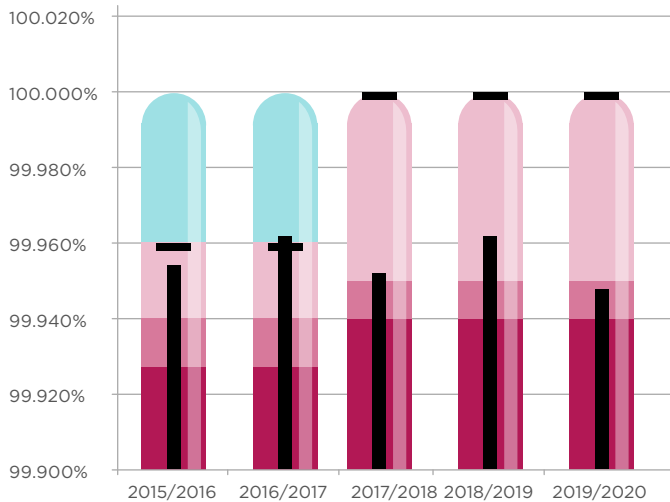
Target: We unfortunately didn't meet our ambitious target of 100%

How did we compare last year with other water companies?

The chart below, taken from the Discover Water website compares our drinking water quality against other water companies. The performance is based on water quality tests known as Overall Mean Zonal Compliance. In 2018, our water quality compliance was 99.96%, which was higher than the overall performance in England and Wales which was 99.95%. Please note, this is a calendar year measure from 01 January 2018 to 31 December 2018.

Source: Discover Water - discoverwater.co.uk/quality

Performance graph - higher is better



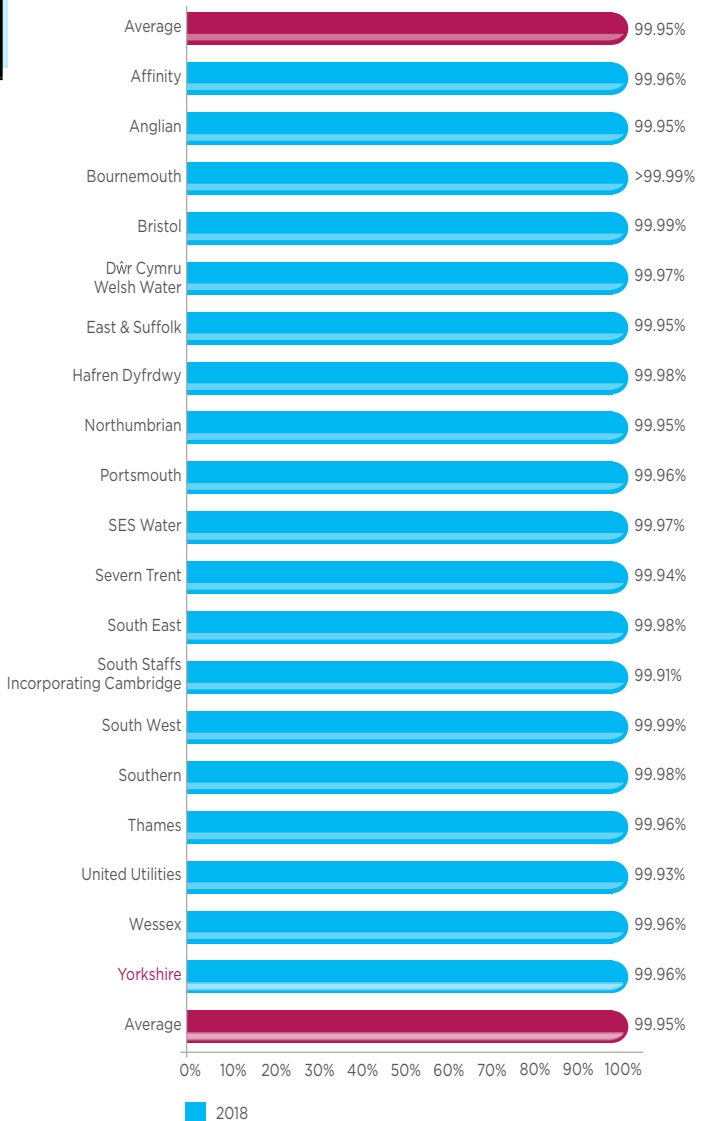
See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Drinking water quality compliance	%	99.954	99.962	99.953	99.962	99.949

Outcome delivery incentives table

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	£0.00	£0.00	£0.00	£0.00	-£0.89



Performance summary


Customers in Yorkshire expect the drinking water we supply to be of the highest possible quality. Because of this we have set ourselves the target of achieving 100% compliance with the Drinking Water Inspectorate’s (DWI) requirements. No Water and Sewerage Company in the UK has yet achieved this target, and the condition of the water samples collected by us is not wholly under our control. Nevertheless, this target is the continuation of a long-term goal and requires us to make improvements in the way we collect, treat, and distribute water from source to tap.

Whilst our water quality remains exceptionally high, in 2019 we saw a slight decrease in compliance to 99.949% from 99.962% in 2018.

Year	Performance	Target	Commitment met
2015	99.954%	99.960%	Target not met (X)
2016	99.962%	99.960%	Target met (✓)
2017	99.953%	100%	Target not met (X)
2018	99.962%	100%	Target not met (X)
2019	99.949%	100%	Target not met (X)

Unfortunately, performance in 2019 is the worst reported in the AMP6 period. The decline in performance was partially related to an increased number of samples being found to contain raised levels of mains sediments, such as iron, manganese, or turbidity. In addition, the nature of the water quality compliance measure is that the most significant contribution to the overall outcome is the number of audit parameter failures. We had 23 iron related failures in 2019 and 15 in 2018. In depth analysis indicates that the period of most unusual aesthetic metals performance was in January and February 2019. Changes to the condition of mains systems happen slowly, and so it is likely the performance in the first half of 2019 was still influenced by the very unusual weather and demand conditions of 2018.

In addition, there was an increase in both the number of lead failures and the number of nickel failures from 2018 to 2019, with both increasing from 2 in 2018 to 3 in 2019. So, the overall number of audit parameter failures increased from 4 in 2018 to 6 in 2019. Primarily the cause of these failures is the condition of domestic pipework or fittings (such as taps). We have maintained phosphate dosing to minimise plumbosolvency and nickel failures.



Plumbosolvency
Plumbosolvency is the ability of a solvent, notably water, to dissolve lead. Plumbosolvent water can cause damage to lead pipes. We counteract this by adding phosphate at our water treatment works, which forms a protective coating to the inside of lead pipes.

There was also an increase in the number of taste and odour positive samples from customers’ taps – we had 14 positive samples in 2019 and 9 in 2018. These parameters are not thought to be health impacting, and none of the property owners indicated dissatisfaction with the supply of water at the time of collection.

However, the levels of these parameters indicate a risk of later discolouration of supplies.

There were no fails for metaldehyde in 2019, a welcome improvement from large numbers of failures seen in 2015 through to 2017. It is likely that long-term initiatives to encourage smart usage of metaldehyde in the farming community and the dry weather conditions at the highest risk periods of the year, reduced the farming usage of this molluscicide and reduced the run-off into watercourses.

Underperformance or outperformance payment

The performance is between the penalty collar and penalty deadband. This means we have incurred a penalty of £0.89 million.

Lessons learnt


The key drivers of performance under mean zonal compliance remain the occurrence of audit failures. In Yorkshire this has historically been for parameters such as lead, nickel, and metaldehyde.

The long-term approach of dosing phosphate-based chemicals into all water supplies, in addition to targeted lead communication pipe replacement have resulted in an on-going trend of reduction in lead failures. All previous nickel detections in Yorkshire have been related to the condition of private fittings (such as domestic water taps) so there is limited option for intervention by the Company. Indeed, our phosphate dosing will provide a degree of protection. There was a small increase in the number of failures for both lead and nickel. But the overall long-term trend remains one of reducing numbers of failures.

Our key approach to addressing metaldehyde has previously been to engage with the farming community. Although the proposed ban on the use of metaldehyde has been overturned, the absence of failures in 2019 indicates that the community engagement, supplemented by careful abstraction from raw water sources, can be effective in reducing the risk.

What’s coming up in the future?

This performance commitment is changing in AMP7 and drinking water quality will no longer be measured by mean zonal compliance. This measure is replaced by the DWI’s preferred measure of Compliance Risk Index (CRI). This CRI measure has been in use for several years for reporting between the Company and DWI.



Definition
Asset Management Period (AMP)
An ‘Asset Management Period’ is the term given to the five-year period covered by a water company’s business plan. AMP1 refers to the first planning period after the water industry was privatised and this covers the period from 1990 to 1995. We are currently in AMP7, which covers 2020 to 2025 and we will report on the financial year 2020/2021 in our next APR.

Our water quality teams have a good understanding of the implications of the change of measurement. Significant effort has been made in understanding the key parameters included within this measure. Under this measure the health risk associated with particular parameters and the number of customers potentially impacted by a failure cause the largest impacts on performance. Hence, detections of microorganisms and turbidity at water treatment works have high impacts on CRI performance, as do the frequently occurring failures in large water supply zones. Investment is being targeted to address the highest risk sites.

The Covid-19 pandemic in 2020 has resulted in an agreed alteration to sampling programmes as well as routine maintenance activity in Year 1 of the reporting period. It is not clear what impact this will have on the final year outcome, at the time that this report was written, but we continue to monitor the situation.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Corrective actions	Number	5	3	4	5	1

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 1

Target: Achieved – maximum of 6 corrective actions per year

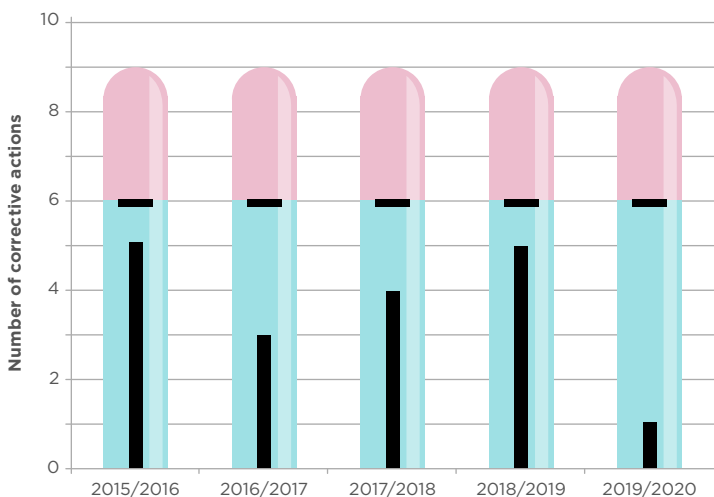
Corrective actions	
Measure	Potentially significant drinking water events which require corrective action.
Unit	Number
Definition	The number of potentially significant events notified to the DWI under the Water Industry (Suppliers' Information) Direction 2009, that have the potential for negative impact on public confidence in the water supply, for which the DWI has required us to take corrective action to maintain compliance or protect public health. The number is the number of events identified by the DWI requiring further action (defined as either a specific action or as a recommendation by the DWI in an Event Assessment Letter) by 1 June each year.
Period	Calendar year measure published annually in July
Target	Maximum of 6 per year
Incentive	Reputational incentive. The Drinking Water Inspectorate (DWI) can take enforcement action if performance deteriorates.

Performance summary

We investigate every instance of suspected deterioration of water quality, and we share the outcome of our investigations with the DWI as well as local health authorities in Yorkshire. In total, there were 26 events investigated in 2019 (calendar year measure), a reduction from 31 in 2018. Most events were associated with third party activity or were the result of private fittings within individual customer properties (such as domestic water taps). Only five events were considered to be 'significant' by the DWI, a clear reduction from 14 in 2018. Each event was subject to review and lessons were learned. Only one of the five events resulted in a recommendation from the DWI.

Year	Performance	Target	Commitment met
2015	5	6	Target met ✓
2016	3	6	Target met ✓
2017	4	6	Target met ✓
2018	5	6	Target met ✓
2019	1	6	Target met ✓

Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

2019 was our best performance in this AMP6 period. Our commitment to have no more than six events with corrective actions was achieved for each of the past five years.

Underperformance or outperformance payment

This performance commitment is reputational only.

What's coming up in the future?

There is no similar performance commitment to this one in AMP7. However, reducing the occurrence of events remains a priority for us.

Drinking water quality contacts	
Measure	Drinking water quality contacts for taste, odour and discolouration and illness.
Unit	Number
Definition	The number of times customers contact us each year, in line with DWI reporting on rate of contacts for appearance, taste, odour and illness.
Period	Financial year measure
Target	2014/2015 = equal to or less than 12,143 (starting position) 2015/2016 = equal to or less than 10,131 2016/2017 = equal to or less than 8,120 2017/2018-2019/2020 = equal to or less than 6,108
Incentive	Financial incentive. Outperformance/underperformance payments calculated annually.

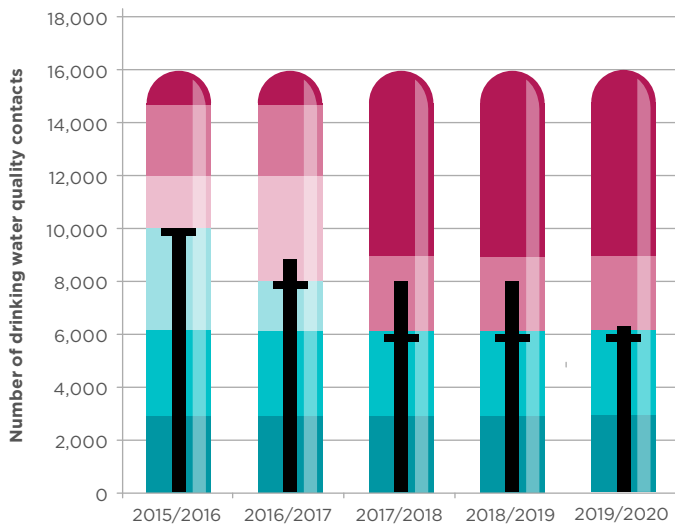
How did we compare last year with other water companies?

The chart below, taken from the Discover Water website shows how many times customers contacted their water companies about the appearance of their water. The chart shows the number of contacts per 10,000 people supplied. In 2018, we had 11.5 contacts for every 10,000 customers which is slightly higher than the industry average of 11.0.

This is a calendar year measure from 01 January 2018 to 31 December 2018. It is important to note that our performance commitment on drinking water quality contacts has a different definition, and includes contacts regarding illness.

Source: Discover Water – discoverwater.co.uk/colour

Performance chart – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

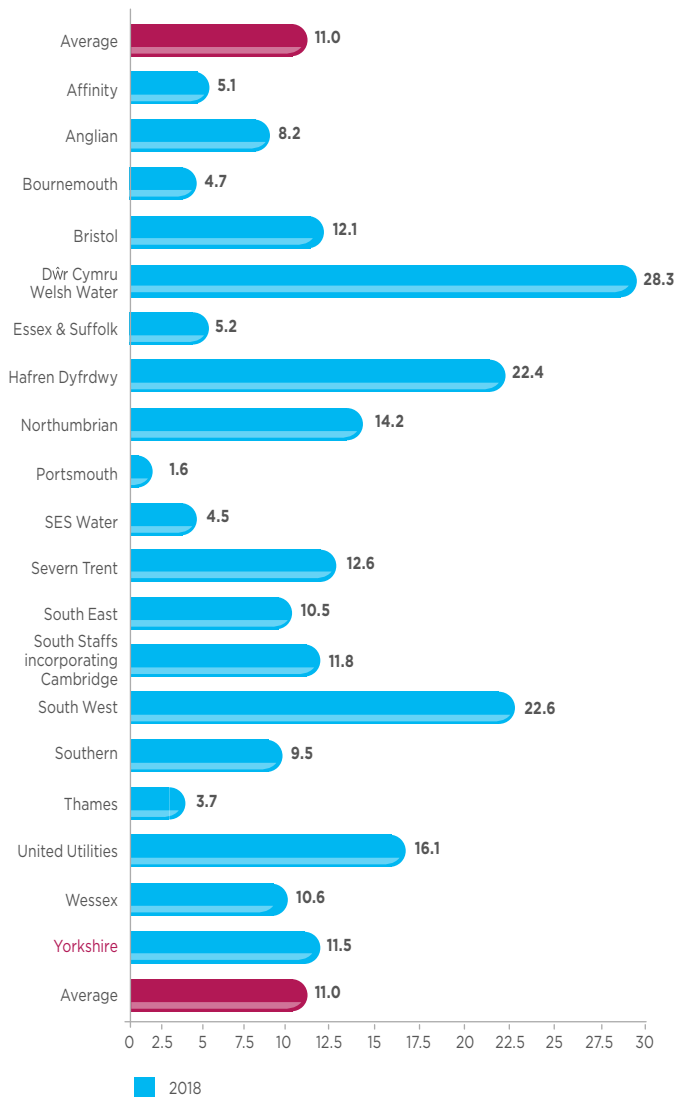
Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Drinking water quality contacts	Number	10,007	9,093	8,100	7,964	6,368

Outcome delivery incentives table

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	£0.00	£0.00	-£6.57	-£6.12	-£0.86

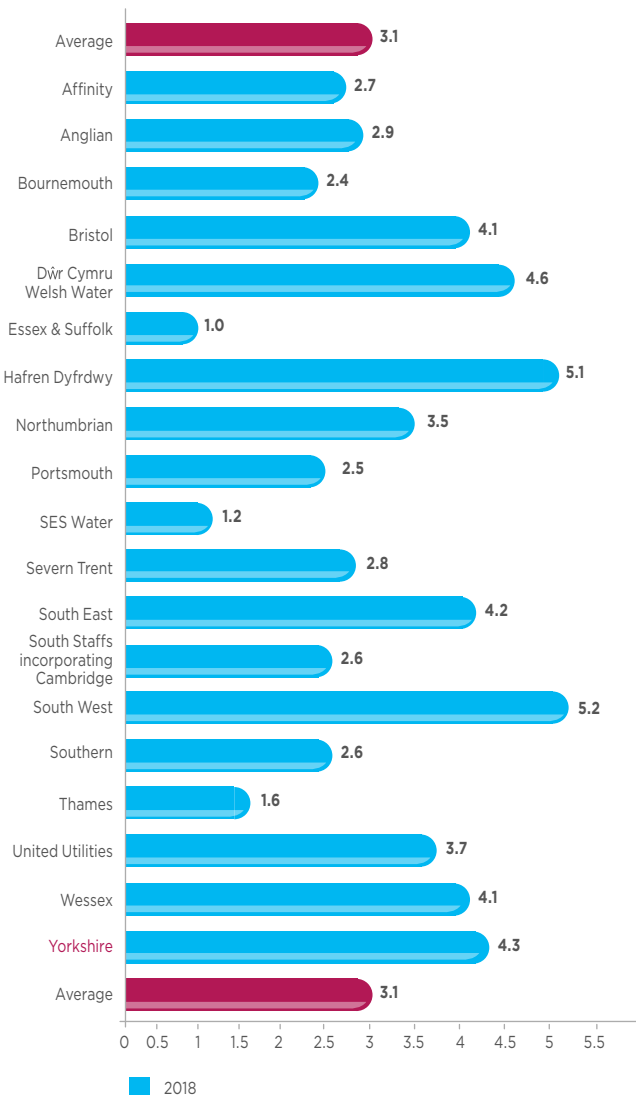
Result: 6,368

Target: Not achieved our target of receiving equal to or less than 6,108 drinking water quality contacts for taste, odour and discolouration and illness



The chart below, taken from the Discover Water website shows how many times customers contacted their water companies about the taste or smell of their tap water. The chart shows the number of contacts per 10,000 people supplied. In 2018, we had 4.3 contacts for every 10,000 customers which is slightly higher than the industry average of 3.1. This is a calendar year measure from 1 January 2018 to 31 December 2018.

Source: Discover Water – discoverwater.co.uk/taste



Performance summary

There was a significant reduction in the number of occasions that customers contacted the company regarding water quality concerns. Overall, there were 6,368 contacts from customers in 2019/2020, down from 7,964 in 2018/2019.

Year	Performance	Target	Commitment met
2015/2016	10,007	10,131	Target not met (X)
2016/2017	9,093	8,120	Target not met (X)
2017/2018	8,100	6,108	Target not met (X)
2018/2019	7,964	6,108	Target not met (X)
2019/2020	6,368	6,108	Target not met (X)

Although the target performance commitment level was not met in 2019/2020 there was a significant improvement compared to previous years with a near 40% improvement over the five-year AMP period. This improvement represents the manifestation of many years of intervention in local networks and improved investigation of trunk mains conditions.

The improvement seen in 2019/2020 relates to an approximate 800 contact reduction regarding discolouration and as well as an approximate 500 contact reduction related to taste and odour. The controlled operation of our supply grid, the continuing impact of our flushing programme and providing targeted information to impacted customers has all contributed to this performance improvement.

Underperformance or outperformance payment

We are currently in the underperformance zone for this performance commitment and have incurred a penalty of £0.86m in 2019/2020. Over the course of AMP6, we have incurred a total penalty of £13.56m in this five-year period.

Lessons learnt

Control of supply to customers and providing relevant information to targeted groups of customers will continue to reduce the number of occasions where customers contact us regarding the taste and odour of their water supply.

What’s coming up in the future?

A performance commitment for water quality customer contacts is retained in AMP7, although the definition has changed slightly and the information will be presented as a rate per 10,000 population. The new AMP7 performance commitment will exclude contact types such as illness. This alteration brings the measure in line with the approach taken by DWI, and mirrors the data displayed on the Discover Water website.

Meeting the updated performance commitment will continue to be challenging. On-going processes of planned zonal flushing, as well as trunk mains condition assessment, and continued careful management of changes in supply and interventions at water treatment works will reduce the likelihood of contacts.

There has been a substantial reduction in the number of water quality contacts during AMP6. Primarily these have been achieved by improved process for the removal of mains sediment. It is assumed that continued application of these programmes will continue to provide benefit. Although it is possible that an optimum level of performance will be reached using these approaches. Assessment of opportunities for further reduction of other contact types will be continued.

Stability and reliability factor – Water quality	
Measure	Stability and reliability factor – Water quality
Unit	Classification: Deteriorating/Stable/Improving
Definition	An overall assessment of long term stability and reliability for water quality, based on a basket of indicators. Assessment is based on the recent historical trend of the indicators. The basket of indicators for the long-term stability and reliability factor for water quality contains: <ul style="list-style-type: none"> • Water treatment works coliforms non-compliance (%) • Service reservoir coliforms non-compliance (%) • Turbidity (number) • Enforcement (incidents number) • Reactive equipment failures (No)
Period	Various (see sub measures)
Target	Stable (As assessed in Year 4 for Year 5 outturn). Assessment subject to independent external and Yorkshire Forum for Water Customers assurance.
Incentive	Financial incentive (underperformance payment only) – calculated in Year 4. Underperformance up to 10% totex for outcome.


Result: Stable

Target: Achieved

Performance summary

The Stability and Reliability Factor is made up of a basket of measures monitoring water quality of our assets, including the presence of coliform bacteria at our water treatment works and service reservoirs, as well as the measure of particles in the water supplied from our sites. We met each of these targets individually, and our overall performance in 2019/2020 has been at our target level of stable for five years.

More information on these sub measures can be found in [Section 8](#) of this report.



Reference Level and Tramlines:
Each of the sub-measures that support the Stability and Reliability Factor performance commitments has a reference level and a tramline. This is the range where performance is expected. It is a bit like a target with a tolerance zone. Performance is measured within this zone but also on trends over the years to help us assess whether the overall measure is stable or not.

Stability and reliability factor – Water quality sub measures

Water treatment works coliform non-compliance	
Sub measure	Water treatment works coliform non-compliance
Unit	Percentage
Definition	The number of water treatment works with determinations containing coliforms as a percentage of the number of determinations of water leaving treatment works taken at frequencies required by regulation 13 (Schedule 3, table 3, item 2), as specified in regulation 4 (schedule 1, table A, part II, item 1) of the 'Water Supply (Water Quality) Regulations 2000' (and its equivalent in Wales). This information is given in the Chief Inspector of the Drinking Water Inspectorate's Annual Report in the calendar year. This information may need to be amended after the publication of the Chief Inspector's Report.
Period	Calendar year measure
Target	Reference level = 0.04 High tramline = 0.07 Lower tramline = 0.01

Service reservoir coliforms non-compliance	
Sub measure	Service reservoir coliforms non-compliance
Unit	Percentage
Definition	Number of service reservoirs with >5% of sample determinations containing coliforms expressed as a percentage of total number of service reservoirs.
Period	Calendar year measure
Target	Reference level = 0.00 High tramline = 0.24 Lower tramline = 0.00

Enforcement actions considered (microbiological standards)	
Sub measure	Enforcement actions considered (microbiological standards)
Unit	Number
Definition	Number of enforcement actions as initiated by Drinking Water Inspectorate (DWI).
Period	Calendar year measure
Target	Reference level = 0 High tramline = 1 Lower tramline = 0

Sub measure	Water treatment works turbidity
Unit	Number
Definition	<p>The number of operational potable water treatment works and sources whose turbidity 95 percentile is less than a 0.5 NTU threshold. Calculate percentile value using all data from regular routine sampling of final water at water treatment works for the calendar year.</p> <p>Minimum of 30 water samples where the works is in production for more than 11 months of the year. Otherwise, a minimum of 30 samples, less one sample per unit of four weeks that the works is not in supply.</p> <p>The maximum time interval between data samples is 28 days where works is in production for more than 11 months of the year, otherwise 28 days less one per unit of four weeks not in supply.</p>
Period	Calendar year measure
Target	Reference level = 0 High tramline = 4 Lower tramline = 0

Sub measure	Reactive equipment failures
Unit	Number
Definition	The number of works orders created reactively for water quality assets.
Period	April to March
Target	Reference level = 6,771* High tramline = 8,380* Lower tramline = 5,161*

Customer Outcome: We provide you with water that is clean and safe to drink

There are four performance commitments under this outcome.

Leakage	
Measure	Leakage
Unit	Mega litres a day (Ml/d)
Definition	The sum of distribution losses and supply pipe losses. This includes any uncontrolled losses between the treatment works and the customer's stop tap. It does not include internal plumbing losses.
Period	Financial year
Target	The commitments have been set through the Water Resource Management Plan and are as follows: 2014/2015 = less than or equal to 297.1 (Starting level) 2015/2016 - 2017/2018 = less than or equal to 297.1 2018/2019 = less than or equal to 292.1 2019/2020 = less than or equal to 287.1
Incentive	Financial incentive

Result: 270.8 Ml/d

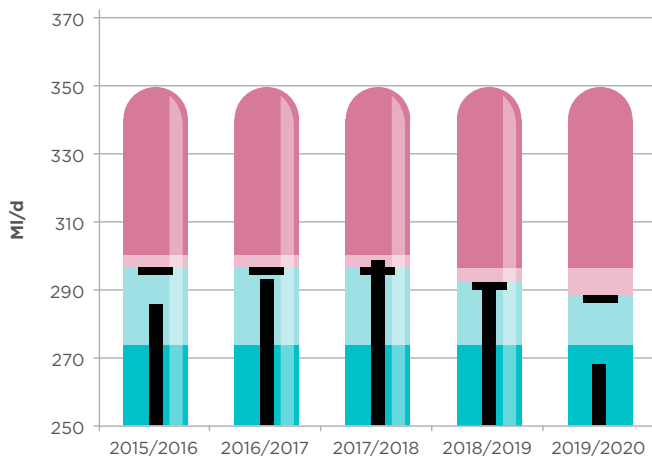
Target: Achieved target of less than or equal to 287.1Ml/d

How did we compare last year with other water companies?

The chart below, taken from the Discover Water website shows the volume of water leaked from each company's pipes compared to the overall length of water pipes the company has. Lower is better. This is the 2018/2019 leakage performance.

Source: Discover Water - discoverwater.co.uk/leaking-pipes

Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

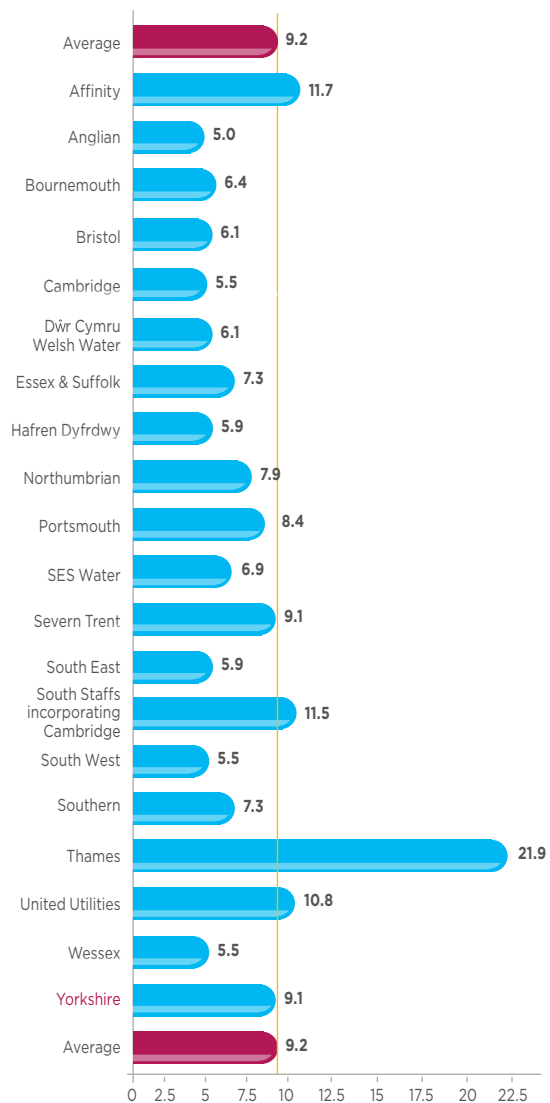
Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Leakage	Ml/d	285.1	295.2	300.3	290.1	270.8

Note: 2018/2019 has been revised slightly compared to the value presented in the 2018/2019 APR. Following identification of a minor error in some supporting information, leakage in 2018/2019 has been amended from 289.8Ml/d as previously reported, to 290.1 Ml/d. For more information on this, please see the change control document, titled 'Amendment to APR 2018/2019 data', published alongside the APR.

Outcome delivery incentives table

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	£0.00	£0.00	£0.00	£0.00	£0.16








■ 2018-2019

Performance summary

Leakage is the amount of water lost from our network when it's being transported between the treatment works and customer homes or businesses. We actively measure, monitor and reduce leakage as the dominant source of water waste. Over the previous two years, we have increased resources, and improved both technology and data analysis to refine our approach to leakage reduction through investing money saved in other areas by working efficiently (outperformance). This approach ensured that the performance commitment target of 287.1 megalitres per day (Ml/d) was achieved with a figure of 270.8 Ml/d, a 7% reduction compared to the previous year. The 2019/2020 performance was our single biggest in-year reduction of leakage when not following an atypical winter, such as those experienced in 2010/2011 and 2018/2019.

Our leakage reduction strategy is well under way. Additional resources employed to undertake proactive leak detection are in place and finding more leaks to reduce losses from our network. To complement these resources, this year 40,000 acoustic listening and logging devices were installed in the top 20% of poorest performing leakage areas. Satellite leakage detection has become an essential method of ensuring we locate and repair leaks as quickly as possible, and this new technology is now utilised across the whole region. The key driver for these new technologies is to improve effectiveness of leakage detection and to achieve our long-term goal of being in the upper quartile of performance in the industry. The establishment, and additional focus, of a dedicated leakage team for our larger trunk mains is demonstrating worthwhile investment and will be continued through the next five-year period. We continue to embed and improve the data and analysis associated with measuring leakage along with its contributing factors.

Year	Performance	Target	Commitment met
2015/2016	285.1 Ml/d	297.1 Ml/d	Target met 
2016/2017	295.2 Ml/d	297.1 Ml/d	Target met 
2017/2018	300.3 Ml/d	297.1 Ml/d	Target not met 
2018/2019	290.1 Ml/d	292.1 Ml/d	Target met 
2019/2020	270.8 Ml/d	287.1 Ml/d	Target met 

2019/2020 saw the creation of a designated Leakage Operations department. All leakage analytics, engineering, optimisation, detection and maintenance functions now sit under a Head of Leakage Operations, offering an increased focus and direction for the expanded leakage teams.

The Upstream Leakage Team was created in November 2018 to survey and carry out leakage detection on the 317 trunk main areas, 4,275 km of underground trunk main network, 347 Category 2-4 (or “dummy”) Distribution Management Areas (DMAs) and above ground upstream storage assets. In order to effectively carry out these activities, the Upstream Leakage Team further expanded in November 2019. Since the team was established in 2018, 32% of the trunk main network has been surveyed. During 2019/2020 it is estimated that 6.4 Ml/d of leakage has been repaired across the trunk main network, with at least a further 2 Ml/d within the Category 2-4 DMAs.

The Leakage Assurance Team was created in September 2019 to focus on providing high quality performance dashboards to drive performance across key areas, improve the competency of our resource, and ensure all process, procedures and protocols are clear, consistent and up to date. By January 2020, the team had expanded to include the Configuration Analysts and therefore the responsibility of providing and assuring the leakage data for year-end 2019/2020 reporting and onwards into AMP7.

Spring 2018 saw our biggest recruitment campaign into Leakage Operations, recruiting 100 trainee Leakage Inspectors, and the subsequent transfer of our service partner detection resource from an external company into Yorkshire Water to ensure a consistent approach. There is an ongoing process for increasing competency and capability of our detection resource, including a review of our existing working patterns.

Underperformance or outperformance payment

We beat our performance commitment target of 287.1 Ml/d this year and earned a financial reward of £0.16m.

What’s coming up in the future?

Plans are in place to reduce leakage by 15% by 2025, as defined through the AMP7 price review process. It should be noted that the Water Resource Management Plan (WRMP), submitted to the Department for Environment, Food and Rural Affairs (Defra) and the Environment Agency (EA) includes the ambitious target of 25% reduction, which aligned with our business plan submission, prior to the final determination being published. We are now unlikely to meet this stretching 25% reduction goal in AMP7 due to the funding levels for leakage reduction included in the AMP7 final determination. We remain committed to a longer-term ambition to reduce this further and support increasing challenge on our resilience to climate change.

In AMP7 we move to a new method of reporting leakage which ensures there is consistency across the industry and sets a good practice baseline across all water companies. This methodology will significantly change how we report leakage going forward; meaning historic comparisons under current methodology are no longer valid. This new methodology also means changes in how we target and respond to leakage.

Since 2017 we have been dual-reporting leakage using both the AMP6 and AMP7 methodologies. Our compliance with the new AMP7 methodology has increased year-on-year, as we have implemented new data and processes in readiness for Year 1.

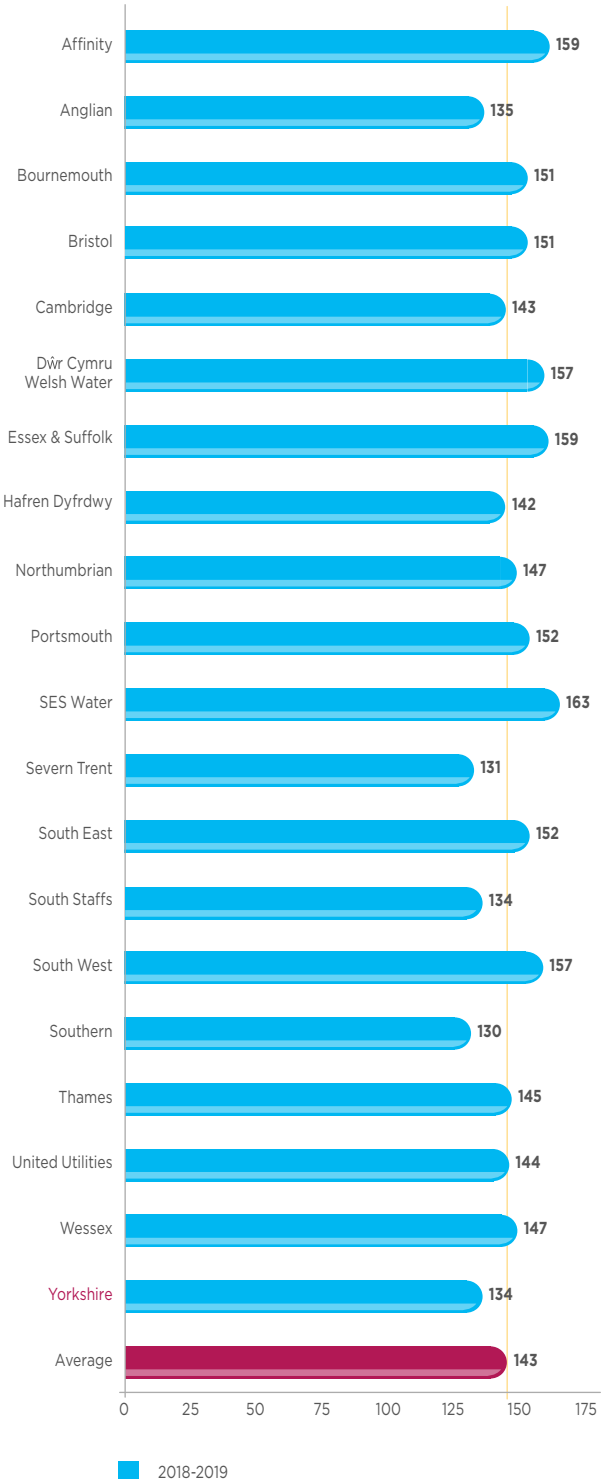
In addition to the changes to the methodology of leakage reporting, Ofwat’s final determination presents us with some significant challenges to delivering the leakage target, for example a required reduction of mains repairs sets a significant challenge to the delivery of the leakage target. There is an important practical relationship between these incentives since one of the ways of reducing leakage is to repair leaking mains.

Water use					
Measure	Water consumption				
Unit	L/h/d (litres per head per day)				
Definition	The average daily water consumption per head of population in measured and unmeasured households in a dry year. This is only for household consumption. This is sometimes also known as per capita consumption (pcc).				
Period	Financial year				
Target	Starting Level 2014-15: 143.7 l/hd/d				
	Y1	Y2	Y3	Y4	Y5
	Target - (l/hd/d) 142.6 141.5 140.4 139.3 138.3				
Incentive	Reputational incentive				

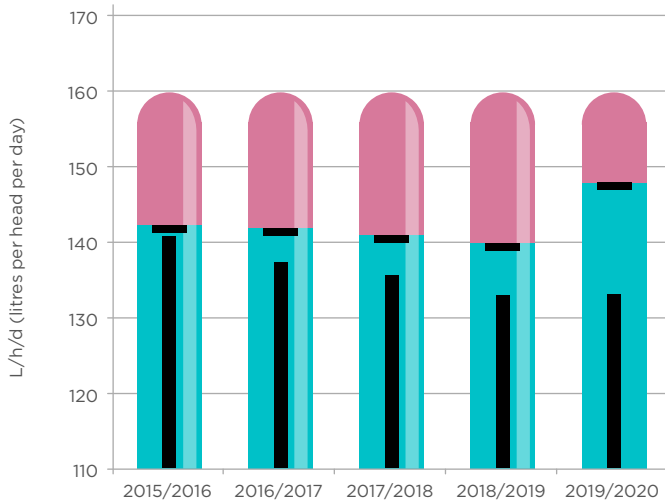
How did we compare with other water companies?

The chart below, taken from the Discover Water website shows daily water usage, in litres, for each company's customers in 2018/2019. Last year, we were joint third.

Source: Discover Water - discoverwater.co.uk/amount-we-use



Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Water use	l/hd/d	141.7	137.4	135.9	133.7	135.0

Note: 2018/2019 has been revised slightly compared to the value presented in the 2018/2019 APR. Following identification of a minor error in some supporting information, water use in 2018/2019 has been amended from 133.5 l/hd/d as previously reported, to 133.7 l/hd/d. For more information on this, please see the change control document, titled 'Amendment to APR 2018/2019 data', published alongside the APR.

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 135.0 l/hd/d

Target: Achieved our target of 138.3 l/hd/d





Performance summary

We support and encourage our domestic customers to save water. Our goal is to deliver tangible water efficiencies and sustainable behavioural change. In 2019/2020 we gave away 21,735 free water saving packs. We also delivered our “Fit2Save” free home audit and retrofit service to 1,164 household customers. This was delivered to homes in the Halifax, Barnsley and Rotherham areas and we will be offering the service to more customers and to Yorkshire Water colleagues in 2020. As part of our education activities we engage with schools and communities on a wide range of topics including water efficiency. This has helped us achieve our performance commitment for water use, with per capita consumption out-turning at 135.0 l/hd/d in 2019/2020 against a target of 138.3 l/hd/d.

The weather in the summer of 2019 was not as warm and dry as that of summer 2018. Although the summer of 2019 saw reduced demand compared to 2018/2019, the winter months saw greater water usage, like that in 2017/2018.

Quadrant analysis of temperature and rainfall data for the period 2009 to 2020 has shown 2019/2020 to be a warm, wet year when compared to previous years. As the definition for per capita consumption (PCC) is based on consumption in dry year conditions, the application of an additional dry year uplift factor to PCC was considered appropriate for 2019/2020 to reflect what PCC would have been in a dry year. Once this factor is applied, the average water use by a person in Yorkshire in 2019/2020 was 135.0 litres per person per day. This means that water demand was comparable to last year where a dry year uplift was not applied.

We have achieved our target for water use every year in AMP6. Throughout AMP6 the reported water use has reduced and then remained stable in 2019/2020. This is a result of increased metering of household properties, with associated reduction in water use. Household consumption is also impacted by water efficiency messages and water saving devices provided to customers as part of our campaign to reduce water use.

Year	Performance	Target	Commitment met
2015/2016	141.7	142.6	Target met 
2016/2017	137.4	141.5	Target met 
2017/2018	135.9	140.4	Target met 
2018/2019	133.7	139.3	Target met 
2019/2020	135.0	138.3	Target met 

We provide a range of water saving advice and support:

- **Free leakage repairs** are offered to our customers for all domestic supply pipes which are not under buildings. We raise awareness with customers that they are legally responsible for the supply pipes in their property boundary and we offer advice and support to help customers understand how they can manage their supply pipes. We also offer assistance for repair of any commercial supply pipe leaks.
- **Free water meters** are provided to household customers on request. Meters provide a financial incentive to use less water. Our Water Resource Management Plan (WRMP) forecasts the number of households with meters will increase over the next 25 years, from 50% to 84% by 2044/2045. Metering is instinctively an appropriate method of charging for water supply and sewerage services, based on payment for use. However, metering can result in a more expensive bill because of the additional cost of installing and maintaining the meter.
- **Free water saving devices** such as tap aerators and shower timers are provided to households, student accommodation and community groups. Our website also includes a link to our contractors’ website offering customers the opportunity to purchase a range of water saving products including water butts.
- **Advice and information** is provided through communication campaigns, at events, in our written communications, social media and on our website. We also run education centres for schools and provide information packs for teachers and their pupils.
- **A home audit and retrofit water fitting service** trial will continue over the next year.

More information can be found on the dedicated water efficiency section of our website at yorkshirewater.com/savewater

Underperformance or outperformance payment

This performance commitment is reputational only.

What’s coming up in the future?

We are anticipating a decrease in reported water use in AMP7, in line with our target. This will be achieved through continuing our promotion of water metering and provision of water efficiency devices and engagement with our customers.

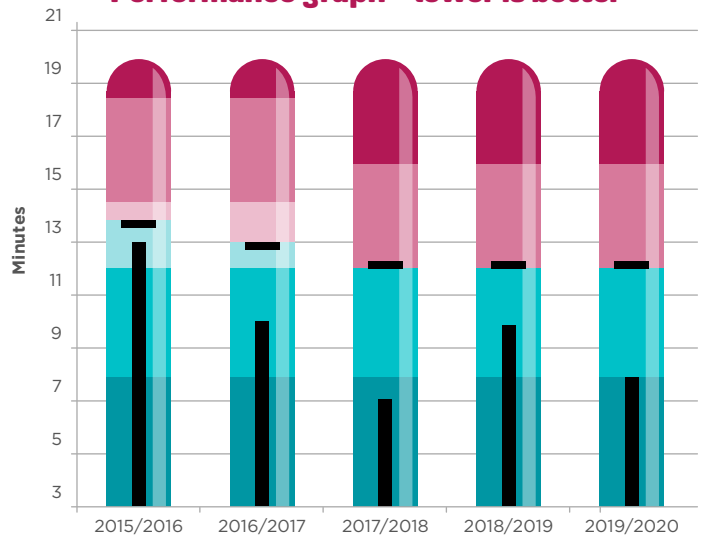
In AMP7, Ofwat is standardising the way in which water companies report water usage. We will be using the same data but small changes in the calculation mean our per capita consumption performance will not be directly comparable to the performance in AMP6.

We will be working to expand our sample of customers that we use to understand the usage by unmetered households, so that we can increase our confidence in this estimate.

Household demand was higher at the end of the year, in March 2020, when compared to previous years. This high usage has continued into April 2020 and is higher than the reduction seen in non-household properties. It is thought that this increase in usage is due to a combination of warm and dry weather conditions and the increased number of people based at home during the global Covid-19 pandemic. We therefore expect PCC to increase in 2020/2021.

Water supply interruptions	
Measure	Water supply interruptions
Unit	Minutes
Definition	Number of minutes lost per property served in the year with supply interruptions for three hours or longer (irrespective of whether it was planned, unplanned or caused by a third party). Per property is the number of properties (domestic and non-domestic) connected for water supply. This includes properties which are connected but not billed (for example, temporarily unoccupied) but excludes properties which have been permanently disconnected. A group of properties supplied by a single connection should be counted as multiple properties. They should only be treated as a single property if a single bill covers all properties in the group. An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply is restored to the tap.
Period	Financial year
Target	Annual target: 2014/2015: 14.44 Minutes (starting position) 2015/2016: 13.63 Minutes 2016/2017: 12.81 Minutes 2017/2018-2019/2020: 12.00 Minutes
Incentive	Reputational and financial incentive. £2.5m per property minute for both the penalty and reward. Calculation will use actual number of minutes calculated to 2 decimal places. Outperformance and underperformance payments are calculated annually.

Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Water supply interruptions	Minutes and seconds	12:53	9:47	6:58	10:28	7:34

Outcome delivery incentives table

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	£0.00	£5.79	£10.23	£4.02	£10.23

Result: 7 minutes and 34 seconds

Target: Achieved target of 12.00 minutes or less

How did we compare with other water companies?

The chart opposite, taken from the Discover Water website shows whether water companies have met their targets for water supply interruptions in 2018/2019. If the actual loss of supply is less than the target, the company has beaten the target. The figures in this chart are presented as minutes and seconds. Last year we beat our target by over a minute.

Source: Discover Water: discoverwater.co.uk/loss-of-supply

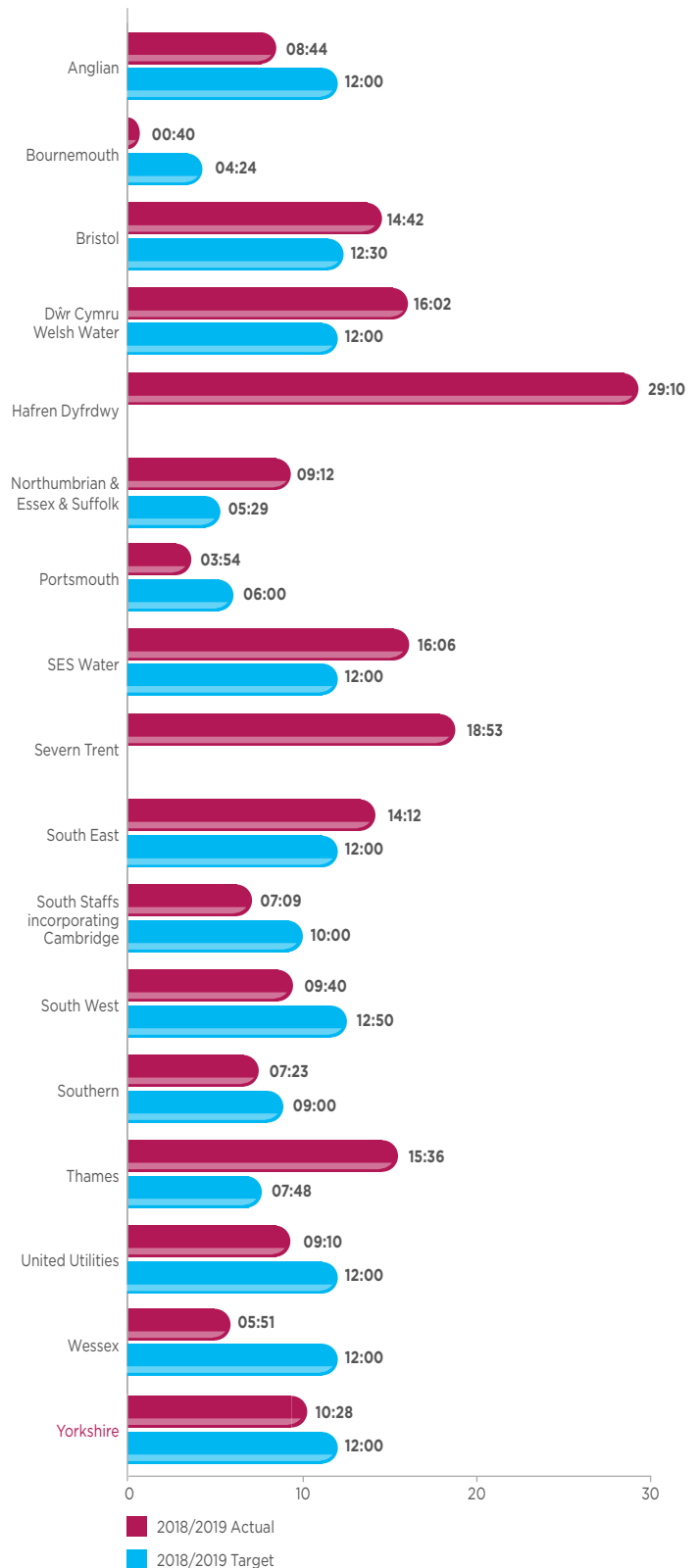
Performance summary

We sometimes need to temporarily interrupt customers' water supplies to undertake emergency and planned maintenance. At 7 minutes, 34 seconds, in 2019/2020, we have performed considerably better than the performance commitment of 12 minutes.

Throughout 2019/2020 the performance has remained relatively stable, with an increase in network activity over the summer months due to the warmer weather increasing customer demand and an increase in network activity across the region. This is typical of the warmer months. However, we did have a single large event in Wakefield in March 2020, which significantly impacted the year end position, adding an additional 51 seconds onto our performance.

Year	Performance Minutes : seconds	Target Minutes : seconds	Commitment met
2015/2016	12:53	14:38 minutes	Target met ✓
2016/2017	9:47	13:49 minutes	Target met ✓
2017/2018	6:58	12:00 minutes	Target met ✓
2018/2019	10:28	12:00 minutes	Target met ✓
2019/2020	7:34	12:00 minutes	Target met ✓

We recognise that any interruption to water supplies can be critical to some customers. This measure, alongside leakage, was targeted as one of the key performance commitments that we wanted to improve upon over the last two years by investing additional money created through outperformance. The operational measures and capital investments made have enabled sustained performance improvement, which we aim to continue to improve upon over the next five years.



Our investments have greatly improved the resilience of our water service, but droughts could still impact customers' water supplies in extreme circumstances. We republished our drought plan in 2019, having learnt lessons from 2018. In the summer of 2018, we experienced a period of hot and dry weather, and demand remained high for an unprecedented prolonged period. This led to the crossing of 'control lines' in our Drought Plan. These are trigger points which, once reached, result in escalated levels of action to maintain resilient water supplies. We applied for, and were granted, two drought permits to temporarily increase river abstraction limits. The permit applications were a precautionary measure and we did not need to use them. Our Drought Plan contains several options to tailor our response to the exact conditions of any drought as it develops. Our planning enables us to act quickly because predetermined options have been assessed for their potential environmental impact and mitigation strategies developed. The two drought options applied for in 2018 were new options identified during the developing drought as low environmentally impacting actions. We learn from each drought and update our Drought Plan accordingly. The two additional options have now been added to our Drought Plan and the plan republished and consulted on in 2019.

Underperformance or outperformance payment

We received an outperformance payment of £10.23m in 2019/2020. Over AMP6, we have achieved an outperformance payment total of £30.26m in the five-year period.

What's coming up in the future?

We will continue to have a performance commitment in AMP7 on water supply interruptions, although there is a slight change in the definition to ensure all companies across the water industry are reporting consistently. As per the AMP7 Final Determination, the performance commitment target starts at 6.5 minutes in Year 1, reducing to 5 minutes in Year 5.

Stability and reliability factor – Water network	
Measure	Stability and reliability factor – Water network
Unit	Classification: Deteriorating/Stable/Improving
Definition	<p>An overall assessment of long-term stability and reliability for the water networks, based on a basket of indicators. Assessment is based on the recent historical trend of the indicators.</p> <p>The basket of indicators for the long-term stability and reliability factor for water networks contains:</p> <ul style="list-style-type: none"> • Total bursts (number) • Interruptions greater than 12 hours (number) • Low pressure (number) • Customer contacts for discolouration (number per 1,000 population) • Distribution index TIM (as 100 minus Mean Zonal Compliance) (%) • Reactive equipment failures • Security of supply index
Period	Various (see sub measures)
Target	Stable in Year 4 for Year 5 outturn. Assessment subject to independent external assurance, including Yorkshire Forum for Water Customers.
Incentive	Financial incentive (Underperformance only). Underperformance payment assessed in Year 4 for Year 5 outturn.

Result: Stable

Target: Achieved

Performance summary

We treat and supply around 1.3 billion litres of drinking water each day, delivered by operating and maintaining our water treatment works and distribution network. Following our investments, Yorkshire has had no service restrictions, such as hosepipe bans, since 1995. In 2019/2020 we have maintained 'stable' status in the performance commitment for the stability and reliability of our water networks. The status of this commitment is determined by a basket of six measures which demonstrate the effectiveness of our long-term planning and asset management to ensure the resilience and sustainability of our service.

The risk of water shortages, supply interruption or discoloured water is a constant priority for us because of the consequences to our customers and operations. Our operational and investment programme includes a range of activities to maintain and enhance services, for example flushing the network to minimise the risk of burst dislodging sediment on the inside of a water main and causing discoloured water, managing pressure in the network and installing further data loggers to improve our knowledge of how the network operates. Helping our customers to use water as efficiently as possible and understand the role that they can play is also central to our plans.

A basket of measures is used to give the overall assessment for this measure. There are six sub measures for this performance commitment. More information on these sub measures can be found in [Section 8](#) of this report.

**Stability and reliability factor –
Water network sub measures**

Sub measure	Total bursts
Unit	Number
Definition	Mains bursts include all physical repair work to mains from which water is lost which is attributable to pipes, joints or joint material failures or movement, or caused or deemed to be caused by conditions or original pipe laying or subsequent changes in ground conditions (such as changes to a road formation, loading, etc. where the costs of repair cannot be recovered from a third party). Includes ferrule failures that are attributable to mains material condition or local ground movements, but not incidents of ferrule failure due to ferrule materials or poor workmanship, or associated with the communication pipe connection. Excludes maintenance work on valve packings, hydrant seals, air valves etc. For the avoidance of doubt, all leakage occurring at locations or through joint or material failures which would have been designed for the life of the main (irrespective of whether earlier failure occurs) should be regarded as mains bursts. Failure of consumable or maintainable items (valve packings etc.) should be excluded. Excludes valve, hydrant, washout and air valve replacements. Includes incidents of over-pressure or pressure cycling, and surge failures etc. which reflect the system operating conditions, even where these failures are accidental rather than associated with weaknesses in pipe condition. All third party damage should be excluded where costs are potentially (rather than actually) recovered from a third party
Period	April to March
Target	Reference level = 5,173 High tramline = 7,710 Lower tramline = 5,680

Sub measure	Low Pressure
Unit	Number
Definition	The total number of properties in the company's area of water supply which, at the end of the year, have received and are likely to continue to receive a pressure of less than 10m head (or a flow of less than 9l/min at 10m head).
Period	April to March
Target	Reference level = 15 High tramline = 67 Lower tramline = 0

Sub measure	Customer contacts for discolouration
Unit	Number per 1000 population
Definition	Number of customer contacts regarding discolouration divided by 1000 population.
Period	Calendar Year
Target	Reference level = 1.18 High tramline = 1.57 Lower tramline = 1.44

Sub measure	Interruptions greater than 12 hours
Unit	Number
Definition	The number of properties affected by unplanned supply interruptions, of more than twelve hours' duration.
Period	April to March
Target	Reference level = 5,173 High tramline = 7,710 Lower tramline = 5,680

Sub measure	Distribution index TIM (as 100 minus Mean Zonal Compliance)
Unit	Percentage
Definition	The arithmetic mean of the zonal compliance values for Yorkshire Water zones and supply pipes for turbidity, iron and manganese only (as 100-mean zonal compliance).
Period	Calendar year measure
Target	Reference level = 0.20 High tramline = 0.34 Lower tramline = 0.06

Sub measure	Reactive equipment failures
Unit	Number
Definition	The number of works orders created reactively for water network assets and also including pumping stations.
Period	April to March
Target	Reference level = 1,825* High tramline = 2,261* Lower tramline = 1,388*

Customer Outcome: We take care of your wastewater and protect you and the environment from sewer flooding

There are four performance commitments under this outcome.

Internal flooding	
Measure	Internal flooding incidents
Unit	Number per year
Definition	<p>Total number of incidents of internal sewer flooding of homes and businesses in the year. Includes any incident of internal flooding to normally occupied buildings and includes schools, offices, commercial premises and public buildings. The measure includes incidents due to other causes, including blocked and defective gullies and overloaded sewers in rainfall events up to and including 1 in 30 year return period, incidents in exceptional rainfall events are excluded. All incidents are included, including damp/wet only patches. Incidents of flooding via the sewers caused by high river levels, inundation due to surface run-off or overflowing watercourses are excluded.</p> <p>The measure includes assets transferred to Yorkshire Water in October 2011.</p>
Period	Financial year
Target	<p>Starting Position: 1,857 2014/2015 rising to 1,919 from 2017/2018. This has been calculated using Monte-Carlo uncertainty analysis (assumes hydraulic and non-hydraulic flooding incidents are independent). Upper and lower deadbands have been set by actual median values in the data set from 2007 to 2013.</p>
Incentive	<p>Financial incentive. Outperformance and underperformance payments are calculated annually.</p>

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Internal flooding	Number	1,842	1,769	1,682	1,692	1,602

Outcome delivery incentives table

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	£0.00	£2.24	£7.24	£6.67	£9.03

Result: 1,602

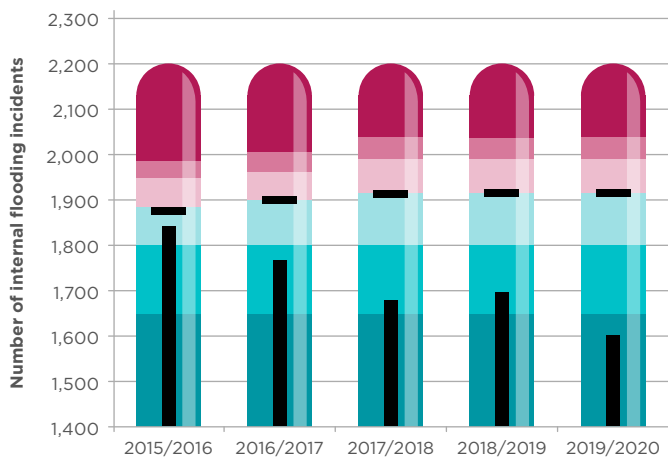
Target: Achieved target of having equal to or less than 1,919 internal flooding incidents

How did we compare with other water companies?


The chart on the next page, taken from the Discover Water website, shows the total number of properties flooded with sewage against company targets. If the actual figure is less than the target, the company has beaten the target. Some water companies have agreed different targets with Ofwat or don't have a target for each year, so they aren't shown on this chart. It should be noted that the definitions can vary across the industry.

Source: Discover Water – discoverwater.co.uk/sewer-flooding

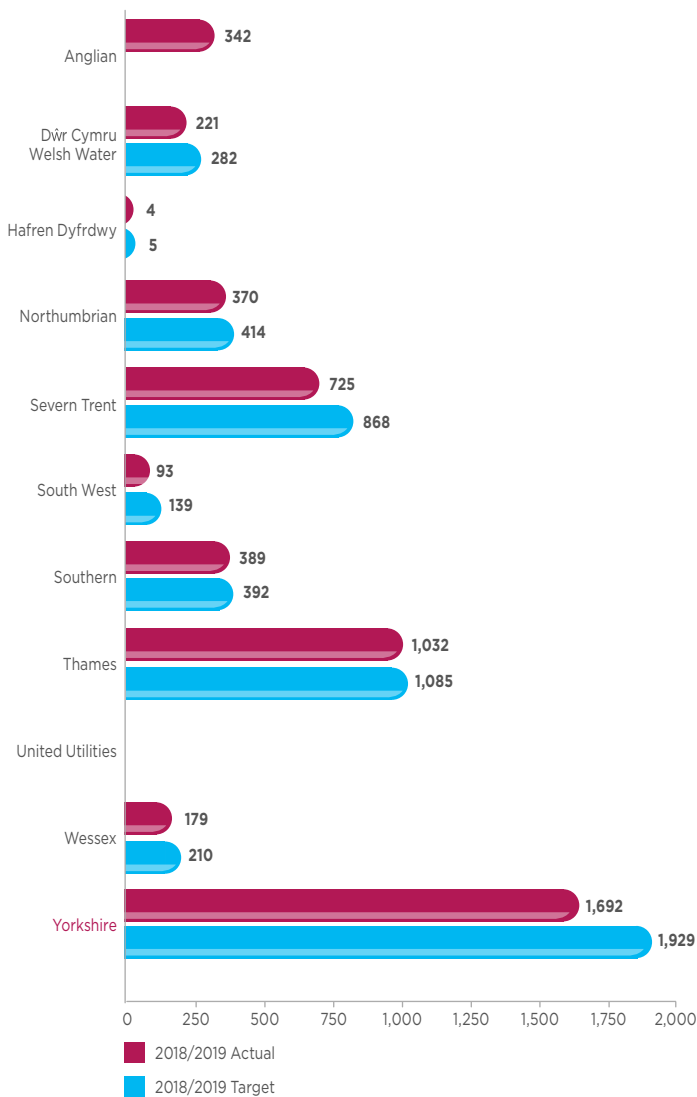
Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.



Monte-Carlo simulation
 Monte-Carlo simulation is a computerised mathematical technique that allows people to account for risk in quantitative analysis and decision making.



Performance summary

We know that internal sewer flooding of homes is one of the worst things that customers can experience from our activities. We continue to work hard to prevent this from happening.

Each day we collect, treat and return one billion litres of wastewater safely back into the environment. The way in which we do this improves river water quality and biodiversity in our region. We also play our part in managing flood risk in our region by providing the public drainage network and collaborating with other flood management agencies to support a joined-up approach to both short-term incidents and long-term plans.

We continue to invest in the region’s drainage network and reduce the risk from sewer flooding, and we have further increased our proactive maintenance of the sewer network in 2019/2020, removing sewer blockages and maintaining sewer capacity. Through this activity we have targeted areas where customers have previously experienced a range of issues, with the view that future incidents can be reduced or avoided. This has been a coordinated approach with communication campaigns running alongside the onsite activity to inform customers of the causes of some issues and the role they can play to improve the situation.

Year	Performance	Target	Commitment met
2015/2016	1,842	1,877	Target met ✓
2016/2017	1,769	1,898	Target met ✓
2017/2018	1,682	1,919	Target met ✓
2018/2019	1,692	1,919	Target met ✓
2019/2020	1,602	1,919	Target met ✓

In 2019/2020, we achieved our performance commitment for internal sewer flooding. We had 1,602 internal flooding incidents this year, which is a decrease on the number of incidents reported in 2018/2019.

We continually invest across the region and collaborate with others to reduce flood risk. Below are some examples of the progress in 2019/2020:

- We have delivered over 840 hours of education to nine schools through the Living with Water Partnership in Hull and East Riding. We have also supported with engagement at events such as The Big Malarkey Literature Festival to raise community awareness of flood risk.
- We have collaborated with Hull City Council, East Riding of Yorkshire Council, Sheffield University and iCASP to share the telemetry data that each Risk Management Authority generates helping identify new opportunities to work together and better respond to rainfall events.
- We have jointly invested in two feasibility studies with Doncaster Council to look at potential partnership opportunities to reduce the flood risk to two communities.
- We have shared sewer modelling with our Lead Local Flood Authorities including Leeds City Council to help identify opportunities to jointly manage flood risk across the region, in particular, looking at opportunities for surface water flooding.
- We have worked alongside all our partner organisations throughout the exceptionally wet winter of 2019/2020 and activated multi-agency flood plans to reduce flood risk to properties across the region.

Underperformance or outperformance payment

We are currently in the outperformance band for internal flooding with a reward of £9.03m in 2019/2020. Over AMP6, we have achieved an outperformance payment total of £25.18m.

What’s coming up in the future?

The definition of this measure changes significantly in AMP7 and this becomes a standardised reporting definition across the industry. Our focus will be on improved first-time response and initial investigation to target a reduction in repeat incidents. Our proactive programme will continue to increase moving forward, targeting historically poor performing areas.

External flooding					
Measure	External flooding incidents				
Unit	Number per year				
Definition	Total number of incidents of areas affected by external flooding in the year. Includes property curtilage, highways, car parks, footpaths, public open space, fields, agricultural land, woodland and flooding to buildings not defined as internal flooding. The measure includes incidents due to other causes, including blocked and defective gullies and overloaded sewers in rainfall events up to and including 1 in 30 year return period, incidents in exceptional rainfall events are excluded. All incidents are included, including damp/wet only patches. Incidents of flooding via the sewers caused by high river levels, inundation due to surface run-off or overflowing watercourses are excluded. The measure includes incidents arising from assets transferred to us in 2011.				
Period	Financial year				
Target	Starting Level 10,125 in 2014/2015				
	Y1	Y2	Y3	Y4	Y5
Performance commitments -(number)	10,125	10,363	10,487	10,487	10,487
Incentive	Reputational incentive				

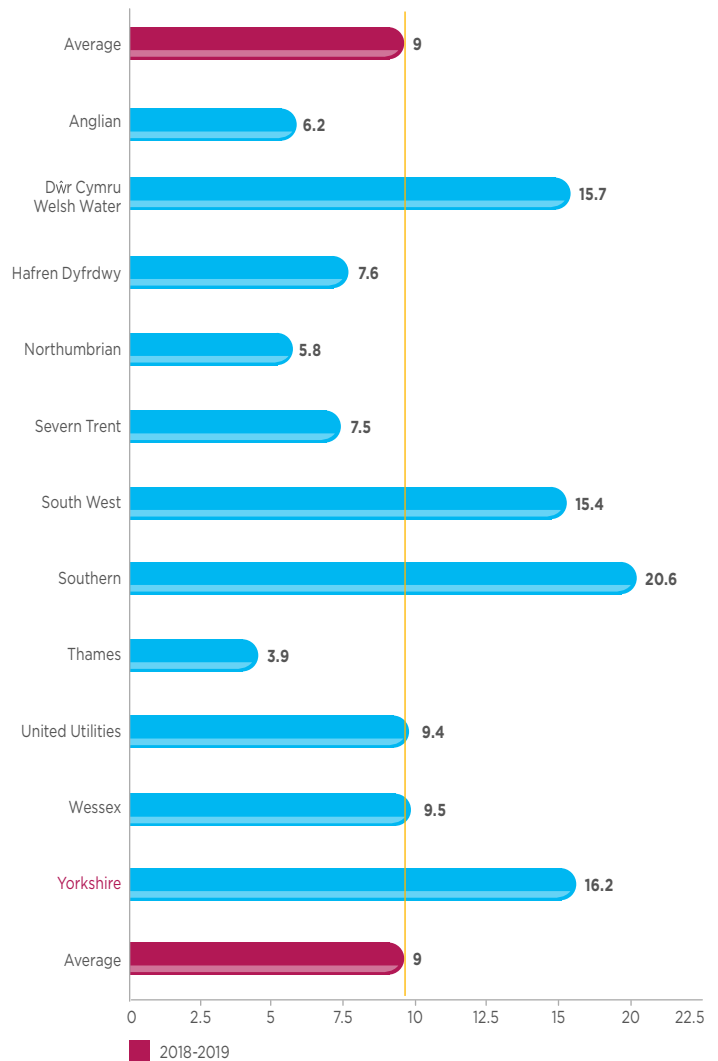
Result: 9,139

Target: Achieved target of having equal to or less than 10,487 external flooding incidents

How did we compare with other water companies?

The chart below, taken from the Discover Water website shows the total number of external areas flooded with sewage (per 10,000 connections to sewers). Please note, our external flooding performance commitment has a different definition to the one shown on the Discover Water website.

Source: Discover Water - discoverwater.co.uk/sewer-flooding



Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
External flooding	Number	9,037	9,145	9,296	9,116	9,139

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Performance summary

This performance commitment includes flooding incidents from legacy and transferred assets and also includes damp/wet patches and gullies. Other causes and overloaded sewers, excluding exceptional rainfall, are included.

In 2019/2020, we again achieved our performance commitment for external sewer flooding. We had 9,139 external flooding incidents this year, which is a slight increase on the number of incidents reported in 2018/2019. There has been an increase in incidents due to overloaded sewers both on the legacy and transferred network, which relates to the rainfall events seen in November 2019 and February 2020.

Year	Performance	Target	Commitment met
2015/2016	9,037	10,125	Target met
2016/2017	9,145	10,363	Target met
2017/2018	9,296	10,487	Target met
2018/2019	9,116	10,487	Target met
2019/2020	9,139	10,487	Target met

Underperformance or outperformance payment

This performance commitment is reputational only.

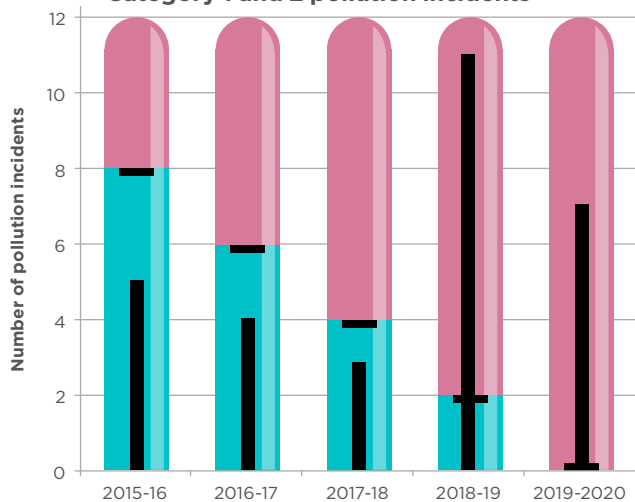
What's coming up in the future?

The definition of this performance commitment changes significantly in AMP7 to ensure there is a consistent definition across the water industry. In addition, outperformance rewards and underperformance penalties are applied. A new Sewer Flooding team has been established in Customer Field Services who will be accountable for reporting and performance. Training is being undertaken to ensure all colleagues supporting the end to end process are aware of the new requirements and their contributions.

Minor and serious pollution incidents							
Measure	Pollution incidents						
Unit	Number per year						
Period	Calendar year measure (reported in the following year)						
Definition	Total number of category 1-3 pollution incidents caused by a discharge or escape from any Yorkshire Water wastewater asset each year (this covers all consented and non-consented intermittent events, but not continuous discharges). This measure includes all wastewater assets, that is surface water assets are included, and excludes impacts from private pumping stations that transferred in 2015.						
Target		2014	2015	2016	2017	2018	2019
	Category 1-2	10	8	6	4	2	0
	Category 3	250	237	224	211	211	211
Incentive	Financial Incentive – only applies to category 3 incidents. Outperformance and underperformance payments are calculated annually. There is also a reputational incentive. The Environment Agency can take enforcement action and pursue penalty through courts. Should the number of successful court prosecutions on category 3 incidents exceed the deadband range, then the number of the prosecutions in excess of the penalty deadband will be deducted from the number of pollution incidents for which the penalty rate is to be applied.						

Performance graph – lower is better

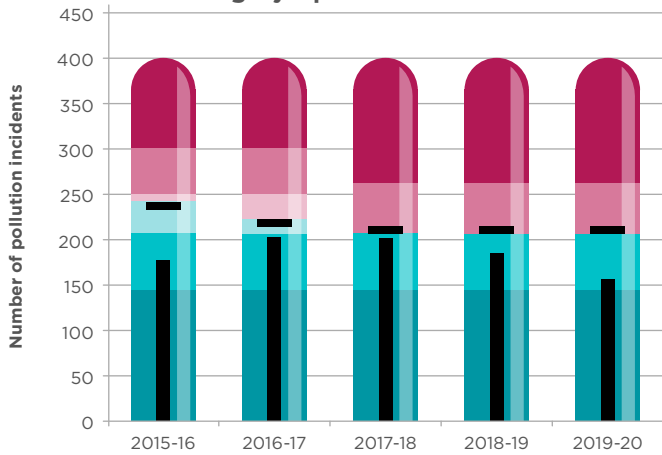
Category 1 and 2 pollution incidents



See page 61 of this report for an explanation of what this graph shows and the key.

Performance graph – lower is better

Category 3 pollution incidents



See page 61 of this report for an explanation of what this graph shows and the key.

**Outcome delivery incentives table
Category 1 and 2 pollution incidents.
Reputational only.**

	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Category 3 pollution incidents.

	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020
ODI (£m)	£5.74	£0.74	£1.67	£4.26	£9.63

**Result: 7 category 1 and 2 incidents
159 category 3 incidents**

**Target: Not achieved category 1 and 2
target of 0
Achieved the category 3
target of 211 or fewer**

Performance summary

This performance commitment is made up of two measures: a measure of the number of serious (Category 1 and 2) pollution incidents within the year and a measure of the number of minor (Category 3) pollution incidents within the year.

We had seven serious pollution incidents in 2019, against a target of zero and therefore we failed against this performance commitment (and the pollution performance commitment overall). Although performance on serious pollution incidents in 2019 is an improved position from 2018 where we had 11 serious incidents, we are disappointed with the number of serious pollution incidents we experienced in the year.

We had 159 category 3 (minor) pollution incidents, against a target of 211 or fewer in 2019. In our 2019 reporting, we have excluded nine consented storm spill events, which would have previously been recorded in this measure. The reason these have been excluded in 2019 is due to revised guidance from the Environment Agency. The nine incidents excluded from our reporting in 2019 have been deemed by the Environment Agency to be compliant combined sewer overflow (CSO) discharges and are deemed not to be having an unacceptable impact on the environment. The updated guidance was confirmed by the Environment Agency in March 2020. Yorkshire Water has excluded these incidents from the performance commitment to ensure alignment with Environment Agency reporting. The Yorkshire Forum for Water Customers and the Yorkshire Water Board have been made aware of, and approved, this position, to ensure reporting aligns with the Environment Agency.



Pollution categories

Serious pollution incidents are classed as category 1 or 2 by the Environment Agency. Other (or minor) pollution incidents are classed as category 3.

Calendar Year	Serious (Category 1 & 2) Pollution Incidents			Category 3 Pollution Incidents		
	Performance	Target	Commitment met	Performance	Target	Commitment met
2015	5	8	Target met ✓	180	237	Target met ✓
2016	4	6	Target met ✓	207	224	Target met ✓
2017	3	4	Target met ✓	202	211	Target met ✓
2018	11	2	Target not met ✗	188	211	Target met ✓
2019	7	0	Target not met ✗	159	211	Target met ✓

During 2019/2020 there were no prosecutions for pollution incidents. However, it should be noted that it takes time for cases to go through the courts.

Underperformance or outperformance payment

This performance commitment is made up of two measures: a measure of the number of serious (Category 1 and 2) pollution incidents within the year and a measure of the number of minor (Category 3) pollution incidents within the year. The serious pollution incidents measure is a reputational measure and the Category 3 pollution incidents measure has a financial incentive attached with it.

In 2019/2020, we achieved a reward of £9.63m for outperformance against the target. Overall in AMP6, the reward outperformance payment has totalled £22.03m.

Lessons learnt

In March 2020 we published our Pollution Incident Reduction Plan for 2020 to 2025. Key actions taken to improve performance in 2020 are detailed in this plan. Our plan is aspirational and the plan will be dynamic as it evolves to meet the scale of the challenge, and as we develop and deploy the most cost-effective solutions.

Our pollution reduction plan is founded on three themes:

- **Theme 1 Operational Excellence** – enhanced operational maintenance, and an industry leading response to pollution risk and management.
- **Theme 2 Data and Technology** – data driven risk assessment and planning.
- **Theme 3 TOTEX Investment** – Totex investment is about choosing the optimal balance of operational activities and capital investment initiatives in a prioritised format to drive the most effective sustainable outcomes.

The Yorkshire Water Board approved this plan and it is published on our website as part of our drive for transparency and accountability to our customers and our regulators. We will review our plan quarterly with the Environment Agency. To read our pollution incident reduction plan, please visit: [yorkshirewater.com/media/2362/yorkshire-water-pollution-incident-reduction-plan-2020-2025-march-2020.pdf](https://www.yorkshirewater.com/media/2362/yorkshire-water-pollution-incident-reduction-plan-2020-2025-march-2020.pdf)

What’s coming up in the future?

The definition of this performance commitment changes in AMP7 to ensure there is a consistent definition across the water industry.

Stability and reliability factor – wastewater network	
Measure	Stability and reliability factor – wastewater network
Unit	Classification: Deteriorating/Stable/Improving
Definition	<p>An overall assessment of long term stability and reliability for the wastewater networks, based on a basket of indicators. Assessment is based on the recent historical trend of the indicators.</p> <p>The basket of indicators for the long-term stability and reliability factor for wastewater networks contains:</p> <ul style="list-style-type: none"> • Sewer collapses • Pollution incidents (CSO, RM, FS & SPS) • Properties flooded due to other causes • Properties flooded due to overloaded sewers, excluding severe weather • Sewer blockages • Reactive equipment failures. <p>The measure excludes assets transferred to Yorkshire Water in October 2011, because there is not enough data on this asset base to allow meaningful analysis.</p>
Period	Various (see sub measures)
Target	Stable at Year 4 for Year 5 outturn. Assessment subject to independent external and Yorkshire Forum for Waters Customers assurance.
Incentive	Financial incentive (underperformance payment only). Up to 10% totex for outcome calculated for Year 5 outturn.

Result: Stable

Target: Achieved

Performance summary

We continue to play our part in managing flood risk by providing a public drainage network and collaborating with other flood management agencies to support a joined-up approach to both short-term incidents and long-term plans. We continue to invest in the region’s drainage network and reduce the risk from sewer flooding, and we have further increased our proactive maintenance of the sewer network in 2019/2020 by removing sewer blockages and maintaining sewer capacity. Through this activity we have targeted areas where customers have previously experienced a range of issues, with the view that future incidents can be reduced or avoided. This has been a coordinated approach with communication campaigns running alongside the onsite activity to inform customers of the causes of some issues and the role they can play to improve the situation.

We have maintained ‘stable’ status in the performance commitment for the stability and reliability of our wastewater network. The status of this commitment is determined by a basket of measures which demonstrates the effectiveness of our long-term planning and asset management to ensure the resilience and sustainability of our service.

A basket of measures is used to give the overall assessment for this measure. There are six sub measures for this performance commitment.

More information on these sub measures can be found in [Section 8](#) of this report.

Stability and reliability factor – wastewater network sub measure

Sub measure	Sewer collapses
Unit	Number
Definition	Number of repairs to gravity sewer collapses
Period	April to March
Target	Reference level = 255 High tramline = 369 Lower tramline = 141

Sub measure	Pollution incidents
Unit	Number
Definition	The number of category 1-3 unconsented and consented pollution incidents on combined sewage overflow, foul/combined sewer, foul manhole, foul rising mains, sewage pipe bridges, syphons and sewage pumping stations. Pollution incidents caused by third parties (including power outages) outside of our control will not be included.
Period	Calendar Year
Target	Reference level = 203 High tramline = 251 Lower tramline = 155

Sub measure	Properties flooded overloaded sewers, excluding severe weather
Unit	Number
Definition	The number of properties affected by flooding incidents due to overloaded sewers in rainfall events occurring more frequently than or equal to 1 in 20 years. The reported number excludes flooding in rainfall events less frequent than 1 in 20 and flooding incidents via the sewers caused by high river levels, inundation due to surface run-off or overflowing watercourses.
Period	April to March
Target	Reference level = 72 High tramline = 110 Lower tramline = 71

Sub measure	Properties flooded due to other causes
Unit	Number
Definition	The number of properties affected by flooding incidents from equipment failures, blockages or collapses (collectively grouped as other causes). This includes properties where an uninhabited cellar is the only part affected by the flooding. All properties flooded due to other causes are included where the flooding incident was caused by factors beyond the our control. A property affected by more than one incident under this definition is reported as one property.
Period	April to March
Target	Reference level = 302 High tramline = 379 Lower tramline = 225

Sub measure	Reactive equipment failures
Unit	Number
Definition	The number of works orders created reactively for sewerage network assets including sewage pumping stations
Period	April to March
Target	Reference level = 5,869* High tramline = 7,282* Lower tramline = 4,456*

Sub measure	Sewer blockages
Unit	Number
Definition	Number of sewer blockages cleared
Period	April to March
Target	Reference level = 20,695* High tramline = 22,936* Lower tramline = 18,454*

Customer Outcome: We protect and improve the water environment

There are six performance commitments under this outcome.

We collect, treat and return over one billion litres of water safely back into the environment each day. Protecting and improving the water environment is of utmost importance to us.

Bathing water quality	
Measure	Number of Yorkshire's Bathing Waters that exceed the required quality standard.
Unit	Number
Definition	A count of the number of beaches where the requirements of the EU Bathing Water Directive are exceeded, based on EA bathing water samples taken at designated bathing beaches; that is, the number of bathing waters which are good or excellent (better than sufficient).
Period	Reported by bathing season in following year
Target	Annual commitment of 15 per bathing season
Incentive	Reputational incentive

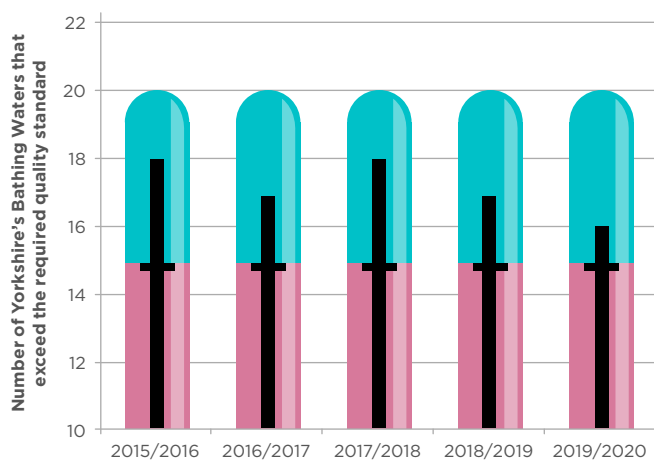
Performance summary

We have continued to enhance our asset base to ensure its resilience. We have achieved the performance commitment to maintain at least 15 beaches at an Excellent or Good legislative standard. 16 of our 19 beaches met these high standards and are going beyond the minimum legal requirement.

The table below shows the number of designated bathing waters in Yorkshire which achieved each of the water quality classifications defined by the Bathing Water Directive.

Classification	2016#	2017#	2018#	2019#
Excellent	11	5	5	8
Good	6	13	12	8
Sufficient	1	0	1	1
Poor	1	1	1	1
Unassessed	0	0	0	1

Performance graph – higher is better



See page 61 of this report for an explanation of what this graph shows and the key.

Calendar year measure.

What do we mean by excellent, good and sufficient?

Parameter	Coastal waters and transitional waters classification categories		
	Excellent quality	Good quality	Sufficient
Intestinal enterococci (cfu/100 ml)	100 (*)	200 (*)	185 (**)
Escherichia coli (cfu/100 ml)	250 (*)	500 (*)	500 (**)

(*) Based upon a 95-percentile evaluation.
 (**) Based upon a 90-percentile evaluation.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Bathing water quality	Number	18	17	18	17	16

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 16

Target: Achieved target of 15 or higher bathing waters that exceed the required quality standard

2019 has seen an improvement from Good to Excellent status at four beaches: Robin Hoods Bay, Scarborough North, Reighton and Hornsea. All other beaches have maintained their 2018 status, apart from Tunstall, which is unassessed due to coastal erosion making it unsafe for the Environment Agency to access for sampling. This unassessed beach is reflected in the reduction from 17 to 16 Good or Excellent beaches compared with 2018.

Bridlington South and Scarborough South remain classified as Sufficient and Poor respectively. We are continuing to work with the Yorkshire Bathing Water Partnership to investigate and implement measures to improve quality.

Of the eight resort beaches in Yorkshire, three will be able to apply for the coveted "Blue Flag" status in 2020, a three-fold increase from 2019 with Scarborough North and Hornsea now joining Whitby in eligibility.

A Blue Flag demonstrates that the beach complies with a range of standards, including water quality, available user facilities, provision of information and other requirements. We have a role in ensuring these requirements are met and other organisations also play a key part in achieving this aspiration.

We continue to work closely with other stakeholders as part of the Yorkshire Bathing Water Partnership to play our part in achieving excellence on Yorkshire's designated beaches. Examples of partnership working which has identified and resolved risks include: practices employed by sea traffic (boats – leisure and fishermen); partnership campaigns such as “Do Your Bit” to reduce seagull impact; and improved practices with waste disposal has made a real difference, particularly in Scarborough North.

Underperformance or outperformance payment

This performance commitment is reputational only.

What's coming up in the future?

Strong partnership working and sharing of data and information is essential in order to make the best use of resources. Multiagency pre-season walkovers across the beaches has proven very beneficial. This is something that we will look to ensure is completed at every beach regardless of the water quality status from the previous season.

From 2020, we have increased our target to have at least 18 of the 19 designated bathing waters in our region which exceed the European Union Bathing Water Directive requirements. Projections from our data science team indicate a likely outturn of 16 beaches against the target of 18 for the end of 2020. This would mean we under achieve against the new performance commitment target by two beaches. We've put in place additional projects to help improve Scarborough South and Bridlington South, however due to the four-year rolling average nature of the dataset these will take a number of years to see benefit in the performance figures.

Additionally, we are continuing to work with the Local Authority and landowners at Tunstall to push for safe access or de-designation of the site if safe access cannot be built.

We are using the Marine Impact Model and prediction tool along with data science modelling to best understand the likely outcomes and causes. However, due to the dynamic nature of the coastal environment it is not possible to reliably predict beach outcomes years in advance. Nevertheless, probabilities of beach status' based on historic performance can be predicted.

The Yorkshire Water partnership has procured some detailed modelling work by a bathing water specialist CREH, to conduct an intensive sampling programme of work to provide insight on two key focus beaches: Bridlington South and Scarborough South. This is now dependent on the Covid-19 situation, government advice around social distancing and how this will impact the ability to do this work. If we are able to go ahead, the work should inform future interventions.

We are currently working with the partnership to understand the risks and impact associated with the Covid-19 situation.

Working with others	
Measure	Number of solutions we deliver by working with others
Unit	Number
Definition	The number of intervention solutions delivered through working with multi agencies, organisations or individuals. This does not include Yorkshire Water research and development activity or any delivery by/with Yorkshire Water contractors. The intervention can be delivered through various arrangements to count for this measure, e.g. joint funding, partnership and shared resources
Period	Financial year
Target	Numeric commitment of 3 per year and 4 in the final year of the AMP.
Incentive	Outperformance payment only – calculated annually. Both annual and cumulative performance commitment must be achieved for annual reward. The target is to deliver 16 solutions by the end of year 5.

Result: 11

Target: Achieved target of a commitment 4 in the final year of the AMP

Performance summary

This performance commitment is designed to encourage cultural change within the company by driving a more externally focussed approach to resolving issues, in acknowledgment that there are some problems we are unable to solve without the cooperation and collaboration of others. These include working with other landowners to restore and protect habitats, or to tackle invasive species, or in removing obstacles to fish passage. Working in partnership enables much larger, landscape scale changes to be achieved, thus providing additional benefits to our customers and the environment than working alone. Partnership contributions are often also crucial in leveraging significant additional funding from the European Union (EU), National Lottery or other funding sources, again enabling much larger and more beneficial schemes to progress than working alone.

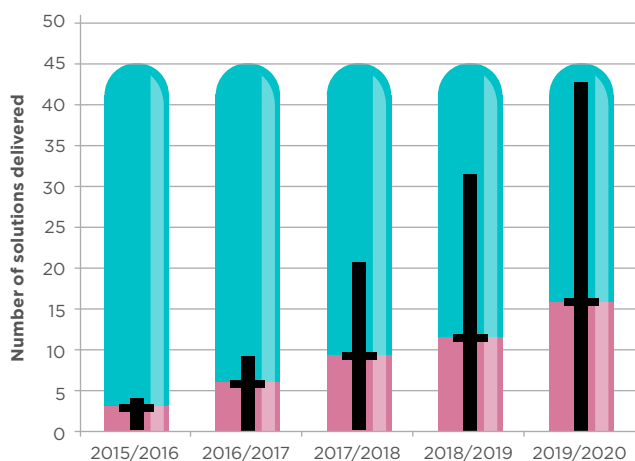
We carefully scrutinise the added value of any potential partnership scheme and will only work in partnership where there are clear benefits to doing so. Partnership projects are subject to the same business approval processes and business case justifications as any other scheme. The Yorkshire Forum for Water Customers plays an important role in reviewing and agreeing the projects which are eligible for this performance commitment on an annual basis.

The target for working with others is three projects per year for years 1-4 of the AMP and 4 projects in year 5. We have outperformed the target each year of the AMP, with more projects delivered in the second half of the AMP. This is because partnership opportunities take time to identify and develop, and in addition, several projects are multi-year schemes including our catchment management partnerships and invasive species work.

In 2019/2020 we delivered 11 partnership projects against the target of 4. We have worked with more than 25 different organisations to deliver projects which have protected raw water quality, enhanced biodiversity, stored carbon, slowed the flow of flood water, removed barriers to salmon on the River Don, eradicated invasive species, trained up hundreds of volunteers, installed rain gardens at 12 schools, revealed 1000 previously unknown sites of historical significance in the South Pennines and leveraged substantial additional funding for further projects across the region.

We have contributed £2.2m towards the 11 projects this year which, together with other partner organisation contributions, represent £26.5m of investment, much of which would not have been possible to leverage had it not been for the match contribution from Yorkshire Water.

Performance graph – higher is better (shows cumulative number of solutions as the target)



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Working with others	Number	4	5	12	11	11
Annual target	Number	3	3	3	3	4
Cumulative total	Number	4	9	21	32	43
Cumulative target	Number	3	6	9	12	16

Outcome delivery incentives table

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	£0.00	£0.00	£0.09	£0.02	£0.07

The 11 partnership projects we have worked on this year are as follows:

1. Yorkshire Invasive Species Forum (YISF) (Environment Agency, Yorkshire Wildlife Trust)

The YISF provides strategic coordination of activity to map and treat invasive species across the Yorkshire region. The Forum takes a headwaters-down approach which means much more systematic, effective, and cheaper treatment of invasive species than individual landowners each trying to tackle the issue alone. The Forum actively recruits and upskills volunteers to carry out surveys and treatments, provides an online platform for surveys and treatment data, and administers a landowner pay in scheme. The project has delivered financial, natural and social capital benefits which include 1,154 hours of volunteer contribution, 246km of watercourse treated for INNS and engagement with over 200 landowners. It has also significantly reduced Yorkshire Water costs for treating invasive species and resulted in some invasive species being locally eradicated.

2. North Yorkshire Moors Invasive Partnership (North Yorkshire Moors National Park)

This partnership focussed efforts specifically on the Rivers Esk and Rye in North Yorkshire, clearing more than 22km of invasive species using both contractors and volunteers. The four-year length of this project has meant that the seed bank for invasive species on the Esk has more than likely been eradicated.

3. Crassula control trials (South West Water, Natural England and CABI)

This partnership with the Centre for Agriculture and Bioscience International, South West Water and Natural England built on many years of Defra research into how best to control *Crassula helmsii*, a non-native aquatic invasive plant which is present in several of our reservoirs. By providing a small amount of funding and a suitable location to test the biological control, we have been one of the first organisations to benefit from this new method of controlling this invasive weed.

4. NERC Biosecurity Fellow (EA, NERC)

We provided match funding to support a University of Leeds bid to the National Environment Research Council for a NERC Innovation Fellow to apply biosecurity learning across the region. The Fellow has worked with seven organisations, including Yorkshire Water, to develop bespoke biosecurity risk assessments and management plans, making use of the latest academic insights and ensuring biosecurity best practice is now widely embedded across key organisations.

5. MoorLIFE 2020 (Severn Trent Water, United Utilities, Moors for the Future)

This five-year partnership between Severn Trent, United Utilities, Yorkshire Water and Moors for the Future secured €16 million funding from the EU LIFE programme to restore and protect 9500ha of peatland habitat. This project has re-vegetated bare peat, reducing the risks to raw water quality, improving biodiversity and carbon storage and reducing flood risk.

6. Pennine PeatLIFE (United Utilities, Northumbrian Water, North Pennines AONB, Yorkshire Peat Partnership)

This was a four-year partnership between Yorkshire Water, United Utilities, Northumbrian Water, North Pennines AONB and the Yorkshire Peat Partnership to restore and protect 1345ha of peatland habitat. This benefits raw water quality, biodiversity, carbon storage and helps reduce flood risk. The project has also developed and showcased a financial payment for ecosystem services mechanism under the UK Peatland Code.

7. Swinton Sphagnum (Yorkshire Wildlife Trust, University of Manchester)

Yorkshire Water worked with the Yorkshire Wildlife Trust and the University of Manchester to support a PhD research project into peatland habitat restoration. The project has repaired over 60km of peat grips and gullies, reintroduced sphagnum to more than 20ha and planted 8750 cotton grass plugs, as well as identifying which techniques work best for increasing sphagnum cover of upland catchments.

8. Soak it Up (Schools, Yorkshire Wildlife Trust)

This project with the Yorkshire Wildlife Trust worked with 12 schools, all of which had experienced flooding in the past, to learn about sustainable water use, the urban water cycle, sustainable urban drainage systems and the importance of blue green solutions. The schools held assemblies and design workshops to develop ideas for rain gardens and other types of solutions, which were then built by staff, pupils and volunteers. The project has collectively planted more than 3000 new trees, created 596m³ of new garden, 459m³ of new wildlife habitat, and delivered 6000 hours of education.

9. Removing barriers to fish on the River Don (Don Valley Rivers Trust)

We have partnered with the Don Valley Rivers Trust, providing match funding to support a Heritage Lottery Fund bid for £1.4m to remove the last remaining barriers to fish passage on the River Don. By working together, we gained access to specialist expertise at a reduced cost for the design and delivery of our own fish passes, whilst our match funding enabled the Don Rivers Trust to secure the Lottery funding. The result is that salmon, trout and other fish can now migrate all the way up the River Don to spawn, returning these species to their natural habitat.

10. Celebrating our Woodland Heritage (Green Bank Trust, Newground Together, University of Bradford)

The Celebrating our Woodland Heritage project, funded by the National Lottery Heritage Fund, Yorkshire Water, Newground Together and the Green Bank Trust, and supported by the School of Archaeological and Forensic Sciences at the University of Bradford, has undertaken over three years of community archaeological investigations, forest schools, festivals, workshops and a conference about the hidden heritage and archaeology in the woodlands across the South Pennines. The project has carried out archaeological surveys of 16 areas of Yorkshire Water owned woodland as well as at another 21 woodlands across the South Pennines to enable better understanding, management and enjoyment of these habitats and artefacts.

There has also been an extensive programme of community engagement including 289 Forest Schools workshops and more than 280 volunteers carried out 37 woodland heritage surveys, revealing more than 1000 previously unknown sites of historic significance. Match funding from Yorkshire Water enabled a successful bid for a further £500,000 of Heritage Lottery Funding to support this project.

11. Growing Resilience (National Trust)

This partnership with the National Trust has delivered a £1.3m natural flood risk management scheme in the Calder Valley. By combining forces with the National Trust, we were able to leverage a significant amount of additional funding to plant more than 100,000 trees around our reservoir at Gorpley, complementing work the National Trust were doing at Hardcastle Crag. This will help reduce the speed and amount of water flowing from the land during storm events, reducing the risk of flooding to some 3000 homes and businesses downstream. Our Six Capitals Valuation shows that the changes and improvements made on Yorkshire Water's area of land are worth £7.7m in improved raw water quality, reduced flood risk, carbon stored and improved amenity values.

Underperformance or outperformance payment

This performance commitment is reward only. The reward is earned only if both the in-year and cumulative target have been met. Any rewards must be reinvested into more partnership working projects and must be spent within three years of earning it. We have earned an outperformance payment of £0.07m in 2019/2020.

What's coming up in the future?

This performance commitment will continue next AMP, although the definition has been amended slightly.

The Covid-19 pandemic is likely to significantly affect the ability of Yorkshire Water and our partner organisations to identify, develop, and deliver partnership projects in the early part of AMP7. Longer term, it is also not yet clear if some of our partner organisations will survive the current situation, especially small charities, or how the likely economic downturn post Covid-19 may impact on third party/private sector funding for this kind of activity.

Visitor satisfaction	
Measure	Recreational visitor satisfaction
Unit	Qualitative
Definition	An assessment of customers' satisfaction with the current facilities, access and use of recreational sites and the recreational offer. "Recreational sites" is defined as our paths and land around our reservoirs, linking routes and paths across our land and across moorland and the facilities (for example, car parks and toilets) provided by us and available at some of these sites. Recreational offer is defined as the additional access provided to our sites (for example one off charity events) over and above the usual recreational site provision available to the public. The definition of recreational sites and recreational offer does not include any Yorkshire Water land, water or rights that has been tenanted or is owned and for which Yorkshire Water has no responsibility or control (for example, water sports clubs)
Period	Reported annually by financial year
Target	No target. Qualitative survey results to be obtained and published each year.
Incentive	Reputational incentive

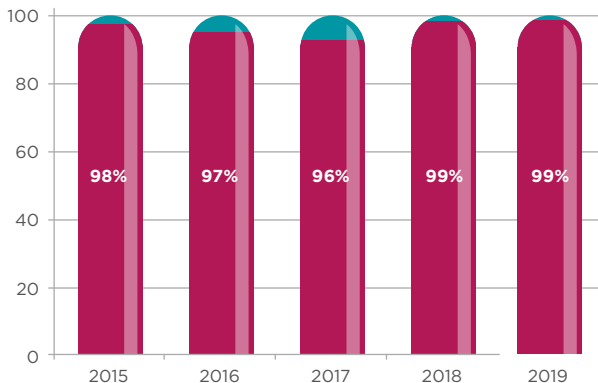
Performance summary

This performance commitment was to complete a survey to assess customer satisfaction with the current facilities, access and use of recreational sites and the recreational offer. We committed to undertaking a qualitative survey each year and to publish the results. The sites chosen were different each year to cover the different recreational offerings across our estate. Enabling people to enjoy the reservoirs and land requires investment for the upkeep of the facilities. This research helps us make sure that the investment is made appropriately, in the areas where it is most needed. It helps us understand what would encourage future visits to our sites.

In year 5 of AMP 6, a visitor satisfaction survey was carried out at four of our recreational locations between Easter 2019 and Spring Bank 2019 which returned a total satisfaction rating of 99%.

Visitor satisfaction has remained consistently high each year of the AMP, not dropping below 96%. This year's result of 99% maintains the same total satisfaction result from 2018. This percentage is higher than the average total satisfaction level over the past 5 years of AMP 6 which is 97.8%.

Performance graph – higher is better Total visitor satisfaction percentage



Underperformance or outperformance payment

This performance commitment is reputational only.

What's coming up in the future?

This performance commitment is not continuing into AMP7 although all our efforts will continue to strive to maintain the high total satisfaction percentage levels we have achieved throughout this period.

Performance data table

Performance Commitment	Units	2015	2016	2017	2018	2019
Visitor satisfaction	Percentage	98%	97%	96%	99%	99%

Outcome delivery incentives table – reputational only

	2015	2016	2017	2018	2019
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 99%

Target: Achieved commitment to undertake a qualitative survey each year and publish results

Land conserved and enhanced	
Measure	The amount of land we conserve and enhance.
Unit	Hectares (Ha)
Definition	The amount of land that we conserve and enhance, for example, Biodiversity 2020, Ancient Woodlands and SSSIs. This includes land within the region and includes both Yorkshire Water and non-Yorkshire Water land.
Period	Cumulative total to the end of AMP6 - Reported annually by financial year.
Target	11,736 hectares. The target is reflective of new obligations and maintaining previous obligations and therefore is shown as a total number of hectares of land that we conserve and enhance over AMP5 and AMP6. The target has been derived from NEP, Ancient Woodlands, SSSI and biodiversity schemes and reflects the combination of the water and wastewater commitment.
Incentive	Reputational incentive. Financial Incentive - Penalty/Reward. Calculated in Year 4 for Year 5 outturn. Reward by 2020-25 Year 1 revenues.

Performance summary

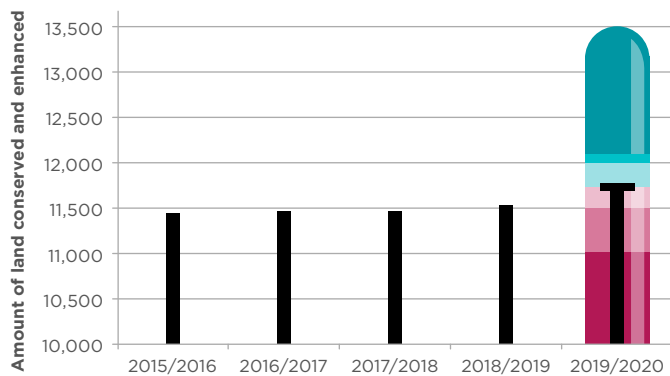
With approximately 28,000 hectares of land, we are one of the three largest land owners in Yorkshire and one of the top 20 largest landowners in the UK. We are developing a Land Strategy for those land holdings. The Yorkshire Land Anchor Network brought together the largest landowners, experts and influencers to define how we can collectively manage land to deliver more for Yorkshire. The strategy will assess international, national, regional and industry strategies, and best practice to manage the land we own, primarily for the purposes of water quality and availability, water attenuation, or carbon sequestration. We have developed objectives and initiatives that will be delivered through an integrated implementation plan utilising our innovative Six Capitals approach to sustainable accounting.

Our flagship land management focused partnership with the National Trust is progressing well with three key areas of action on catchment management, influencing of relevant policy and engagement with the people of Yorkshire. In addition, we continue to work with many organisations with interests ranging from the uplands to those helping our operational sites and assets including Natural England, Nidderdale area of outstanding natural beauty (AONB), Pennine Prospects, Moors for the Future, Northern Forest and Woodland Trust, as well as the numerous more local groups supporting the running of our recreational assets and, at Dronfield, public engagement with an operational detention basin.

As the AMP6 investment period closes, we have delivered our performance commitment to conserve and enhance 11,731 hectares of land featuring sites of special scientific interest, ancient woodlands, river restoration schemes and biodiversity schemes. Overall, the end of AMP hectares (ha) claimed was 11,806.1 ha. This was made up of the following:

- 11,339 ha on Sites of Special Scientific Interest (SSSIs)
- 150 ha on Ancient and Semi Natural Woodland
- 5 ha on fish passes
- 25 ha through biodiversity projects
- 287.1 ha through invasive species projects.

Performance graph – higher is better




See page 61 of this report for an explanation of what this graph shows and the key.

Outcome delivery incentives table

	2015	2016	2017	2018	2019
ODI (£m)	N/A	N/A	N/A	N/A	£0.00

Result: 11,806 hectares

Target: Achieved target of conserving and enhancing 11,736 hectares of land



Site of Special Scientific Interest
A Site of Special Scientific Interest (SSSI) is a formal conservation designation. Usually, it describes an area that's of particular interest to science due to the rare species of fauna or flora it contains - or even important geological or physiological features that may lie in its boundaries.

An example of one of our biodiversity projects is our work with the East region of the Yorkshire Wildlife Trust, to help turn a disused fish farm on the West Beck Chalk Stream SSSI into a thriving space for nature. The site is just upstream of one of our major river intakes, and on one of the most northerly chalk streams in England. Partnership work with the Yorkshire Wildlife Trust and Natural England helped to re-landscape the fish ponds, restore the impacts on the main river caused by the former abstraction points, and to appropriately reconnect the river to the wider landscape. We helped protect an important priority habitat, ensured the river remains resilient to our abstraction, and that there was a long-term plan for the site through Yorkshire Wildlife Trust management to deliver a lasting benefit.

We also worked to understand how we take that work forward and further into a similar AMP7 performance commitment that will focus on Sites of Special Scientific Interests (SSSIs), biodiversity improvements, local wildlife site improvements and the company's innovative Beyond Nature approach to farming. The first Beyond Nature farm, Humberstone Bank, has enhanced biodiversity, improved water quality and increased carbon storage capacity, whilst the Upland Hub based on the farm has been very well used throughout the year.

We committed in 2017 to plant one million trees by the end of 2028. In partnership with tenants, Woodland Trust, National Trust, White Rose Forest Partners, Wildlife Trust and others, 215,000 trees were planted by the end of March 2020, and we have engaged with the Northern Forest and wider water industry on this.

We continue to provide a wide and diverse range of recreational opportunities across our estate, with over 50 clubs and organisations undertaking activities on our land and reservoirs. Tophill Low Nature Reserve had to be closed for part of the year following significant flooding, but visitors will hopefully see even more wildlife highlights on re-opening. The reserve was highly commended in the 2020 Remarkable East Yorkshire Tourism Awards. The access, woodland and recreation aspects of our land holdings are a key part of both the Land Strategy and Land Anchor Network with many opportunities to utilise those assets to benefit the people of Yorkshire. One aspect of this will be to review and trial approaches that enable a more representative sample of our customers to enjoy the assets we manage.

There has also been a lot of activity on and around our operational land estate where any proposals or opportunities are reviewed in accordance with our Six Capitals approach, including installation of solar power at our Buttershaw site. We have advanced our understanding and plans in this area, with future activities to include: converting bio-gas for supply into the national gas grid; photovoltaic solar energy to supply our operational assets, off-setting of our operational carbon emissions; and managing dormant operational land to remove or mitigate problems for operational colleagues. There has also been an Industry wide initiative on Sustainable Urban Drainage assets (SuDs) to provide water storage and ecological improvement. We are working with local authorities in Hull to plan SuDs developments with the aim of reducing flood risk in this area.

Underperformance or outperformance payment

We are within the reward deadband for this performance commitment so no reward payment due.

What's coming up in the future?

This performance commitment continues into AMP7. Some of our focus in the next five years will be on sphagnum planting, rewetting the moors and incorporating natural flood management interventions.

Length of river improved	
Measure	Length of river improved
Unit	Kilometres (km)
Definition	The length of river in the Yorkshire Water region improved during 2015-2020 against WFD component measures.
Period	Total by end of AMP6 (progress reported annually)
Target	The target has been derived from the NEP programme. The total length of river to be improved by end of period is 440 km. Measurement using modelled length. This is made up of; 100km from water service component and 340km from wastewater service component.
Incentive	Reputational incentive. The Environment Agency may take enforcement action, and/or use no deterioration principle. Financial incentive - Penalty/Reward calculated in Year 4 for Year 5 outturn. Reward by 2020-25 Year 1 revenues. The maximum penalty is £14m for the water service, and £49m for the wastewater service.

Outcome delivery incentives table – Length of river improved – clean water

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	£0.31

Outcome delivery incentives table – Length of river improved – wastewater

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	£0.00

**Result: Clean water – 107 km
Wastewater – 352 km
Total length of river improved: 459 km**

Target: Achieved target of improving 440 km of river by 2020

Performance summary

We have a performance commitment for the length of river improved, which is split into water and wastewater elements. The definition of this measure is: The length of river in the Yorkshire Water region improved during 2015-2020 against Water Framework Directive component measures. This is an end of AMP6 measure. We achieved 107km for water and 352km for wastewater.

Clean water

We completed eight schemes in year 5 of AMP6 (one fish passage, seven flow schemes). Completion of three of these flow schemes triggered the achievement of one cumulative length of river improved. One of the flow schemes was at Kepwick, which was a scheme delivered by Yorkshire Water in addition to our National Environment Programme (NEP) schemes.

The total length of river improved achieved in this year was 67.37km, which resulted in an end of AMP cumulative performance of 106.98km. The target was 100km.

Wastewater

26 schemes were completed in Year 5 of AMP6, with a single additional scheme (Clayton West) signed off in Year 4. Clayton West was within a grouped river length and therefore could not be claimed until other sites in the group were completed.

The total length of river improved in this AMP was 352km, against a regulatory target of 340km.

**Performance graph – higher is better
Length of river improved – clean water**



See page 61 of this report for an explanation of what this graph shows and the key.

Underperformance or outperformance payment

For the clean water element of this performance commitment, an outperformance payment of £0.3064m was achieved.

For the wastewater element of this performance commitment, the reward will not be claimed as although we achieved the regulatory target of 340km, we did not meet our revised internal target of 357km and a business decision was made that reward payments would only be made if the revised internal target of 357km was achieved. Therefore, we will not claim the reward for the performance achieved.

What's coming up in the future?

This performance commitment will continue into AMP7, albeit with a broader definition and annual (reputational only) targets with an end of AMP financial target.

Covid-19 related restrictions on travel and regulatory staff availability have already impacted our programme. We are actively managing these risks and will negotiate delivery deadline extensions if required.

Stability and reliability factor – wastewater quality	
Measure	Stability and reliability factor – wastewater quality
Unit	Classification: Deteriorating/Stable/Improving
Definition	An overall assessment of long term stability and reliability for the wastewater quality based on a basket of indicators. Assessment is based on the recent historical trend of the indicators. The basket of indicators for the long-term stability and reliability factor for wastewater quality contains: <ul style="list-style-type: none"> • Sewage treatment works non-compliance • Population equivalent % non-compliance • Reactive equipment failures
Period	Various (see sub measures)
Target	Stable at Year 4. The assessment will be subject to external independent and Yorkshire Forum for Waters Customers assurance.
Incentive	Financial incentive (underperformance payment only). Up to 10% totex for outcome.

Result: Stable

Target: Achieved

Performance summary

We collect, treat and return around one billion litres of wastewater safely back to the environment every day. We have maintained “stable” status in the performance commitment for the stability and reliability of our wastewater quality. The status of this commitment is determined by a basket of measures which demonstrate the effectiveness of our long-term planning and asset management to ensure the resilience and sustainability of our service.

Two of our 611 wastewater treatment works did not meet their numeric discharge permit conditions in 2019, securing 99.3% compliance. This was an improvement in performance compared to 2018, when we had six failing wastewater works or 98.0% compliance. It is our continued aim to achieve high levels of performance and drive towards 100% compliance.

Three of our 21 water treatment works with an environmental discharge permit failed their permit limit. This is a reduction in performance since 2018. We also operate a further 29 water works which do not require a discharge permit. A comprehensive plan is in place to reduce the number of these failures.

We had three failures in 2019 from our UV disinfection systems on wastewater treatment works. This is a reduction in performance since 2018 when there were zero failures.

A basket of measures is used to give the overall assessment for this measure. There are three sub measures for this performance commitment.

More information on these sub measures can be found in [Section 8](#) of this report.

Stability and reliability factor – wastewater quality sub measures

Sub measure	Sewage Treatment Works non-compliance
Unit	Number of failing works
Definition	The number of discharges failing upper tier, non-sanitary and look up table (LUT) consents. Sites will be deemed to be failing their numeric consents under the following circumstances: <ul style="list-style-type: none"> • Failure of WRA Lookup Table based on Calendar Year dataset • Failure of WRA Upper Tier Limit • Failure of WRA Absolute Non-Sanitary Limit • Failure to achieve disinfection for 99% of 365 days based on Calendar Year dataset • Failure of Urban Wastewater Treatment Directive (UWWTD) Lookup Table based on Calendar Year dataset • Failure of UWWTD Upper Tier Limit • Failure of Annual Average Limit for Phosphorus based on Calendar Year dataset The Urban Wastewater Treatment Directive (UWWTD) limits also allow for % removal to be taken into account so samples will not be considered as failures if the required % removal has been achieved.
Period	Calendar year measure
Target	Reference level = 0 High tramline = 8 Lower tramline = 0

Sub measure	Reactive equipment failures
Unit	Number
Definition	The number of works orders created reactively for wastewater quality assets.
Period	April to March
Target	Reference level = 15,651* High tramline = 20,848* Lower tramline = 10,453*

Sub measure	Population equivalent % non-compliance
Unit	Percentage
Definition	The population equivalent of the discharges failing look up table (LUT) consents.
Period	Calendar year measure
Target	Reference level = 0 High tramline = 0.6 Lower tramline = 0.0

Customer Outcome: We understand our impact on the wider environment and act responsibly

There are two performance commitments under this outcome.

Waste diverted from landfill	
Measure	Waste diverted from landfill
Unit	Percentage
Definition	The amount of waste from all Yorkshire Water activities (office, operational or construction) that is recycled or re-used as a percentage of total waste produced.
Period	Reported annually by financial year
Target	The total performance commitment for Yorkshire Water is to recycle or re-use 94-95% of its total waste, annually. Year 1-2 = 94% Year 3-5 = 95%
Incentive	Reputational incentive

Performance summary

In 2019/2020, we achieved 99.6% of waste diverted from landfill, which maintains last year's performance.

We continue to advance our work to reduce waste and find innovative ways to take more value from under-used materials and resources such as wastewater, sewage sludge, and our operational land. Ongoing success in our performance commitment to divert almost all our waste from landfill serves to demonstrate our strength in this area.

Our approach is based on collaborative engagement with multiple stakeholders because this enables better opportunities than working alone. We are working closely with local authorities, community groups, universities and regional development agencies.

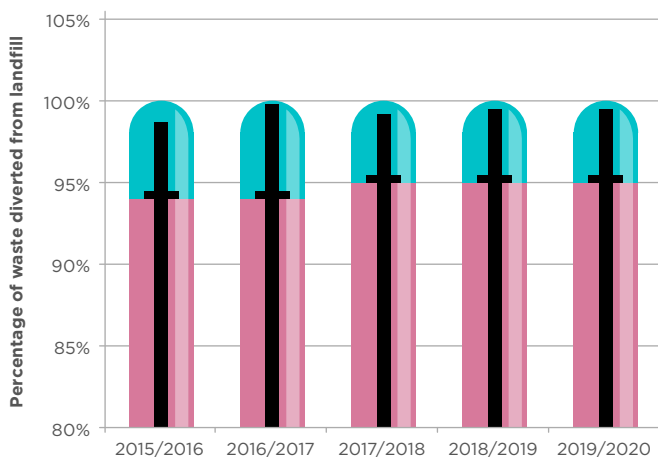
Our flagship resource recovery programme is progressing well at Esholt wastewater treatment works in Bradford. Here we are embracing the principles of circular economies to help further eradicate waste and take more value from under-used resources. We are working with a range of partners on a mix of projects across the large site to deliver an exciting vision for green growth, through sustainable homes and businesses that use redundant brownfield land, spare renewable heat and currently unused wastewater.

Recycling rates of grit have increased from 81% last year to 100% this year. This is as a result of working closely with Biffa to identify land restoration and composting sites which could accept all of our grit production. This is a brilliant way to close the AMP after many years of effort to improve performance in this area.

All but two waste streams have landfill avoidance rates above 90%. Screenings (a bi-product of our sewage treatment processes) is 100% landfilled, this is an industry issue and is one which continues to be explored to try to find a more sustainable solution which is also cost beneficial to allow us to keep customer bills low.

Clean water sludges (a bi-product of our drinking water treatment processes) made up 97% of the waste produced by Yorkshire Water in 2019/2020, and with the significant volumes recycled through biosolids and sludge use in agriculture, this contributes significantly to the performance commitment. However, if clean water sludges were removed from our reportable figures, landfill avoidance would still be 95.5%, which is above the 95% landfill avoidance target. This is the third year in a row we would have achieved the performance commitment target if clean water sludges had been removed, demonstrating our commitment to waste management, recovery of wastes and the circular economy.

Performance graph – higher is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Waste diverted from landfill	Percentage	98.9%	99.9%	99.4%	99.6%	99.6%

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 100%

Target: Achieved target of recycling or re-using 95% of our total waste, annually

Underperformance or outperformance payment

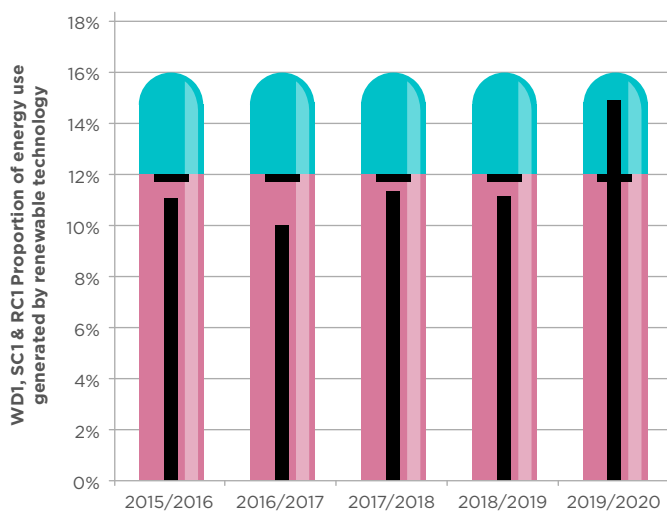
This performance commitment is reputational only.

What's coming up in the future?

In the next AMP, this performance commitment does not stand alone, it is captured under another performance commitment focused on demonstrating value from resource. Performance is expected to be sustained due to the high cost of landfill tax and our commitment to the circular economy.

Energy generation	
Measure	Energy generated through renewable technologies
Unit	Percentage
Definition	The amount of energy (electricity) Yorkshire Water generates through its renewable technology expressed as a percentage of total energy consumption.
Period	Reported annually by financial year
Target	The total performance commitment for Yorkshire Water is to generate 12% of its total energy use, annually.
Incentive	Reputational incentive

Performance graph – higher is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015	2016	2017	2018	2019
Energy generation	Percentage	11.3%	10.4%	11.4%	11.3%	14.6%

Outcome delivery incentives table – reputational only

	2015	2016	2017	2018	2019
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 15%

Target: Achieved target to generate 12% of our total energy use, annually

Performance summary

We are a large consumer of electricity because it is energy intensive to move, manage and treat water and wastewater. We also use smaller amounts of gas and fuel oils in our operations. These forms of energy, especially electricity, are critical to the resilience of our operations and they are amongst our largest operating costs. We continually seek new ways to reduce the amount of energy we need and to keep these operating costs as low as we can. We also produce an increasingly substantial amount of renewable energy to supply our operations, and we purchase only certified renewable electricity from the national grid. Our approach to energy supports our carbon footprint, cost efficiency and resilience.

We have been investing in renewable energy for many years and continue to do so. Our latest anaerobic digestion (AD) plant came online in 2019 at our Knostrop treatment works in Leeds. Our AD plants treat the region's sewage sludge to produce biogas which we use to generate green electricity. The new plant at Knostrop provides 55% of the site's electricity needs, equivalent to powering 7,600 homes. This facility, along with our other renewables enabled us to generate 86.9GWh in 2019/2020, which met 14.6% of our total electricity needs. This result met our performance commitment to self-supply at least 12% of our own electricity needs.

Underperformance or outperformance payment

This performance commitment is reputational only.

What's coming up in the future?

Extreme weather events such as droughts, floods and warm summers can impact on our electricity use. At the turn of the financial year into 2020/2021 we have again experienced unusually dry weather. Therefore, to secure resilient water supplies we have been using higher than usual levels of energy as we increased levels of water pumping. We are monitoring this closely to optimise our approach throughout the year.

We are currently part way through a project to install a large AD plant at Huddersfield treatment works. Once complete, this will allow us to reach the milestone where virtually all our sewage sludge is used to produce green energy. We are also developing plans to install approximately 30mW of solar panels across a number of our sites.

We are investing in energy efficiency projects as well as renewables. For example, the replacement of old pumps with more energy-efficient new ones can reduce energy consumption, operational costs and carbon emissions. We expect the energy efficiency investments we made in 2019/2020 to save approximately 1.7gWh of energy and 700 tonnes CO₂e of emissions each year.

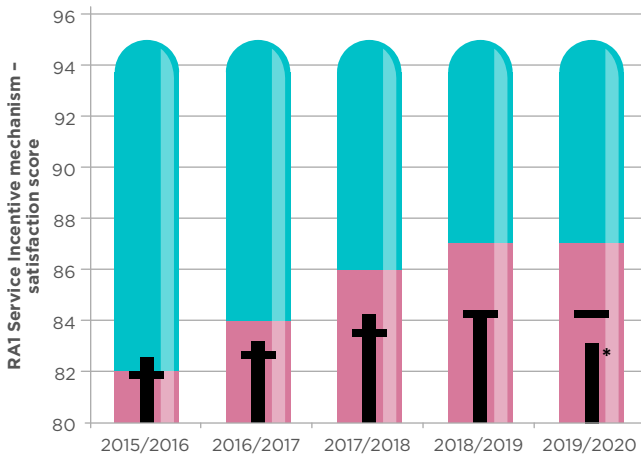
Looking beyond electricity, we also use other fuels in our operations. We are escalating our focus on all these energy sources to help us further reduce our costs and carbon emissions. This focus is supported by the new Streamlined Energy and Carbon Reporting (SECR) Regulations.

Customer Outcome: We provide the level of customer service you expect and value

There are three performance commitments under this outcome.

Quality of customer service (SIM)	
Measure	Service Incentive Mechanism (SIM) score - qualitative
Unit	Number out of 100
Definition	The level of customer concern with company service and how well the company deals with them. The Ofwat measure of customer service satisfaction - SIM.
Target	Improve on last years performance (>83.4)
Period	Financial year
Incentive	Reputational and financial incentive. Penalty/Reward is calculated annually.

Performance graph – higher is better



See page 61 of this report for an explanation of what this graph shows and the key. *SIM measure is being replaced. The forecast performance for 2019/2020 is based on a proxy calculation.

Performance data table

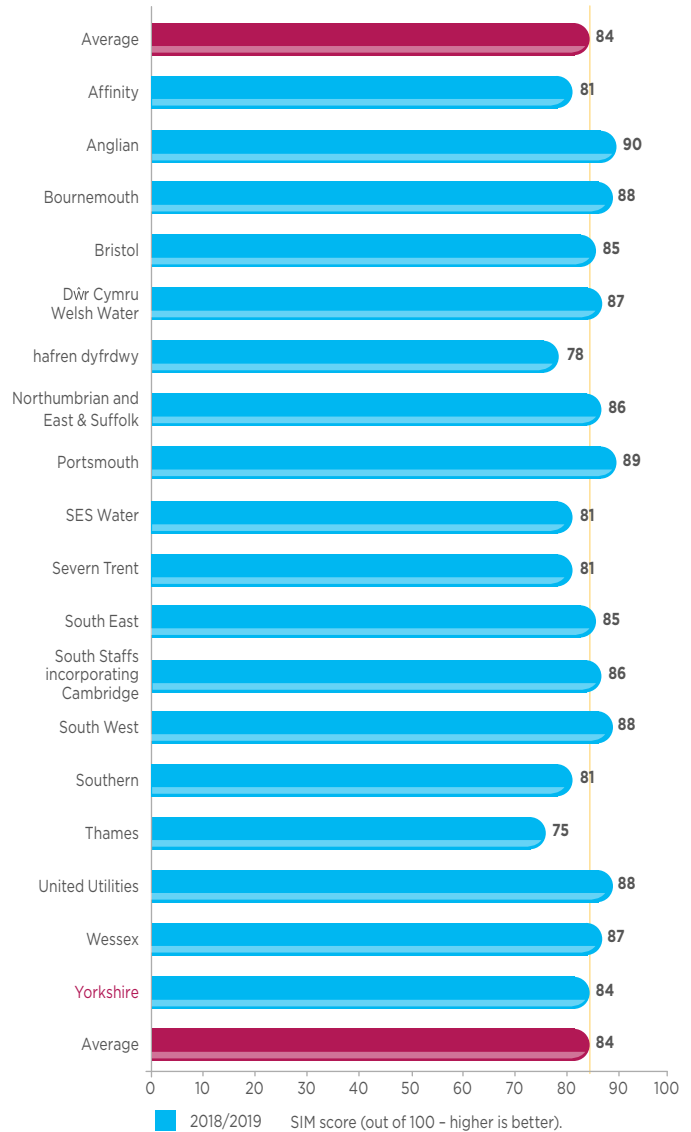
Performance Commitment	Units	2015	2016	2017	2018	2019
Quality of customer service (SIM)	Score	82.6	83.4	84.3	84.0	83.2

Outcome delivery incentives table – reputational only

	2015	2016	2017	2018	2019
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 83.2

Target: Not achieved, score needed to be greater than 84.0



How did we compare with other water companies?

Ofwat measures the customer service that water companies provide using a measure called SIM. It is scored out of 100 and a higher score is better. The chart above, taken from the Discover Water website compares our SIM score against other water companies for 2018/2019. This year we have had a slight reduction in our performance from 84.0 to 83.2. When we compare this with all companies for last year, we can see that we have achieved average company performance. We expect to do better for our customers to drive up the standards again in future years through faster resolution of issues.

Source: Discover water – discoverwater.co.uk/customer-experience-rating

Performance summary

The Service Incentive Mechanism (SIM), has been the water industry regulatory measure of customer service since 2010, reporting a score out of a maximum 100 points through an independent assessment of each UK water company. The overall SIM Score is based on qualitative (75%) and quantitative (25%) elements. The qualitative score is produced from surveys carried out with customers who have had contact with us within a defined period. The quantitative element has historically looked at the number of written complaints received, and at what stage of the complaints procedure they were as well as unwanted telephone contacts. These elements are combined to give an overall SIM Score out of 100.

Ofwat is replacing the SIM with a metric called the Customer Measure of Experience (C-MeX), from 2020 onwards and have trialled this in 2019/2020. C-MeX is a mechanism to incentivise water companies to provide an excellent customer experience for residential customers, across both the retail and wholesale parts of the value chain. In these shadow C-MeX surveys we have seen an improvement in overall performance compared to the SIM, ranking sixth out of 17. In the SIM, our average score for the four years from 2015/2016 to 2018/2019 was 83.51, which left us 11th in the rankings.

Due to the shadow trial of C-MeX in 2019/2020, SIM was not calculated as in previous years and the information was not fully available. In order to provide a comparative score to SIM, Ofwat has provided a proxy calculation. The qualitative element is taken from the C-MeX customer service survey and the quantitative from the number of written complaints only. The methodology and satisfaction scales in the survey do not match, but give an indication of performance in customer experience. The quantitative element of the measure is very different and no longer includes unwanted telephone calls. Direct comparisons are not therefore reliable.

The score by this proxy method was 83.2 which is lower than the SIM measurement of 84.0 in 2018/2019. This indicates the performance commitment was not achieved based on this calculation. This year we saw an increase in waste complaints and lower than expected satisfaction scores.

We have seen an increase in escalated written complaints across all areas of the business and a rise in first stage wastewater complaints, with an increase of around 75% from last year. On a positive note the number of billing first stage complaints has continued to reduce and there has been a slight reduction in water related complaints.

In addition to this, there have been several significant rainfall and storm occurrences, which placed additional pressure on our sewer networks which became overwhelmed and inundated with water. We know that these rainfall events caused repeat instances of flooding for some customers who are in an area where it's known the sewers are overloaded, which caused further dissatisfaction.

On a positive note, we have seen improvements in our time to respond and resolve customer issues in March within our operational teams despite the challenges faced with the current Covid-19 situation.

Underperformance or outperformance payment

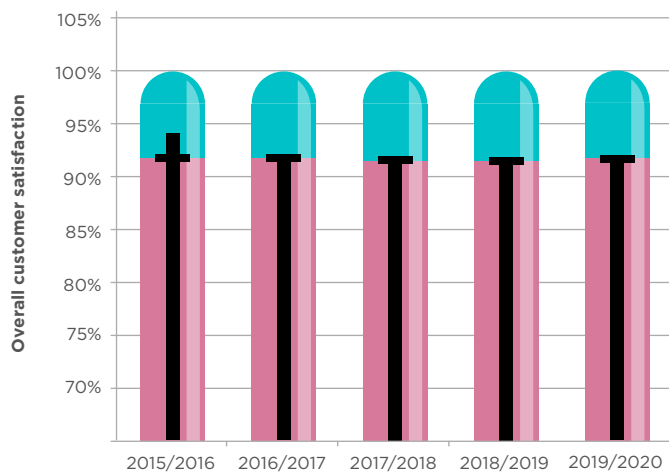
This is a financial incentive but the incentive mechanism is calculated differently to our other outcome delivery incentive performance commitments. The level of outperformance or underperformance payment is related to performance against the industry. More information on this is provided in the commentary in [Section 8](#).

What's coming up in the future?

Ofwat is replacing the SIM with C-MeX and this has been trialled throughout 2019/2020. It is pleasing to see that our comparative ranking in C-MeX is showing an improvement. Our focus in 2019/2020 has been to develop a customer experience strategy fit for the future needs of our customers. The good results in the C-MeX shadow surveys gives us confidence we are set up to improve.

Overall customer satisfaction	
Measure	Overall customer satisfaction
Unit	Percentage
Definition	The reported value for overall customer satisfaction determined by the Annual CCWater Tracking Survey.
Target	Average of 2015-2020 performance to be better than average of 2010-2015 performance. Reported annually, performance commitment to be assessed at Year 5.
Period	April to March
Incentive	Reputational incentive

Performance graph – higher is better



Please note this chart shows an average for both the clean water and wastewater results. See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Customer satisfaction for water	Percentage	95%	93%	94%	95%	94%
Customer satisfaction for wastewater	Percentage	92%	91%	89%	88%	90%
Combined	Percentage	93.50%	92.00%	91.50%	91.50%	92.00%

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

**Result: 94% water
90% wastewater**

Target: Achieved target. The average of 2015-2020 performance was better than average of 2010-2015 performance

Performance summary

Our customer service is also measured by the Consumer Council for Water (CCWater), through an independent survey of customer satisfaction. The perception survey is carried out with a representative sample of households in England and Wales for their views and experience of their water, wastewater services and related charges. A variety of questions are asked, and we use four of them as a measure of customer satisfaction. The standard is 200 interviews per year, but we boost the sample to obtain 400 interviews.

The target for this performance commitment is for the average of 2015-2020 (AMP6) performance to be better than average of 2010-2015 (AMP5) performance. The average performance in AMP5 was 92%. Our average performance in AMP6 was 92.1%. We therefore met our regulatory commitment. The result for 2019/2020 is 94% for water and 90% for wastewater.

Underperformance or outperformance payment

This performance commitment is reputational only.

What’s coming up in the future?

We know that customer expectations are growing, and this has also been recognised by the regulator who has changed the way we measure our customer experience, increasing the level of assessment to a much broader experience survey. The past few months have seen extensive development work to build a new customer experience strategy, which has considered a broad range of insight and feedback, both from internal colleagues and customers within Yorkshire Water and external broader customer experience insight in the UK. It also seeks to address the challenges faced by Yorkshire Water both through the delivery of regulatory plans and the external societal and environmental pressures in Yorkshire. Through this work, customers have told us that they need an experience that does more than simply meet their needs and that they need companies like us to be creative, resourceful and sustainable. We need to focus on building longer term relationships with our customers to enable an experience that they really value.

The new strategy challenges Yorkshire Water to grow a Customer Experience organisational mindset to think customer across every part of our operation, linking a focus on customer to achieving our performance outcomes as a business. The new strategic intent is to be one of Yorkshire’s most customer valued organisations, generating high customer satisfaction through brilliant people and achieving greater productivity and effectiveness as a result. The strategy comprises three key focus areas: firstly, breaking away from industry stereotypes to create a stronger community focus; secondly, applying our understanding of customer lifecycle and need states; and finally, recognising and influencing customer emotion.

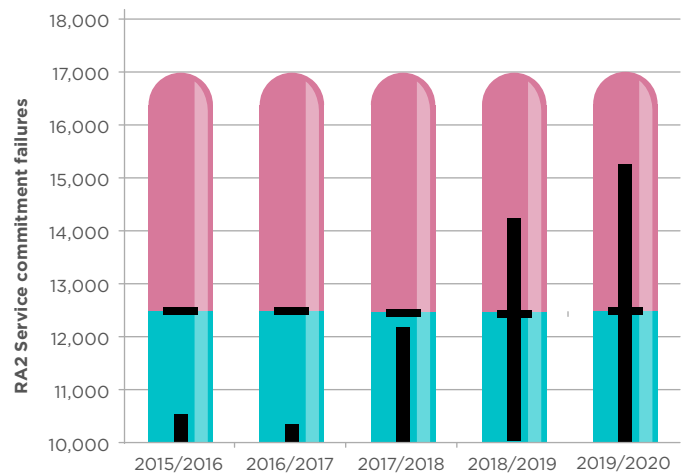
The implementation of the strategy has been split into five key delivery streams:

- Super easy customer focused journeys and experiences
- Insight, processes and systems built around colleague and customer emotion
- Customer quick fix solutions
- Creating a people first experience
- Brilliant Customer Engagement driving customer focus with partners and regulators.

The first key activity is the launch of the new customer promise in May 2020, after which the implementation plan will commence and progress driven and measured appropriately. A broader five-year capability map has been produced to ensure regular review against meeting the objectives of the strategy and close working with relevant areas.

Service commitment failures	
Measure	Number of service commitment failures
Unit	Number
Definition	The total number of GSS (Guaranteed Standards of Service) events, including enhanced GSS events. Excludes company customer charter events/payments.
Target	Average of 2015-2020 performance to be less than the average of the last 3 years of 2010-2015. Reported annually, performance commitment to be assessed at year 5.
Period	Financial year
Incentive	Reputational incentive

Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015	2016	2017	2018	2019
Service commitment failures	Number	10,567	10,356	12,203	14,221	15,140

Outcome delivery incentives table – reputational only


	2015	2016	2017	2018	2019
ODI (£m)	N/A	N/A	N/A	N/A	N/A

Result: 15,140

Target: Achieved our target for average of 2015-2020 performance (12,497) to be less than the average of the last 3 years of 2010-2015 (12,552)

Performance summary

This performance commitment is the total number of Guaranteed Standards of Service (GSS) events, including enhanced GSS events, each year.



Guaranteed Standards of Service (GSS)
 GSS is the statutory minimum level a company must provide, enhanced is where a company has chosen to enhance the minimum level either by responding quicker or paying more if there is a failure.

Whether an event is a failure is based on the GSS regulations, listed below are the elements included. We have also noted whether it is just GSS or whether there is enhanced GSS (GSS criteria shown in brackets).

- Appointments not made properly (GSS only)
- Appointments not kept (GSS only)
- Incidences of low water pressure (GSS only)
- Incorrect notice of planned interruptions to supply (GSS only)
- Supply not restored (GSS)
- Written account queries and requests to change payment arrangements not actioned on time (GSS and EGSS)
- Written complaints not actioned on time (GSS and EGSS)
- Properties sewer flooded internally (GSS)
- Properties materially affected sewer flooded externally (GSS).

We are disappointed to report that the number of service commitment failures continues to increase. The number of service commitment failures has increased this year from 14,221 to 15,140. Although water supply interruptions have reduced, there has been an increase in sewer flooding and failures to keep appointments.

Our performance commitment has been achieved based on the average number in this AMP (12,497) being less than the last three years of 2010-2015 (12,552).

There are three areas that have impacted the higher outturn than expected this year:

- written complaints
- failed appointments
- external sewer flooding.

Written complaints are higher due to an increase in late responses to developer services complaints. External sewer flooding events are higher because during the period, business process change has been embedded to allow full reporting against the definitions for the next five years of reporting.

Underperformance or outperformance payment

This performance commitment is reputational only.

What's coming up in the future which might affect performance?

This will not be a performance commitment in AMP7 but GSS regulations will remain and we will continue to review how we improve our performance in this area.

Customer Outcome: We keep your bills as low as possible

There are three performance commitments under this outcome.

Number of people who we help to pay their bill	
Measure	Number of people who we help to pay their bill
Unit	Number
Definition	Number of customers who are assisted to pay their bill. This includes, but is not limited to, Water Sure, Resolve and the Community Trust, plus the number of those who take up a water meter as a result of targeted advice following identification of an affordability issue (customers should not be double counted).
Period	April to March
Target	Reported annually, performance commitment to be assessed at Year 5. Average of 2015-2020 performance to be less than average of 2010-2015 performance. Aim to increase the number of people who are helped.
Incentive	Reputational incentive

Performance summary

We know that affordability is a key concern in Yorkshire. Domestic customers cannot choose their water company, so it is essential that we provide our services as efficiently as possible so that our customers get value for money and feel that our bill is affordable.

In response to Covid-19, we have taken a number of measures to ensure that customers who are in debt are supported throughout this time. Since the middle of March 2020, we have suspended all debt recovery action for customers financially impacted by Covid-19, providing time for them to understand the impact for them. In place of our letter communication to these customers we have implemented new correspondence which provides additional information about the suite of financial support options Yorkshire Water has in place. These include, but are not limited to:

1. Payment matching schemes to help customers out of debt
2. Social tariffs which cap customers' bills at a reduced amount
3. A charitable trust which provides debt write-offs for customers with multiple debts.

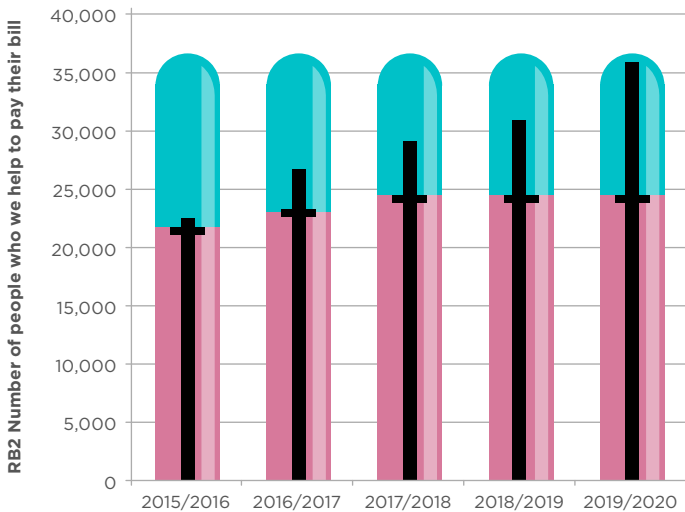
In addition to these ongoing measures, we have also introduced payment holidays for customers impacted by Covid-19, which allow customers up to three months without making payments on their account. This provides the breathing space which may be required during a time of financial uncertainty for many of our customers who are struggling to pay their bill.

The price of our bills has always been, and remains, a top priority for our customers. Our average household bill is below the national average at £392 in 2019/2020.

Our affordability strategy is a simple one, we:

- Keep bills affordable for customers and free them from worry.
- Innovate to deliver services efficiently.
- Deepen our understanding of customers' needs, allowing us to anticipate them.
- Prevent customers from falling into debt by knowing their individual circumstances.
- Deliver prompt and meaningful support when it is needed.
- Where debt occurs, help get customers back on their feet as quickly as we can.

Performance graph – higher is better



See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table

Performance Commitment	Units	2015	2016	2017	2018	2019
Number of people who we help to pay their bill	Number	22,735	26,902	28,853	31,606	35,939

Result: 35,939

Target: Achieved target

We offer financial help through a broad range of support schemes such as WaterSure and WaterSupport, as well as FreshStart, Resolve, Community Trust, and Debt Settlements for those customers in debt with their water bill. In addition to the performance commitment measures, for customers in debt, we may support by offering a water meter or special payment arrangement, if this would benefit them financially. For customers in debt, where appropriate, we would also signpost customers to external agencies for debt advice and support.

We have further increased the number of customers we help through our support packages, up from nearly 32,000 customers in 2018/2019 to 35,939 in 2019/2020. By 2025 we aim to increase this number to 83,000. To support this ambition, we will provide £14.5m funded directly from the company through our Community Trust and WaterSupport social tariff.

Overview of performance to date

The number of customers supported has increased on a yearly basis throughout the period. This year's performance has seen an increase of over 4,000 customers on the year before and is 13,000 higher than the number supported five years ago.

This year's performance has exceeded the target by around 12,000 customers.

The year-on-year increase throughout the AMP has been in both the number of schemes available, as well as the number of customers benefiting from those schemes.

Of all the schemes, WaterSupport, a social tariff aimed at customers with low incomes, has the largest number of customers, at around 19,000, for 2019/2020, and account for 52% of the total customers helped.

The debt management schemes, although grown in numbers, is not reflective of the demand as there is a finite amount of financial investment available for these schemes – this recognises our priority for also keeping all customer's bills affordable.

The continuing increase in customers supported has confirmed that there is a need for financial support across our customer base. Customer research illustrates that the gap in customers who require support and the level of engagement stems from a lack of awareness of the support available. This is supported by our regular customer satisfaction tracker where we monitor how many customers are aware of the support we provide. In response to this ongoing customer insight, there is increased focus on promotional activity, particularly through wider engagement with external organisations who are able to reach customers who may need our support the most.

The over-performance seen in the final year of the AMP was delivered by design in response to customer need and in AMP7 readiness. With significant growth planned to continue throughout the coming AMP we want to make sure we were maximising our reach in 2019/2020.

Underperformance or outperformance payment

This is a reputational measure with no financial incentive.

What's coming up in the future?

This measure of performance continues into AMP7 and we have a target to help 83,000 customers by the end of the AMP.

There has been recognition that water meters are financially beneficial to a wide number of customers. As such, rather than just customers who are in debt with Yorkshire Water being reported as benefiting from this option, increased transparency of water meter costs to all customers with affordability needs has been built into the future performance commitment.

Bad debt	
Measure	Cost of bad debt to customers expressed as proportion of bill.
Unit	Percentage
Definition	The cost to bill paying customers to cover the cost of interest on revenue that is not collected, debt written off and debt management costs, expressed as a percentage of the average annual bill. This includes the collection and revenue activities for managing the debt.
Period	Financial year
Target	Annual target maintained at 3.16%
Incentive	Reputational incentive

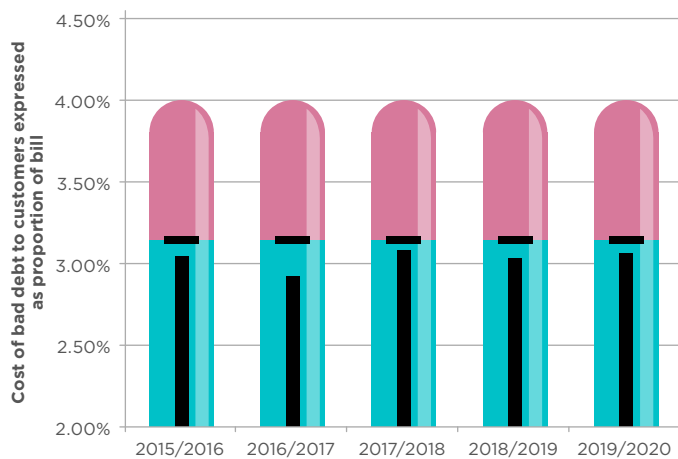
Performance summary

Non-recovery of customer debt threatens profitability in the short term and may increase bills for paying customers in the medium to long term. The Ofwat Price Review process incorporates an allowance in prices for the cost of debt considered to be irrecoverable. To help minimise this cost we operate a range of schemes designed to help customers who genuinely struggle to pay their bill, while having strong processes in place for overall debt collection. One of our performance commitments is to make sure the cost to customers of our bad debt is kept at no more than 3.16% of the average bill. In the year we have maintained our leading approach to debt management, this cost being 3.06% of the average bill in 2019/2020.

Overview of performance to date

Year	Performance	Target	Commitment met
2015/2016	3.05%	3.16%	Target met ✓
2016/2017	2.94%	3.16%	Target met ✓
2017/2018	3.10%	3.16%	Target met ✓
2018/2019	3.02%	3.16%	Target met ✓
2019/2020	3.06%	3.16%	Target met ✓

Performance graph – lower is better



See page 61 of this report for an explanation of what this graph shows and the key.

This performance commitment has remained consistently below target over each year of the AMP. This has been done through utilising data to make effective decisions when tackling customers in arrears. Credit reference agency data is used to make effective litigation decisions resulting in a reduction in claims issued and therefore less court fees added to customer arrears. With increased vulnerability identification through these data sources, we have been able to utilise data to better support customers who are in a vulnerable position and maintain our cash collection performance.

Performance data table

Performance Commitment	Units	2015	2016	2017	2018	2019
Bad debt	Percentage	3.05%	2.94%	3.10%	3.02%	3.06%

Underperformance or outperformance payment

This is a reputational measure with no financial incentive.

Outcome delivery incentives table – reputational only

	2015	2016	2017	2018	2019
ODI (£m)	N/A	N/A	N/A	N/A	N/A

What's coming up in the future?

This measure of performance continues into AMP7. We are monitoring the impact of Covid-19 and the subsequent economic impact on our customers. We continue to offer support to customers to prevent them falling into arrears. A provision of £5.7m has been made to account for these costs.

Result: 3.06%

Target: Achieved target of 3.16% or less

Value for money	
Measure	Value for money
Unit	Percentage
Definition	The reported value for Value for money determined by the Annual CCWater Tracking Survey.
Period	April to March
Target	Average of 2015-2020 performance to be better than the average of 2010-2015 performance. Reported annually, performance commitment to be assessed at Year 5.
Incentive	Reputational incentive

Performance summary

Each year, the Consumer Council for Water (CCWater), survey water customers about perceived value for money. Latest results show that 79% of customers agreed our water service was “value for money”, and 80% for our wastewater service. We are pleased to have achieved our performance commitment to improve average satisfaction scores this AMP compared to the last one, for both water and wastewater services. As last year, our scores are above the industry average.

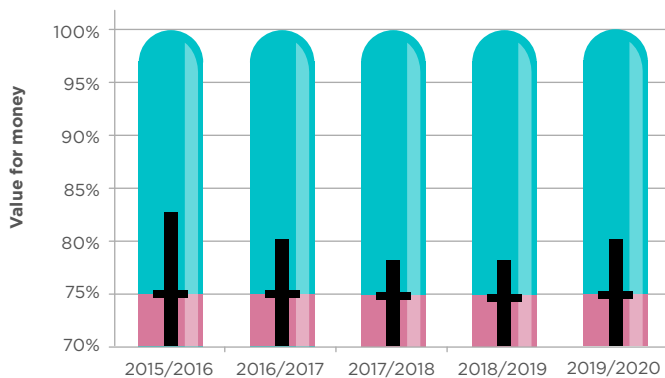
Underperformance or outperformance payment

This is a reputational measure with no financial incentive.

What’s coming up in the future?

This measure of performance continues into AMP7.

Performance graph – higher is better



Please note this chart shows an average for both the clean water and wastewater results. See page 61 of this report for an explanation of what this graph shows and the key.

Performance data table – please note table shows an average for both the clean water and wastewater results.

Performance Commitment	Units	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Value for money	Percentage	82.50%	80.50%	77.50%	78.00%	79.50%

Outcome delivery incentives table – reputational only

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
ODI (£m)	N/A	N/A	N/A	N/A	N/A

**Result: 79% water
80% wastewater**

Target: Achieved target to be better than average this period (79.6%) compared to the last three years of AMP5 (75%)

5. Our process to provide information you can trust

In this section

01.

We start off section 5 with an explanation of where our Annual Performance Report sits in our cycle of publications.

02.

In this section we explain what assurance is and how we make sure that we apply the correct amount of assurance to each piece of information that we publish within this annual performance report (APR). We talk through our process to make sure our assurance is effective.

03.

We then give a summary of the assurance plan we put in place to check and review the information within this APR to make sure it is accurate.

04.

We then provide you with a summary of our targeted areas of assurance. Our targeted areas are those that are important to you or are considered a higher risk and require more assurance. We identified these targeted areas through our risks, strengths and weaknesses process. This part of our report provides a summary of why they are targeted areas, the assurance we have completed over the year and our key assurance findings.

05.

Finally, we provide a summary of our APR audit findings. External independent assurance is applied to the data that is in this APR. Deloitte carry out an audit on our financial information. Jacobs carry out audits on our performance commitments and supporting information as well as other information within the report.

The assurance framework


We want you to be able to have confidence in what we do, and we want you to be able to trust the information we publish. To meet this objective, we follow an assurance framework starting with our Risks, Strengths and Weaknesses Statement publication, where we consult with our customers and stakeholders to understand what they need us to focus on in the year. We call these our ‘targeted areas’.

We finish the assurance framework with our APR, where we explain the assurance we have carried out on the ‘targeted areas’ over the year.


On the following pages, we explain the stages of the assurance framework.

<p>Prescribed Water companies are placed in this category when they have not met the reporting requirements that customers and stakeholders expect.</p>	<p>Targeted Water companies are placed in this category when they have not consistently met the reporting requirements that customers and stakeholders expect.</p>	<p>Self-assurance Water companies are placed in this category when they consistently meet the reporting requirements and demonstrate leading edge behaviour.</p>
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We will continue to challenge ourselves to make sure that the information we publish can be trusted by our customers so that we meet our aspiration to achieve the self-assurance status in the next CMF assessment. You can read about the improvement steps we have taken towards achieving self-assurance status in [Section 6](#).



Definition
Ofwat
The Office of Water Services, which is the economic regulator of water services in England and Wales.



Additional information:
What is the Company Monitoring Framework (CMF)?
Our regulator Ofwat, has introduced a process for assessing the quality of the information we provide for our customers and stakeholders. It assesses whether the information is accurate, transparent, timely and tailored to its audience. This is called the CMF. Ofwat completes a CMF assessment annually and places companies into one of three assurance categories: self-assurance; targeted; or prescribed. Each year, water companies can move up from ‘targeted’ status to ‘self-assurance’, or from ‘prescribed’ to ‘targeted’ status. However, they cannot move up two categories in one year, for example, from ‘prescribed’ to ‘self-assurance’. They can also move down.

Assurance framework stages



Assurance at Yorkshire Water

The aim of our assurance is to make sure you can trust the information we publish.



What is assurance?

Assurance is a process we use to make sure you can trust the information we provide to you.

The assurance process is to review the ways we work and our information to make sure that our publications are accurate, accessible and easy to understand.



How does it work?

We have assurance teams to ask questions and challenge the information so that we can rely on it.

This assurance plan shows you how we check and review our information to make sure that what we publish is correct and meets everyone's needs.



Why does assurance matter?

It is important that you can be sure of the quality of the information we publish, so that you can be confident in us and how well we are doing in delivering the promises we made to you.

Our assurance process

We want our customers to trust that the information we publish is accurate, accessible and easy to understand. It is important to us that we get it right for our customers. Our Board is accountable for the quality of our information and we want to make sure it meets your needs.

We apply assurance to the data within the APR and to the overall APR publication. We have data assurance processes in place to ensure that the data contained within the APR is accurate. We have a wider assurance process in place to make sure that the overall APR publication meets regulatory guidance and also that it is transparent, accessible, easy to read and relevant for you.

Our annual performance reporting process is certified to the Quality Management System standard ISO9001:2015.

We follow a methodical process to make sure that our data and publications are assured adequately. This is a summary of our process.

Planning

We review the guidance available to understand what is required within this APR and to review what our customers, regulators and other interested parties want from the APR. We put a plan in place to make sure we can deliver what is required and to deliver this by the publication deadline.

Risk assessing

We review the likelihood of the information being incorrect and what impact this could have on our customers, on meeting our regulatory requirements and on how we conduct our business activities at Yorkshire Water.

Developing and completing our assurance

Using our risk assessment, we make sure that the right level of checks take place, at the right time by the right people. We use our three levels of assurance methodology and implement it, considering the level of risk that has been identified. We also externally assure our APR.

Approval and publication

We present the outcomes of our assurance to our Board Audit Committee who then report to our Board. The Board is accountable for the quality of the information that we publish. It owns and approves the information within our APR. If the Board is satisfied that processes have been followed and any findings from assurance have been appropriately actioned, it will give approval for publication.

Review

We look back over the assurance process and make improvements. We gather feedback from customers and other interested parties and we also review what could have gone better. This helps us put together our risks, strengths and weaknesses statement.

Planning

The requirements we will fulfil

It is a requirement of our licence to report information to our customers and Ofwat (and other regulators/ external bodies as required), and to confirm compliance with obligations.

We want our reports and published information to be accurate, transparent, easy to read and compliant with the requirements.

Our wider assurance processes are the considerations we make when publishing our data for you. We do this to make sure that the publications will adhere to our regulatory requirements and contain information you want and trust. We use this process when planning and reviewing our publication information.

Our Regulatory Compliance and Assurance Team are responsible for making sure that the wider assurance process is followed, that we abide by our assurance principles and that our publications meet the requirements and are published within the right timescales.

We carry out the following processes to ensure that we plan our publications and the assurance on our publications adequately.

Horizon scanning

Throughout the year our Regulatory Strategy Team identify the topics that are important in the water industry and across the UK. We care about the future economic, social and environmental issues that Yorkshire faces as a region. We are proactive when we see something coming up that may affect our customers, or the ways we will be required to work. It helps us to understand the information that you might want to see in our publications.

Regulatory guidance

Our Regulatory Compliance and Assurance Team analyse and interpret the regulations and guidance that are set by our regulator Ofwat. They support teams to make sure what they do complies with these. Our Data Providers, Data Managers and assurance teams review our documents and processes to make sure that we meet our obligations. They make sure our customers understand these requirements too. This means our customers can read our publications objectively and with better understanding.

Stakeholder engagement

We believe our customers and stakeholders should be involved in improving how we provide information in our publications. We consult with our customers and stakeholders regularly and often. This helps us to understand what gives you confidence in our publications. We describe how we do this in our risks, strengths and weaknesses statement.

These activities are considered when we plan and review our publications.

Risk assessing

Our risk-based approach

Not all data is the same. We recognise that we need to give you greater trust in the areas that have a bigger risk or are important to you. We call this our risk-based approach.

Our assurance approach uses a method called 'three levels of assurance'. We make sure we apply these levels of assurance proportionately to the level of risk of error associated with the information we publish, or with the publication itself. Before we apply the three levels of assurance to our documents and information, we assess the risk associated with the data we are providing you.

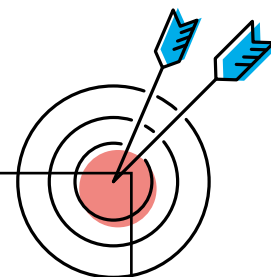
To develop our plan, we risk assess the information that goes into the reports and decide how much assurance to apply.

When we assess risk, we look at the likelihood that something will go wrong and how big the effect will be if it does. For our reports, the risk is the possibility that our documents will contain incorrect information. If that happens it will have a negative effect on the quality of the information in our reports and our customers may not trust us.

Managing risk is important to us. Our information is checked to make sure it is accurate and meets your needs. This will happen whether the information is considered higher risk or not. The higher risk information will just have more assurance overall.

Each year we publish our risks, strengths and weaknesses statement which lets you know what risks we have highlighted. You can read the statement here.

yorkshirewater.com/reports

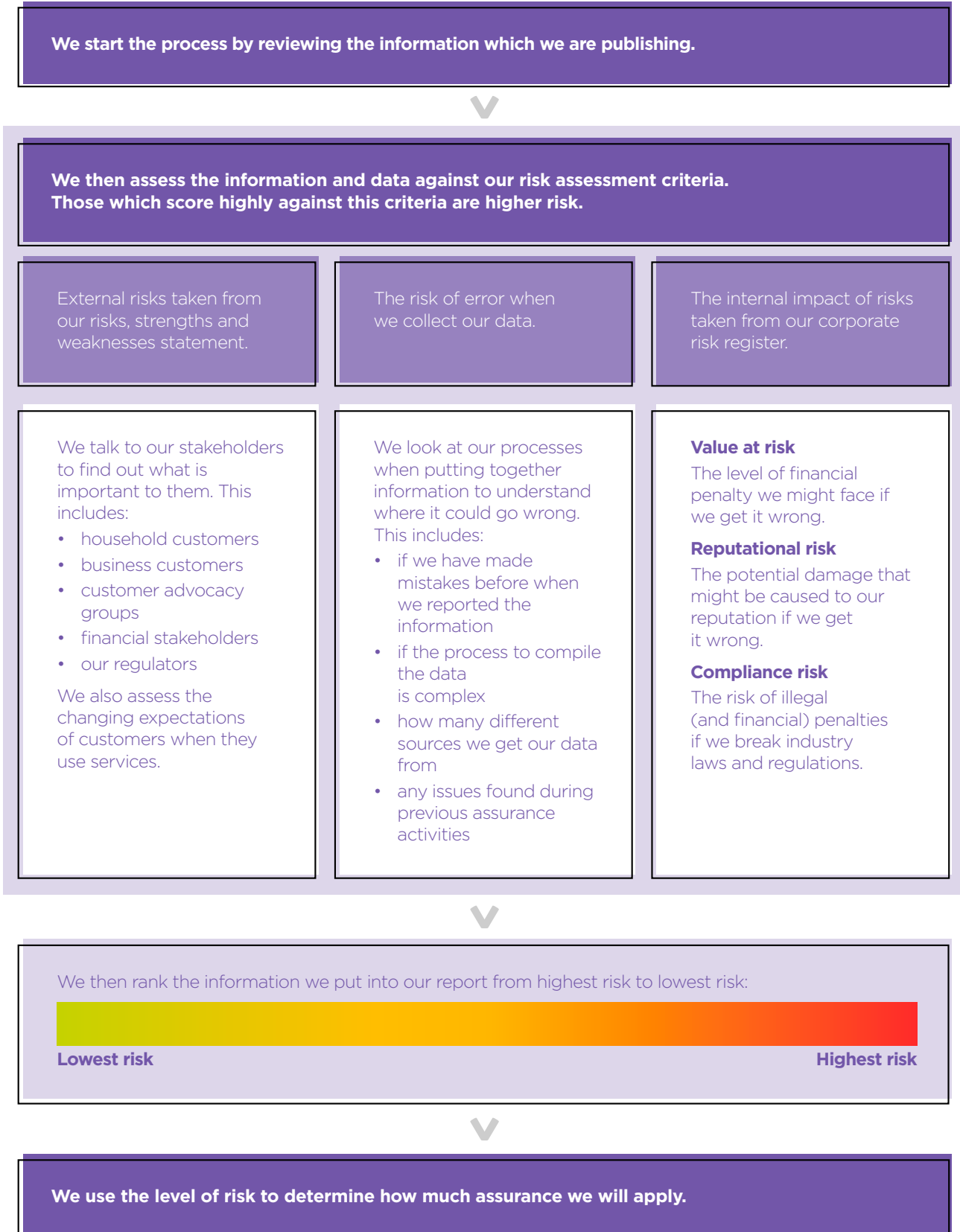


The areas where we apply more assurance

- Where our assurance processes have identified areas for improvements.
- Where we forecast that we will not meet our commitments or where we did not meet them in the previous year.
- Areas where we gather lots of data, sometimes from several sources, to put together the information we publish.
- Where there is change inside or outside the organisation.
- Where there are financial rewards or penalties involved. (Ofwat call this outperformance and underperformance).
- Where there have been changes or additions to what we are required to report.

Our risk assessment approach

We carry out a risk assessment on the information we publish to determine what amount of assurance we will apply to it. Our approach is illustrated below:



Developing and completing our assurance

Our three levels of assurance

We use a ‘three levels of assurance’ way of working so that you can trust the data we put in our report. We call this our methodology. This methodology gives us consistency across our Annual Performance Report as some of our data comes from several sources.

By putting our assurance activities into three levels, we make sure that we apply the right amount of assurance, at the right time. A description of the levels of assurance applied to our Annual Performance Report data is provided in the diagram below:



Approval and publication

Accountability of our data

The findings from the assurance that has taken place is presented to the Board Audit Committee. Our external auditors report their findings directly to the Board Audit Committee. This makes sure that the assurance carried out is independent and our Board Audit Committee get an accurate view of what the findings are. It reviews any action that is being taken in relation to findings to make sure that the data we provide is accurate.

The Board Audit Committee scrutinise the information presented and ask our senior managers and those responsible for providing the data any questions it may have. This ensures that the Board Audit Committee has a full understanding of whether the processes in place have been followed, why any findings have arisen from the audits and assurance reviews and the action being taken to address these findings. It then reports this information to the Board.

The Board is accountable for the quality of the information that we publish in our reports. It owns and approves the information within our reports. To make sure that it is satisfied with the information, the Board seek confirmation from the Board Assurance Committee that the planned assurance processes have been followed and that appropriate action has been taken on any findings identified. If the Board are satisfied, it will give approval for publication and will sign a Board Assurance Statement. If a publication does not need full Board approval, this process will still take place with the appropriate Director reviewing and approving the publication on behalf of the Board.

Our reports are then published on our website and made accessible to our customers and other interested parties.

Review

Continuous improvement review

When our information has been published, we review the processes that we have followed. We identify where we could make improvements to the process and put together a plan to implement these improvements across the business.

We review our assurance findings and improve the processes to put together and validate the data we put in our publications.

We engage with our customers and other interested parties to make sure that they understand our publications and they believe that the publications are relevant and transparent.

We review all the findings from our review and put in place improvement plans to continuously improve the way in which we provide information. This information feeds into our risks, strengths and weaknesses statement and then our assurance plan. Progress on the improvements we make is reported through the annual performance report and the data assurance summary,

We also update the plan for our next publications, completing our continuous improvement cycle.

Our assurance plan for the Annual Performance Report

We assure the data that goes into our APR and the supporting information that is provided to explain our data. Jacobs and Deloitte provide independent external assurance on the Annual Performance Report.

This year, due to the impact of COVID-19, we have had to change the way in which we conduct our external audits to enable them to take place effectively, whilst keeping our employees safe and adhering to government advice. In line with this, we have conducted our external audits remotely using remote meeting software. We risk-assessed this method and ensured there were adequate contingencies in place for any identified risks. We are confident that the audits were effective and adequate to continue to appropriately assure the information within the APR.

The table below summarises the assurance plan for each section of our APR.

Section of the APR	Content	Assurance plan
Regulatory financial reporting	This contains our financial statements, including our profit and loss statements, cash flow, income statement and net debt. The tables are reconciled to the Yorkshire Water Statutory accounts. The information is provided in Tables 1A to 1F.	<p>Level 1: Accountants monitor and manage costs and finances within our business throughout the year. When gathering information for our APR, named data providers and data managers from within these teams are responsible for providing accurate data and supporting information which adheres to regulatory guidelines.</p> <p>Level 2: Managers oversee the accountants' activities and put in place checks to make sure the information is correct. They review and track the information monthly. For our APR we allocate responsibility to named senior managers and directors to review the information and do further checks to make sure that the data is correct. Our Regulatory and Compliance Team also ensure that the data provided is in line with regulations and other requirements.</p> <p>Level 3: Deloitte is appointed as our external independent financial auditors. Every year Deloitte review the preparation of our accounts against the regulatory accounting guidelines and complete a cross reference to our statutory accounts.</p>
Price review and other segmental reporting	This contains further detail on our revenue and costs, to allow you to review the company's performance against final determinations. Revenue and costs are split between the price controls and revenue is split further down by customer type. The information is provided in Tables 2A to 2J.	<p>Level 1: We have named data providers and data managers who are responsible for providing accurate information in line with any guidance provided.</p> <p>Level 2: We have named senior managers and directors who review the information provided and undertake reconciliation activities. The publication manager ensures that information is provided in line with requirements.</p> <p>Level 3: Deloitte is appointed as our external independent financial auditors. Every year Deloitte review the preparation of our accounts against the regulatory accounting guidelines and complete a cross reference to our statutory accounts. Jacobs also provide assurance of the non-financial information in this section. Throughout the year our internal audit team have also applied assurance in this area, including a review of tariff modelling, developer services and connection charges and wholesale billing and collection.</p>

Section of the APR	Content	Assurance plan
Performance summary	This contains information on our performance against the performance commitments and whether any financial incentives have been incurred in the year. The information is provided in Tables 3A to 3D.	<p>Level 1: The Board monitors performance against our commitments on a monthly basis. For the publication, we have named data providers and data managers who are responsible for providing accurate information in line with any guidance provided.</p> <p>Level 2: Throughout the year, we have management oversight of the performance reporting activities. For the publication, we have named senior managers and directors who review and approve the information provided. The regulatory assurance and compliance team ensures that information is provided in line with requirements.</p> <p>Level 3: External independent assurance is provided by Jacobs. They assure the procedure in place to produce the data and assure the data provided to make sure the commentary and information provided reflects the data provided. They assure the delivery of our performance commitments and confirm that the data presented in the APR is accurate. Extra scrutiny is provided on a number of our performance commitments, as per our risk-based approach. Throughout the year, internal audit has also completed reviews including reviews on our wastewater treatment works in relation to odour, our sludge and energy generation, water treatment and water quality and leakage.</p>
Additional regulatory tables	This section provides additional information including accounting policies, totex (total operating expenditure) analysis and financial metrics. This information is presented in Tables 4A to 4W with cost assessment information within Tables 4J to 4W.	<p>Level 1: We have named data providers and data managers who are responsible for providing accurate information in line with any guidance provided.</p> <p>Level 2: We have named senior managers and directors who review and approve the information provided. The publication manager ensures that information is provided in line with requirements.</p> <p>Level 3: Deloitte and Jacobs review the accuracy of the data which we are presenting within our APR. Internal audit have also completed reviews of billing and debt recovery in our household and wholesale operations.</p>
Risk & Compliance Statement	An annual statement from the Board confirming compliance with the relevant statutory, licence and regulatory obligations for the provision of services to its customers.	<p>Level 1: Our Head of Internal Audit confirms within the statement that we are compliant with our regulatory obligations, meet our licence requirements and have adequate processes in place to manage our risks effectively.</p> <p>Level 2: Our Regulatory Compliance and Assurance Team make sure that the information contained within the statement is accurate and meets the reporting guidelines. Throughout the year, we have processes in place to monitor and review compliance with our relevant obligations. We have named senior managers and directors who review and approve the statement.</p> <p>Level 3: Throughout the year, our internal audit team has undertaken comprehensive reviews and audits of our process and the declarations within this statement including a review of our operational risk management and our control and risk self-assessment process.</p>

Targeted assurance findings

We identify these areas as part of our risks, strengths and weaknesses exercise. As part of this we consult with our customers to understand what is important to them. These targeted areas contribute to the completion of our APR and make the information we provide to you accurate.

These are our targeted areas:

Performance commitments where we missed our target in the previous year.

We put extra assurance around calculating and reporting our performance against our targets. This is because some of our performance commitments are associated with financial rewards or penalties. Where we are forecasting a financial penalty, we want to make sure that we are transparent with our customers about our plans.

Performance commitments where we have received queries from Ofwat.

When Ofwat review our APR they can send us queries and ask us to clarify information surrounding the data we have provided. We want to continually reduce the number of queries that we receive to show that we are providing all relevant information and being transparent with our data.

Effect of our internal SAP programme on our reported information.

We have updated SAP, which is one of our internal reporting systems. The processes to implement some elements of these improvements are still ongoing. We have completed extra assurance to confirm the accuracy of the data we are providing through this system.

We applied targeted assurance to areas that we identified as being important to you or being higher risk. We applied more assurance to these targeted areas so you can trust that our information is correct.

New connection charging arrangements publication.

Ofwat and other interested parties told us to improve in this area. We were assessed on this document as part of the Company Monitoring Framework in January 2019. Ofwat advised us of concerns they had with the new connection charging arrangements publication and we have applied more assurance to our 2020-2021 publication.

Regulatory information section of our Annual Performance Report.

Through internal assessment and upon receiving queries from Ofwat we identified errors within our reporting. The regulatory information section of our APR provides information summarising around 6,000 pieces of data across several data tables which we have a regulatory requirement to provide. We have applied added assurance to make sure that this is comprehensive and accurate.

Improving accessibility and awareness.

When we completed our risks, strengths and weaknesses statement our customers highlighted to us areas in which we could improve the accessibility and awareness of our publications. We applied extra assurance to make sure that our customers had access to our information and it is presented in a transparent way which is easy to understand.

Charging arrangements for new connections.

As part of our ongoing assurance over our data, we identified that our new connections quoting tool for 2019-2020 contained errors. These errors led to the issue of some inaccurate quotes. We put together a plan to review and provide enhanced assurance to make sure our quotation tool was accurate going forward.

This table provides a summary of why the targeted area has been included.

Targeted area	Comments	Target missed or forecast to be missed in 2019/2020 (at November 2019)	There have been internal or external changes that affect how we report	High priority area	Errors have been identified with improvements required
Performance commitment: Drinking water quality.	This continues to be a targeted area. This has been a targeted area over the last 4 years due to our failure to meet our target.	✓			
Performance commitment: Drinking water quality contacts	This continues to be a targeted area. This has been a targeted area over the last 4 years due to our failure to meet our target.	✓			
Performance commitment: Category 1 and 2 pollution incidents	We have missed our AMP6 target for this performance commitment.	✓			
Performance commitment: Measure of Customer Service (SIM)	We have missed our AMP6 target for this performance commitment.	✓			
Performance commitments where we have received queries from Ofwat	We received queries from Ofwat to clarify information within our APR or errors have been highlighted.				✓
Effect of our internal SAP programme on our reported information	We are continuing to target this area as we are still upgrading our SAP system. The accuracy and completeness of the information from our IT systems is central to the overall accuracy of the information we report.		✓		

Targeted area	Comments	Target missed or forecast to be missed in 2019/2020 (at November 2019)	There have been internal or external changes that affect how we report	High priority area	Errors have been identified with improvements required
New connection charging arrangements publication	This is a targeted area as concerns were raised about the information within this publication.				✓
Regulatory information section of our Annual Performance Report	We identified internally that there were errors in this information. Ofwat also highlighted this in their query process.				✓
Improving accessibility and awareness	We are targeting this area as we want to continue to strengthen the trust our customers have by improving our transparency.			✓	
Charging arrangements for new connections	Our internal assurance checks identified errors in the processes for our charging arrangements.				✓

Targeted area 1. Performance commitments where we missed our target in the previous year

It is important that our customers trust the information we provide for all our performance commitments. This means that we report transparently where we are not hitting these targets and explain our performance to our customers. We understand that if we do not do this, we risk losing the trust of our customers.

As we are now at the end of our five-year business plan (AMP6), this is the last time we will report on the performance commitments as they have been defined in this plan. This year we will report if we have achieved our AMP6 performance commitments or not.

The performance commitments that we have not achieved in our final year of AMP6 are:

- Drinking water quality
- Drinking water quality contacts
- Serious pollution incidents
- Measure of customer service (SIM).

The following performance commitments were targeted areas throughout this year, however we have made improvements and have achieved our performance commitment target.

- Energy generation
- Leakage.

What we said we would do and the assurance we said we would carry out

We said we would regularly monitor and review our performance against our performance commitments. This is to make sure that the information we report is accurate and transparent.

We review our performance commitments at our Board Investment Committee (BIC). BIC review the impact of missing our targets and set action plans to make improvements based on the data that is presented.

We will publish a performance summary report alongside our APR and publish information in formats suitable for our customers and other interested parties.

An update on our progress and key findings

Our data providers have monitored and reported on our performance against our commitments throughout the year. They have highlighted where we are off track, putting in place rectification plans and have reforecast our outcomes to show how we expect to perform.

Our Delivery Assurance Groups (DAGs) have reviewed and challenged our monthly reports. They have analysed the information and set new and revised targets to improve our performance.

Our DAGs have reported to our Board Investment Committee (BIC) this year. Our BIC also review our outcome delivery incentives, which are the penalties and rewards associated with the performance commitments. It reviews these for our internal business planning and year-end reporting to be able to provide accurate forecasting. The BIC scrutinise our performance and, if required, approve funding for improvements and monitor performance closely.

We make sure that the information about our performance commitments is accessible and transparent. We want to make sure it is clear to our customers how we are performing and the reasons behind this.

What we said we would do and the assurance we said we would carry out

An update on our progress and key findings

We will check the processes that we use to collect data from our corporate systems for our performance commitments.

Our new Integrated Assurance Framework includes an assurance map, which is presented to our Board Audit Committee (BAC). The assurance map allows our data providers and managers to score the amount of assurance in their area of the business against the most recent findings and risk of something going wrong. This gives us a confidence level for each area. More support is given to areas that are higher risk and which may affect the accuracy of the data that is reported. Our internal assurance teams work together to complete compliance reviews and audits to check that processes are compliant and produce accurate information. The BAC challenge and monitor the confidence levels to ensure we make improvements.

Our assurance process will continue to work with the Yorkshire Forum for Water Customers (the Forum) which challenges our performance, when our targets are missed.

We work with the Forum and give them information about our performance commitments. Throughout the year, we present information to the Forum which enables them to challenge the ways we are working. We presented information to them about our final position against our performance commitments and our APR in June 2020.

The minutes of our meetings with the Forum can be found here. yorkshirewater.com/yorkshire-forum-for-water-customers

Jacobs, our technical auditor, will perform a detailed review of these performance commitments for the 2019/2020 APR.

Jacobs have carried out an audit of our reported performance against our performance commitments. They have assured our reporting and checked that we have adhered to our regulatory requirements. You can read the findings from the assurance within [Appendix 2](#) of this report.

Next steps and action plan

We conduct a review after each cycle of assurance to make sure that we have considered all actions and lessons learnt. We will report our performance against our new performance commitments quarterly in 2020/2021. You can read about how we are preparing for our new commitments in [Section 4](#) of this document.

We have committed to analysing the data and the processes behind our data to make sure our reporting is accurate. This will provide transparency to our customers on our performance throughout the year. We look to publish our first quarterly performance report in September 2020.

Targeted area 2. Performance commitments where we have received queries from Ofwat

We received queries from Ofwat on some of our performance commitments. Some of these were errors and some were where we could have provided more information to explain our performance commitment sub-measures in our Annual Performance Report (APR).

We want to reduce our queries and make sure that the information that we report is clear and without errors.

What we said we would do and the assurance we said we would carry out

An update on our progress and key findings

We are implementing our integrated assurance framework to strengthen the assurance around our data.

We analysed the queries that we received and fed them into our integrated assurance group so the assurance providers from these business areas have targeted the processes behind this data.

We will make sure that the commentary around our data is clear and that we provide more information about the calculation of our sub-measures and we will undertake regular peer reviews to make sure that there is consistency in the data we provide.

We have hired a Regulatory Reporting Manager and a Regulatory Assurance Manager. These roles coordinate the collection and assurance of the data within the APR. Our data providers have submitted procedure documents and assurance statements for review. Our Regulatory Reporting Manager has reviewed the processes to make sure that data providers collected their data in line with requirements and reviewed what that data is telling us. Our Regulatory Assurance Manager reviewed the assurance statements to give us confidence in the data provided. They ensured that the commentary was clear, aligned to previous years reporting and any exceptions were explained fully to be able to give clear commentary to Ofwat and our customers.

We will develop our assurance principles across the business.

We have utilised the Integrated Assurance Group to develop our assurance principles across the business and strengthen the skills and knowledge of our level 1 and level 2 assurance providers. Through workshops and knowledge sharing we are making sure our assurance is robust.

We will review the queries that we have received to make sure that we continue to improve our data and commentary.

We conducted a review at the end of our APR process and have focused on the areas where errors have been highlighted. We conducted root cause analysis workshops and improved the processes and assurance around areas with queries or errors. We will monitor these areas throughout the year and request live commentary throughout 2020-2021 as part of our quarterly reporting process.

Next steps and action plan

We will continue to review areas where we have received queries from Ofwat to improve the way in which we collate and validate the data we publish. We will ensure that our commentary explains our data clearly and continue to improve, taking into consideration any feedback we receive. We will update you on our progress in our 2020/2021 Assurance Plan.

Targeted area 3. Effect of our internal SAP programme on our reported information

In 2018/2019 we upgraded our SAP IT system. SAP is enterprise software which is used to manage business operations and customer relations. We are targeting this area because the accuracy and completeness of the information from our IT systems is central to the overall accuracy of the information we report.

Our assurance will focus more on making sure the information we report on is accurate during the first year of reporting from our new SAP system.

What we said we would do and the assurance we said we would carry out

We will continue to assure the operation of our SAP system with User Acceptance Testing, training and dual reporting.

We will monitor any issues raised by our data providers.

An update on our progress and key findings

The progress of the upgrade is reviewed weekly at a programme steering group. Our Internal Audit team and audit partners PwC assure the programme. A list of actions is reviewed weekly at a Steering Group meeting. These actions are monitored to make sure they are complete. The SAP programme is ongoing and is being delivered and tested in phases.

Whilst collating data for the APR and other internal reports, our data providers make us aware of any issues. Where it has been identified that SAP has caused issues or delays, our Regulatory Assurance Manager completes a risk assessment on the area to help implement plans for continuous improvements in the SAP system. These improvements bring down the risk of errors in our reports.

We will continue to engage with our SAP Quality Management team to monitor improvements and check with our data providers to reassess the risks to our reporting.

Next steps and action plan

We will continue to monitor the effects of the SAP system on our reporting. We will work with SAP users and data managers to identify issues and understand the risks to reporting. We will continue to put in place processes to support our data providers in providing accurate data that our customers can have confidence in.

Targeted area 4. New connection charging arrangements publication

We were assessed as part of the Ofwat Company Monitoring Framework in January 2019 and serious concerns were raised with our New Connections Charges Arrangements publication.

It is important to us that the information that we publish is accurate and transparent and we have now made improvements to this publication using our targeted assurance process.

What we said we would do and the assurance we said we would carry out

We said we would apply additional checks before sending the charges to publishers.

An update on our progress and key findings

We had to make some corrections to the developer charges we had published for building water, mains connections and section 106 charges. Our Regulatory Change Manager has supported the data providers to review the processes to produce and calculate the charging information in this publication.

Draft documents had more assurance applied to them, with peer reviews and workshops taking place to ensure accuracy.

A secondary review of the charges publication was completed by the D-Mex Readiness Project Manager who was independent of the team involved in the process to produce the publication.

The publication was signed off by the Regulatory Strategy Manager and Manager of Developer Services before publication.

Next steps and action plan

The targeted assurance was completed by January 2020 and the charging arrangements were published on our website. There have been no errors found in our 2020/2021 charges since its publication. We will continue to monitor the process to produce future charges publications.

Targeted area 5. Regulatory information section of our Annual Performance Report

Through our own internal assessment and Ofwat’s query process we identified some errors in our reporting. The regulatory information section of our Annual Performance Report (APR) provides information summarising about 6,000 pieces of data presented in various tables and is required as part of our regulatory reporting guidance.

We have applied more assurance to make sure that the information is accurate and transparent.

What we said we would do and the assurance we said we would carry out

We are recruiting a Regulatory Assurance Manager into the Regulatory Compliance and Assurance team.

We will review the assurance that has taken place in our APR 2018/2019.

Next steps and action plan

We will continue to review the processes in place to gather the information for the APR to continue to improve our processes and the checks in place. We will update you on the outcome of our improvements in our APR 2020/2021.

An update on our progress and key findings

We have hired a Regulatory Assurance Manager and a Regulatory Reporting Manager. The Regulatory Assurance Manager reviews the assurance taking place over the APR and manages other regulatory reporting publications. They have responsibility for reviewing the data contained within the APR. They complete an updated risk assessment of the data to ensure appropriate assurance has been put in place to support the information published.

The Regulatory Reporting Manager coordinates the collation of the information that goes into the APR. They ensure the written information that supports the data is aligned and transparent and explains the data we have reported.

We have reviewed the assurance that was in place for the APR 2018/2019 and the procedures that accompanied them. We are now implementing new procedures to put together the information in our 2019/2020 APR with our Regulatory Assurance Manager and Regulatory Reporting Manager. Through this work they will improve the processes and checks in place ready for our APR 2020/2021.

We have reviewed our processes for external assurance and are implementing a new Regulatory External Assurance Framework to strengthen and consolidate the external assurance taking place over our publications. This includes using a wider range of external auditors, giving us access to a larger resource pool and expertise in different areas.

Targeted area 6. Improving accessibility and awareness

Through our risks, strengths and weaknesses exercise, we identified a weakness around the accessibility and awareness of our publications. We are targeting this area because we want to continue to be transparent and remove any weaknesses in our reporting.

Our customers also told us that our performance webpage had lots of information, but the amount of text could be reduced. They told us we needed to find the right balance of text to visual images on our performance and reports webpage.

What we said we would do and the assurance we said we would carry out

We will conduct analysis with our customers and other interested parties.

We will explore different options for accessibility and we will continue to monitor our website analytics.

An update on our progress and key findings

We have used our online research community made up of 1,000 Yorkshire Water customers from across our region to ask for feedback on the information we report.

We sent publications to an independent research company, for their feedback on how they look and the information in them. With the feedback we received, we updated the look and content of our publications to make them easier to read. We reengaged with our online research company to make sure that they approved of the changes we had made.

We test our website with our customers to make sure that it is easy to navigate and to find our published documents. The link to our reports is located on the front page of our website so it is clear to our customers where they can read about our performance. We have also improved our reports webpage, using larger tiles and a clearer design to help our customers find information that is important to them. This includes larger icons, clearer text and a logical layout. We also made sure that all reports could be found here.

We redesigned the section of our reports page which explains our performance by monitoring how our customers access our information. We continue to make improvements to our website using this information, looking at which areas of our website our customers access the most. Where our customers may not be able to locate our publications, we have made improvements to our reports page to help direct our customers to the information they want.

We have worked with our design agency to make sure that our reports are easy to navigate. The 'contents' and 'back' buttons mean you can return to previous pages and navigate our publications more easily.

What we said we would do and the assurance we said we would carry out

An update on our progress and key findings

We will explore requirements for external accreditations for website design.

We have worked with the Plain English Campaign who helped us make sure our publications are easy to read.

We also held plain English training sessions with our data providers and Regulatory Compliance Team. They are responsible for providing the information within our APR. This training helps them to write clearly and in a way our customers can understand.

We continue to work with the Plain English Campaign to gain their Crystal Mark on our documents. By giving our documents the Crystal Mark, they are confirming the document has been written in a way that is easy to understand.

We will continue to work with the Yorkshire Forum for Water Customers to make sure that the style, format and content of our reporting is tailored to the feedback we receive.

We consulted with the Forum and presented the feedback that our customers have given. They hold us accountable for acting in our customers' best interest and making improvements based on the feedback received.

We understand that our APR is a long document. Feedback suggested that a shorter document would be more engaging, although it would contain less information. Over the last year we have created summaries of some of our publications to enable us to get feedback and understand if our customers feel they are adequate.

Our customers told us that videos are more engaging and help them understand what is important to them. Last year we created an animated video explaining our performance and what this meant to our customers. We received positive feedback and we have created a similar up-to-date video for APR 2019/2020.

We send the Forum feedback from our customer consultations so they can act in the best interest of our customers and consider their needs.

We will use internal audit to review our publications through detailed proofreading exercises to make sure our reporting is accurate and can be understood. The findings will be applied in our reporting.

We have used our Internal Audit function to review our highest risk areas. Our Risk and Compliance Statement has been coordinated and reviewed by our Internal Audit function. They audit our risk management process which ensures the process is robust and we confidently give information about our risk management process. They audited some of our tables to ensure that the information within these financial tables was accurate at the end of this AMP.

We will publish our APR data tables in excel format to make our data more accessible.

Last year we published our data tables in excel format as part of our Open Data project. This makes sure we are transparent with our customers and they can scrutinise the information we are providing.

We have published our data tables in excel format alongside our APR 2019/2020.

Next steps and action plan

We will continue to work with the Forum and our customers to make sure that the information we publish is accessible and easy to understand. You can read more about our work with the Forum and our customers in [Section 6](#).

Targeted area 7. Charging arrangements for new connections

Whilst completing assurance checks in November 2019, we identified errors in our 2019-2020 quoting tool which is used to provide quotations to our new connections customers by our Developer Services Team.

These errors led to some inaccurate quotes being issued. It is important that our charges are correct and our customers can trust us so we targeted assurance on this area to rectify these errors.

What we said we would do and the assurance we said we would carry out

We said we would rectify any historic errors that this may have caused.

We applied extra assurance to the rectified quotation model.

Next steps and action plan

The issue has been resolved and all refunds related to inaccurate quotes issued in 2019/2020 have been paid to affected customers. We have updated our procedures for 2020/2021 and all additional assurance measures have been implemented.

An update on our progress and key findings

We have contacted all impacted customers and have approached Ofwat with our findings and proposed remedies for the incorrect charging of our customers.

Customers who have been overcharged will receive a refund.

We conducted extra checks and put extra sign-off steps into the procedures we have in place to update the model. We worked with our data teams to make sure our processes did not create errors.

If a request is made to update the model, this goes through extra approval stages and change control processes.

Before a new version of our quoting tool is released it is reviewed and signed off by senior managers in our Developer Services and Customer Experience teams.

Annual Performance Assurance Findings

Summary of the financial audit findings

We prepare our regulatory accounts in accordance with the Regulatory Accounting Guidelines issued by Ofwat. We have instructed Deloitte to carry out the audit of our regulatory accounts and the financial information in the APR. [Appendix 1](#) contains the audit opinion from Deloitte, which covers:

The regulatory financial reporting tables comprising:

- the income statement (table 1A),
- the statement of comprehensive income (table 1B),
- the statement of financial position (table 1C),
- the statement of cash flows (table 1D) and
- the net debt analysis (table 1E) and
- the related notes; and

The regulatory price review and other segmental reporting tables comprising:

- the segmental income statement (table 2A),
- the totex analysis for wholesale water and wastewater (table 2B),
- the operating cost analysis for retail (table 2C),
- the historical cost analysis of fixed assets for wholesale and retail (table 2D),
- the analysis of capital contributions and land sales for wholesale (table 2E),
- the household water revenues by customer type (table 2F),
- the non-household water revenues by customer type (table 2G),
- the non-household wastewater revenues by customer type (table 2H),
- the revenue analysis & wholesale control reconciliation (table 2I),
- the infrastructure network reinforcement costs (table 2J),
- the related notes.

The findings from the financial auditor's review were presented to the Board Audit Committee on 8 July 2020.

Findings from their review and their audit opinion is included in [Appendix 1](#) of this APR. Deloitte also provide assurance over Table 1F and some of the tables in [Section 4](#). This is completed by agreed upon procedures.

Summary of the technical audit findings

We prepared all other data within the APR in line with the definitions of our performance commitments and in accordance with any relevant guidance from Ofwat. We instructed Jacobs to carry out the audits of our performance commitments and supporting information as well as other non-financial information contained within the APR.

Jacobs also provided assurance over the infrastructure charges reconciliation (table 2K).

Overall, Jacobs have confirmed that the information provided in the Annual Performance Report 2020 provides a fair, balanced and understandable summary of the Company's 2019/2020 circumstances and performance. Jacobs raised 44 comments as a result of their assurance reviews. Of these:

- 9 were raised as being without concern
- 30 are observations where there were opportunities to make improvements in the future but Jacobs were content with the reported information
- 5 observations where there was concern over the requirement for minor future amendments to procedures
- 0 observations where there was evidence of material error or mis-statement.

The areas for improvement have been put into an action plan with identified action owners. Progress against the completion of these actions will be reviewed by senior management and reviewed by Jacobs at future audits.

The findings from the technical auditor's review were presented to the Board Audit Committee on 8 July 2020.

Findings from their review and their assurance statement is included in [Appendix 2](#) of this APR.

6. Our engagement with our customers and stakeholders

In this section

01.

We start section 6 with an introduction to Ofwat's Company Monitoring Framework (CMF) and the steps we have taken to improve how we provide information to our customers.

02.

We then explain how we involve our customers in producing our Annual Performance Report and include the results of our consultation.

03.

Finally, we explain how we engage with our stakeholders including the Yorkshire Forum for Water Customers.



Securing stakeholder trust

We always want to provide customers with information that they are able to trust.

It is important to us that we provide performance information that our customers and stakeholders want and, in a format, which suits them. When we don't get this right, we risk losing trust and confidence. We have assurance processes in place to make sure that the information we publish is accurate and can be trusted.

Ofwat, our economic regulator, introduced a process in 2015 for assessing the quality of the information we provide for our customers and stakeholders. It assesses whether the information provided is accurate, reliable, transparent, timely and tailored to its audience. It is a tool to challenge all companies to be transparent with customers and stakeholders about the data they publish. This is called the Company Monitoring Framework (CMF).

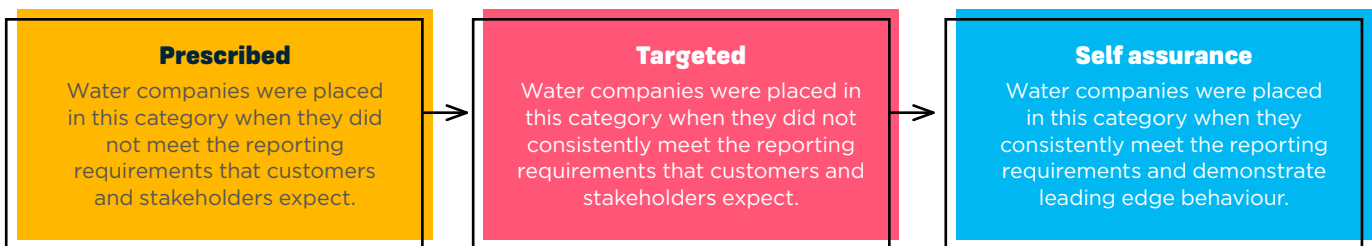
Ofwat completes a CMF assessment annually and places companies into one of three assurance categories: self-assurance; targeted; or prescribed. Each year, water companies can move up or down one category. For example, companies can move up from targeted to self-assurance, or up from prescribed to targeted assurance. Companies cannot move up two categories in one year, for example, from prescribed to self-assurance.

The most recent CMF assessment was in January 2019. Ofwat will not publish further CMF assessments but will continue to scrutinise and challenge our approach to data quality and assurance of our performance reporting. Ofwat is evolving its approach to performance monitoring to make sure that it's able to assess our performance in the round therefore we will continue to strive for high quality performance reporting and transparency.

You can read more about Ofwat's update on information quality and assurance here on its publications webpage: ofwat.gov.uk/publications

Although Ofwat hasn't published a formal CMF assessment since January 2019, it has continued to assess the quality of our information. For our 2018/2019 Annual Performance Report, we are pleased to say that Ofwat didn't find any significant concerns with our reporting.

We will continue to publish our usual performance and assurance reports throughout the year starting with the engagement on our risks, strengths and weaknesses statement in the autumn.



Prescribed

Water companies were placed in this category when they did not meet the reporting requirements that customers and stakeholders expect.

Targeted

Water companies were placed in this category when they did not consistently meet the reporting requirements that customers and stakeholders expect.

Self assurance

Water companies were placed in this category when they consistently meet the reporting requirements and demonstrate leading edge behaviour.

Improvements we have been working on

We sought feedback from our customers and the Yorkshire Forum for Water Customers on the presentation and coverage of our performance reporting. On this page we go through a few of the things we have done this year to improve how we present information on our performance to meet the expectations of our customers and our customer challenge group.

Website redesign

Last year we redesigned the 'Our Performance - How we're doing' webpage by understanding the journey our customers take when viewing our performance information. We have continued to make improvements to this website. Click here to see our redesigned performance webpage: yorkshirewater.com/our-performance/

This year we have also redesigned our reports webpage. The webpage has a fresh new look and now includes larger buttons for the links to our reports. We have also moved our PR14 reconciliation reports to this webpage to bring our regulatory reports to one place.

Animations

We recognise that our reports are quite long, and our customers have told us that videos can be a good way for us to present information. Last year, we created an animation explaining the progress we had made on delivering our performance commitments. We received great feedback from our customers on this animation and so we have updated it for 2020.

The video can be viewed on our reports webpage: yorkshirewater.com/reports

Crystal Mark

We have continued to work with the Plain English Campaign to make sure our publications are easy to read.

This year we have received a Crystal Mark for three of our publications:

- Summary of our Risks, Strengths and Weaknesses Statement
- Our Performance at a Glance.

Short summaries of our reports

Our customers and the Yorkshire Forum for Water Customers have told us that some of our reports are too long and they would welcome shorter versions of our reports.

This year we have produced the following summaries:

- Final Assurance Plan Summary
- Summary of our Risks, Strengths & Weaknesses Statement
- Our Performance at a Glance
- Performance Summary.

Better navigation in our reports

We have worked with our design agency to improve navigating our APR onscreen and we have added the following functionality:

- Arrow buttons on each page so you can click forward to the next page or click backwards to the previous page.
- A contents button to return to the contents page.
- A back button to return to the last page you visited.

Transparently reporting our total impact

We are introducing a new form of annual sustainability report to share more information on Yorkshire Water's value to the society it serves. Our new report applies the Six Capitals approach that we have been working on over recent years to help us enhance resilience and sustainability by informing risk management, decision-making and investment choices. Later in 2020 we will be publishing the latest methodology and findings in a new Our Contribution To Yorkshire report. This will be available at yorkshirewater.com/capitals where you can already find further information on our work in this area.

Engaging with our customers

We want to make sure that information on our performance is appropriate for our customers and stakeholders.

We look to continually improve how we publish this information and regularly consult with our customers on our performance reporting. This helps us understand what is important to our customers and whether the information published in the reports is clear, understandable and relevant.

Our online community, existing of over 600 customers from across the Yorkshire region, has played a key role in helping us to improve our performance reporting over the past four years. The online community allows us to continuously test and tailor our service aspirations and communications, making sure that customers are at the heart of what we do.

We consulted on the following documents with our customers:

- Annual Performance Report
- Performance Summary
- Our Performance at a Glance.

We found that our documents do a good job of raising awareness of how much we do, the challenges that we face and were well received by most. Most customers appreciated and enjoyed reading the documents, being attracted to the pages with the most colour, icons and bite sized information but they also appreciated a level of detail was necessary to help them understand the content.

The most common issue customers had with the content of the documents was around providing some context for the figures – either against last year's figures or those from other water companies. These figures on their own can be difficult to interpret. Also, our customers would like to see us lead with information that directly impacts them, for example bills, customers service and water quality.

Overall statements:

- 8 of 10 customers said they were satisfied with each of the documents.
- The Performance summary received top marks for presentation, primarily because it was able to strike a good balance between level of detail, usages of icons vs. text and colour.
- The Our Performance at a Glance felt a little crowded for some, and could have used more colour coding and images to help customers read the information. However, it was applauded for having a bite sized amount of information and they appreciated Yorkshire Water's attempt at making the information more appealing to read. This section also had the highest relevancy and interest to customers.

Feedback on our Annual Performance Report

This Annual Performance Report (APR) has been developed to reflect customer feedback. To test this year's report, we presented draft sections of our APR to the online community, and asked for feedback on the content of the report. We asked the online community:

- To highlight areas of the APR they most understood and least understood
- To highlight the areas they found relevant
- To comment on the flow, language and the presentation
- Whether they trusted the information presented in the APR
- Whether there is a balance of text and infographics.

81% of customers who participated in this consultation told us that they liked the way Section 3 (Introduction to our performance) of the APR was presented and 83% agreed that the structure of Section 3 flows in a way that makes sense to them. 79% agreed that the balance between the graphics and text is right.

Overall statements

Majority of customers understood that some of the detail might appeal to some people more than others, but the biggest suggestion for improvement was to make it shorter overall and more concise.

Including prioritising the information that is most tangible to the customer for example, information on bills, customer service, and quality of water. Some did mention that some of the language could be improved. Adding a table of contents at the start of each section to enable smoother and quicker navigation and placing some of the figures in context.

The top favourite pages were those with diagrams, colour and icons as these were eye-catching and more likely to resonate with customers than just text.

Feedback on Our Performance Summary

We presented a draft version of the Performance Summary to our customers and asked them to focus their feedback on the content and presentation.

91% of customers who participated in this consultation told us that they liked the way the Performance Summary was presented and 87% agreed that the structure of the summary flows in a way that makes sense to them. 96% agreed that the language in the summary was easy to understand and digest.

We also asked our customers what they thought of our navigation features. 85% of customers found the Navigation Page useful to some extent. With some using it to navigate to a specific section that sounded interesting to them. They were able to hop back to a section easily if they needed to. The majority of people just read the document from start to finish so didn't need to use it. For some it didn't work which left them a little frustrated.

Overall statements

- The top favourite pages were those with colour and icons to help drive the point home.
- Customers appreciated the level of detail (most agree that you need a good amount of context and detail for a customer to understand), and they felt we struck this balance well.
- Although a few didn't feel it was short enough to be labelled a summary. Making a shorter version of the document was the most common call for improvement. This would also address the concern about printing such a long document but also satisfy the call for a printed version for those less tech savvy.
- Giving the figures from last year as a comparison would help give the customers some context.
- There was also a call to add in more colour and images, for example icons or photographs of Yorkshire to bring a bit of life.

Feedback on Our Performance at a Glance

We followed a very similar consultation approach for Our Performance at a Glance to our Performance Summary. We presented a draft version of the Our Performance at a Glance to our customers and asked them to focus their feedback on the information and presentation.

84% of customers who participated in this consultation agreed that the structure of the Our Performance at a Glance flows in a way that makes sense to them. 86% agreed that they trust the information provided in this document and 79% agreed that the language in this section is easy to understand and digest.

Overall statements

Overall, our customers had a positive impression of the layout/structure of the page, and the icons made the section easy to understand at a glance. However, some of our customers did struggle to understand what the figures meant when looking at it in a bit more detail, and what they were being compared to. The figures were hard to understand without any context.

Some customers wanted to understand how other water companies were doing and whether our performance is good or bad in comparison.

The sections that stood out the most for customers were around the environment, quality of the water, sewage/leaks and customer service.

How we could improve

Changes to the document revolve around the issues identified in their initial impression of what stood out:

- Giving context/scale to the figures. For example, comparison against previous years, against other water companies, in context of amounts that make sense such as number of swimming pools of water – this would give our customers the scale they need to understand our performance better.
- Some customers have asked us to consider cutting down on the information or spreading it across two pages.
- Colour code the sections to make them more distinctive.

Continuous and ongoing feedback

We welcome this feedback and have amended our reports to reflect the feedback we received. We will continue to engage with our customers on the format and content of our reports to make improvements for future years. We know there is more to do and so will continue to listen to you and act upon your feedback. We will publish a Risks, Strengths and Weaknesses Statement in Autumn 2020. This will provide information on the risks, strengths and weaknesses with our reporting and will provide information on the areas that we will target for additional assurance over the coming year.

Here are some verbatim comments from our customers

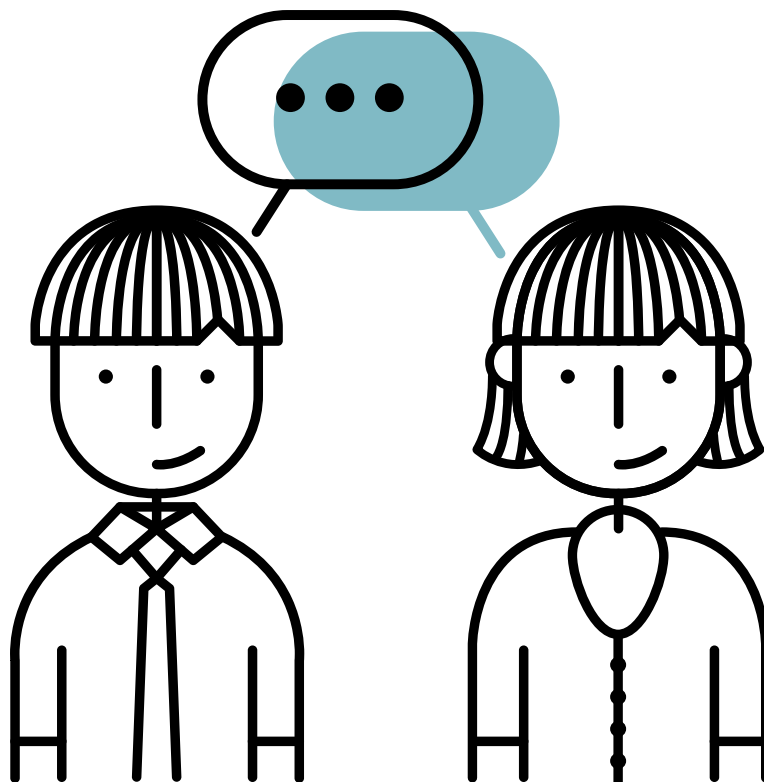
"All of the facts and figures and how they are responding to current issues and the environment. I found it all interesting and relevant to read."

"I would have liked to find out what your performance was against your target/previous year's performance/other water companies. I would particularly like to find out more about the commitments which are relevant to me as a customer; for instance call waiting times and customer satisfaction. I think the balance of text/infographics could be improved. The text gets a bit lost on these big pages with lots of white space."

"More detail and more visual aids, how many kettles of water wasted a day, how many showers leaked etc."
"Perhaps different colours to emphasise different sections."

"Anything with a diagram, because it was the only way I could make any sense of it!."

"I like the balance of text/graphics and the ordering of subjects. All most people care about is constant access to clean water, at a fair price, with decent pressure and a clean healthy environment."



Engaging our stakeholders

Yorkshire Forum for Water Customers

What is the Yorkshire Forum for Water Customers?

The Yorkshire Forum for Water Customers (the Forum) is an independent customer-challenge group. The Forum was established in 2012 and is made up of key groups in Yorkshire who collectively represent Yorkshire Water's customers.

The panel includes members from the Consumer Council for Water, Natural England, Citizens Advice, National Farmers Union and The Environment Agency.

You can find more information about the forum and its members here: yorkshirewater.com/yorkshire-forum-for-water-customers

You can also find the Forum's independent statement on our performance for 2019/2020 at the link above.

If you would like to contact the Forum about Yorkshire Water's performance or about the Forum, please email: theforum@yorkshirewater.co.uk

The Forum provides constructive challenge to the objectives and proposed delivery of Yorkshire Water's business plans. The Forum also monitor, challenge and comment on the progress we make on our performance commitments. They make sure that we present information on our performance commitments in a way which suits our customers' needs.

Reporting our performance to the Forum

We reported progress against the performance commitments to the Forum throughout 2019/2020. Our technical auditor, Jacobs, also attended a Forum meeting in June 2020 to provide their report on Yorkshire Water's performance and reporting. This allows the Forum to challenge and evaluate the level of performance achieved to make sure we are delivering for our customers and to understand the delivery plans for the coming year.

Feedback on our publications

The draft Performance Summary, Our Performance at a Glance and the Performance Animation were all shared with the Forum, allowing them an opportunity to review and provide feedback on the information being published.

We sought advice and direction from the Forum throughout 2019/2020 on how we report and present information on our performance commitments. You can read the meeting minutes here yorkshirewater.com/yorkshire-forum-for-water-customers

Our other stakeholders

As well as regularly meeting with our regulators, every year we also aim to meet with each of our local Members of Parliament, local authority leaders and Chief Executives, and a range of non-governmental organisations who have an interest in our work.

These meetings give us the opportunity to update stakeholders on what we're doing, and they also provide a forum for stakeholders to raise any concerns or questions they may have. As our work has such a significant impact on the region, we regularly share information on our performance both face to face during our regular meetings and by email through our stakeholder newsletter.

We aim to be open and transparent with stakeholders around our performance and we regularly ask them how we can improve the information we share with them. More information on our stakeholder engagement, including some case studies, can be found online at: yorkshirewater.com/news-media

We recognise the role of the media in contributing to stakeholder understanding of, and trust in, our business and services. We work with all strands of the media to raise awareness of our activities and respond to media interest. We track media coverage of our business activities and met our 2019/2020 target for at least 65% of coverage to be positive in nature.

7. Our governance

In this section

01.

We start off section 7 with an overview of our company structure and an introduction to our Board of Directors.

02.

We then explain how our Board considers that it has complied with all the principles of the UK Corporate Governance Code published in July 2018 throughout the year ended 31 March 2020, and list the exceptions.

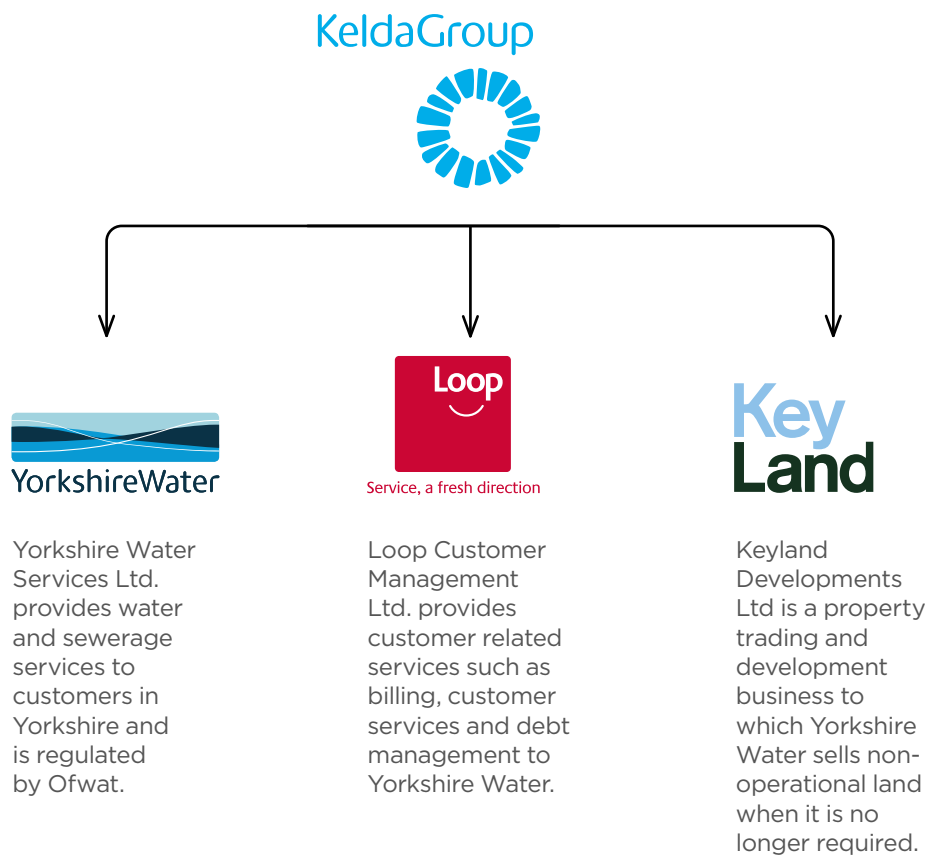
03.

Finally, we explain how we are meeting the Ofwat Board Leadership, Governance and Transparency Principles published in January 2019.

Our company structure

Yorkshire Water sits within the Kelda Group, which is privately owned. The Kelda Group is made up of several businesses and Kelda Holdings Limited (the top holding company) is owned by a group of investment companies. The diagram below shows a high-level structure of the group and the companies.

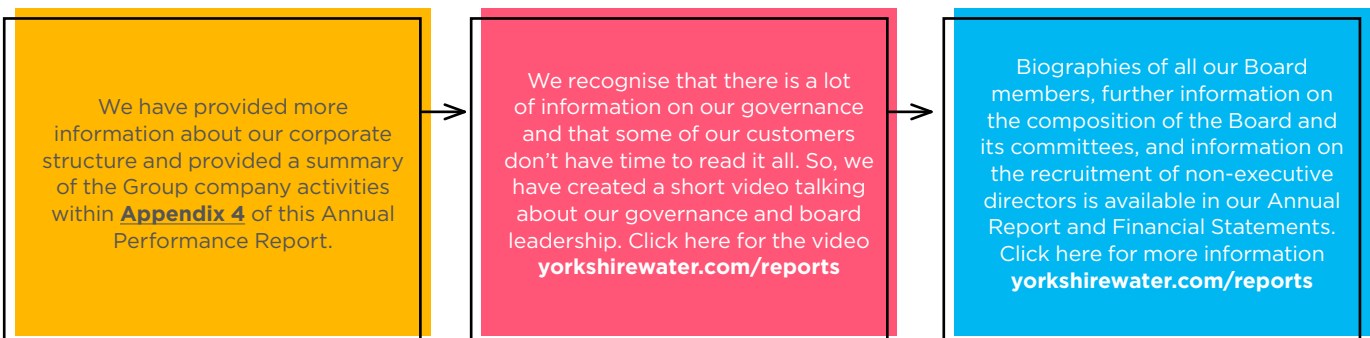
A more detailed diagram of the Kelda Group structure is available in our Annual Report and Financial Statements, on Kelda Group’s website and can be found in [Appendix 4](#): Disclosures of this report.



Yorkshire Water is the only company in this Group that is regulated by Ofwat. It holds the licence to provide water and sewerage services to our customers and the governance for Yorkshire Water is described within this report.

However, all the companies within the group share common values in relation to governance and directors may be on the Board of more than one company within the group.

Getting more information



Our Board of Directors

The primary focus for the Board is to lead the development and delivery of the company’s purpose, strategy and values needed to meet the service and performance expectations of our customers and stakeholders.


At 31 March 2020 our Board consists of an independent Non-Executive Chairman, two Executive Directors, four Independent Non-Executive Directors and three Investor Non-Executive Directors. On 1 June 2020 we appointed another Executive Director to the Board when Chris Johns joined our Board as Chief Financial Officer.

An executive director is a member of the Board who also has management responsibilities within the company. A non-executive director is a Board member who contributes their wider skills and experience to Board decision-making.

They do not typically engage in the day-to-day management of the organisation, but are involved in policy making, setting the company’s strategy, values and standards, making sure that the necessary financial and people resources are in place, and reviewing management performance. We are required to have a number of independent non-executive directors on our Board, which means that they are free of any links with us or our shareholders and are therefore unbiased when making decisions.


Our investor non-executive directors represent our larger shareholders. The composition of the Board at 31 March 2020 was as follows:

**Independent
Non-Executive Chairman**
Anthony Rabin




Independent Non-Executive Directors


Ray O’Toole




Dame Julia Unwin



Andrew Wyllie




Andrew Merrick




Executive Directors

Liz Barber,
Chief Executive



Nevil Muncaster,
Director of Asset Management



Investor Non-Executive Directors



Scott Auty



Andrew Dench



Michael Osborne

Compliance

The UK Corporate Governance Code

Yorkshire Water is a private limited company and does not have listed shares. However, up until July 2019 it had been a requirement of our Instrument of Appointment to report our compliance with the UK Corporate Governance Code. Whilst this requirement has now been replaced with a requirement to report our compliance with the new Ofwat Board Leadership, Governance and Transparency Principles, for part of the year the requirement was still in place and therefore for completeness we have reported below our compliance with the UK Corporate Governance Code.

The Board considers that it has complied with all the principles of the UK Corporate Governance Code published in July 2018 throughout the year ended 31 March 2020, with the exception of the following provisions:

- Provision 11 – this principle requires that at least half the Board, excluding the chairman, should be independent non-executive directors. We have not complied with this provision during the year due to the presence on our Board of three investor directors who represent our shareholders and are therefore not independent. We have found having investor directors on our Board extremely beneficial so that we can hear shareholder views first-hand and ensure that our shareholders have a full understanding of the opportunities and challenges facing the business. It also enables the business to operate as if it is a separate entity as required by the Ofwat Board Leadership, Governance and Transparency Principles.
- Provision 17 – this provision requires the nomination committee to consist of a majority of independent non-executive directors. This principle is not met for the same reason as Provision 11. There are three investor directors on the nomination committee, which the Board believes brings valuable insight from our shareholders to the committee.
- Provision 18 – this provision relates to the annual re-election of directors by shareholders at the annual general meeting. As a private limited company, we do not hold an annual general meeting and therefore this provision does not apply.
- Provision 24 – this provision states that the audit committee membership should consist of at least three independent non-executive directors and specifically states that the chairman of the Board should not be a member. For the period from 1 April 2019 to 10 June 2019, our audit committee consisted of two independent non-executive directors and two investor directors, with the chairman of the Board, Anthony Rabin, acting as the interim chair of the committee due to his recent and relevant financial experience. Andrew Merrick was appointed to the Board on 1 June 2019 and took up the role of chair of the audit committee on 11 June 2019, with Anthony Rabin stepping down from the role on that date, therefore our committee membership reverted from 11 June 2019 onwards to three independent non-executive directors and two investor directors.
- Provision 32 – this provision relates to membership of the remuneration committee and states that membership must consist of at least three independent non-executive directors. For the period from 1 April 2019 to 31 May 2019 the committee only had two independent non-executive directors as members, in addition to the chairman of the Board who was independent on appointment. Following the appointment of Andrew Merrick to the Board on 1 June 2019, the committee returned to having three independent non-executive directors, two investor directors and the chairman of the Board as members for the remainder of the year.

The UK Corporate Governance Code is available on the website of the Financial Reporting Council at [frc.org.uk](https://www.frc.org.uk)

The Ofwat Board Leadership, Governance and Transparency Principles

In January 2019 Ofwat published the above principles, which contain four key objectives. Since July 2019 we have had an obligation under our Instrument of Appointment to meet these objectives and to explain annually how we are doing this.

To monitor this during the year, a spreadsheet is maintained and regularly circulated to the Board, showing all of the agenda items from the Board and committee meetings throughout the year and how these contribute to compliance with these objectives. This enables an 'at-a-glance' view of when and how these objectives are being met and ensures each is being regularly considered throughout the year.

For example, Ofwat provisions 2.3(ii) and 2.4(i) include reference to delivery for customers and the customer expertise needed in the boardroom. Delivery for customers was considered by in-depth discussions around customer experience at the Board workshop meetings in May 2019 and January 2020, consideration of the impact of a no-deal Brexit on customers in September 2019, an update on the impact of, and the Yorkshire Water response to, flooding in November 2019. This is in addition to detailed consideration of delivering for customers in the 2020/2021 Business Plan and AMP7 Business Plan in January 2020 and March 2020 and the consideration of Performance Commitments in relation to customer delivery at each Board meeting. The Board also had an in-depth review of the company response to Covid-19 in March 2020 and considered as part of this the support that could be given to our customers through this unprecedented time.

We have set out below each of the four key objectives from the principles and an explanation of what we are doing to ensure we comply with these:

The regulated company Board establishes the company's purpose, strategy and values, and is satisfied that these and its culture reflect the needs of all those it serves.

Establishing our purpose and values

We reported last year that there was much work being undertaken in relation to reviewing the purpose of the company.

This process consisted of multiple working groups, with representation from across our business, from stakeholders and from customers, to seek feedback and consider the purpose, vision and values of the company. Involving a broad range of colleagues, stakeholders and customers in the creation of the purpose and values was seen by the Board as crucial in ensuring that these met the needs of those served by the business.

The Board participated as one of the working groups, providing its own feedback and thoughts on the purpose, vision and values. The output from these workshops was collated and then fed back to the working groups, including being reviewed again by the Board. A number of Board members were also involved outside of the working groups to provide direct guidance and input at various stages in the process. The proposals were then revised further and additional feedback was incorporated until a final version was ultimately presented to the Board for review and approval in January 2020.

Our company purpose sets out what we are here to do and is now defined as:

To play water's role in making Yorkshire a great place to be – now and always.

Further information on our company purpose can be found on in [Section 2](#). Board Statements.

Our vision is:

Putting people at the heart of everything we do.

This reflects our awareness that customers, colleagues and stakeholders should be at the heart of all we do and reflects the sense of social purpose that is felt across the business, including at board level.

The work also set the values, or behaviours, necessary to ensure that the desired culture is achieved across the business.

Our desired behaviours are:

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

Embedding the desired culture

To start the embedding of these behaviours in the business to seek to achieve the desired culture, a series of 'Big Ambition' events were held across Yorkshire in early March 2020 where Liz Barber, our Chief Executive, and a number of colleagues involved in the work behind the purpose, vision and values, presented the output to colleagues from across the business. A video of one of the events has been made available for those colleagues who were unable to attend in person.

Follow-up events then took place in April and May 2020, via video conference as part of a communications plan to continue to reiterate and embed these behaviours.

Plans are also in place to update our performance management procedures to embed the desired behaviours further. A cultural benchmarking exercise is also planned to establish the current culture across the business to enable measurement of how this moves closer to the desired culture over time, as well as regular internal audits around culture and how this is measured. The Board will also receive updates on the culture across the business through detailed feedback from colleague engagement surveys at regular intervals throughout 2020/2021.

During the year a Colleague Engagement Forum was created, with membership from across the organisation. This is regularly attended by Julia Unwin and Nevil Muncaster from our Board, as well as other board members on an ad-hoc basis. The forum provides another means for the Board to understand the culture of the business directly from those experiencing it on a daily basis and allows the Board to gauge whether the vision and values are appropriately embedded across the business. Further information on the forum can be found in the Annual Report and Financial Statements 2019/2020 yorkshirewater.com/reports

Alignment of purpose and strategy

The long term strategy of the business was published in August 2018 and the submission of our Price Review plan to Ofwat was aligned to our long term strategy and was published in September 2018.

Throughout 2019/2020 the Board has continued to review the strategy of the business to ensure it meet the needs of those served by the business and as part of this has ensured that it reflects the purpose and vision launched during the year.

The five Big Goals set out in our long term strategy in 2018 have been updated during the year to align more closely with our new purpose and vision, whilst still meeting the expectations of our customers as set out in our long term strategy. More information on this can be found in the Annual Report and Financial Statements 2019/2020 yorkshirewater.com/reports

A new role, Chief Strategy and Regulation Officer, was created in October 2019 and Nevil Muncaster has moved into this role. As part of the strategic remit for his role, Nevil will be leading a team to update the long term strategy in 2020/2021 and this is built into the forward agenda of the Board to be involved in the process of setting the long term strategic direction and signing-off on the final strategy.

The regulated company has an effective board with full responsibility for all aspects of the regulated company's business for the long term.

Ensuring an effective board

We undertake an annual board evaluation to ensure that our Board continues to operate effectively. In 2019 this was conducted externally and the output and the work done in response to this is detailed further in the Annual Report and Financial Statements 2019/2020. We have followed this up with an internal evaluation in 2020, led by our company secretary. The results of this and our goals for the coming year are described in the Annual Report and Financial Statements 2019/2020.

We appreciate that the composition of the Board is unusual in having investor representatives on the Board as well as executives and independent non-executive directors and are keen to ensure that we maintain the right balance in the boardroom.

As a result, in addition to the annual board evaluation process, we have engaged with an independent consultant Mark Goodridge, of Organisation Effectiveness Cambridge LLP, during the year to work with the Board to ensure it is operating as effectively as possible. Mark has observed two sets of Board and committee meetings and held two workshop sessions to look at how effectively the Board is working together and where there may be areas for improvement. This has identified the Board as a high-performing board, with plenty of open debate and challenge but with a strong sense of trust and mutual respect amongst Board members and a diversity of experience and approach. The Board continues to seek to improve, however, and the work with Mark will continue in 2020/2021 to ensure that the Board continues to operate effectively.

Handling conflicts of interest

Each of our directors is clearly subject to the legal obligations in relation to conflicts of interest that are set out in Company Law. Our Board members are all experienced directors and all receive regular reminders of their statutory obligations.

Our investor directors are very conscious of their obligations as directors and that first and foremost their duty is to act as a director of the company rather than a shareholder representative.

We have a standing agenda item at each meeting in relation to conflicts of interest and if any of our directors believed that they were conflicted in any way then this would be declared and appropriate action taken.

Matters reserved to the holding company

There are a number of matters reserved to the Board of Kelda Holdings Limited, the ultimate parent company of Yorkshire Water Services Limited.

These generally reflect matters that legally require shareholder approval or which must be considered by the directors of Kelda Holdings Limited in order for them to fulfil their statutory obligations as directors of the holding company who sign-off on the consolidated Annual Report and Financial Statements for Kelda Holdings Limited. These may be strategic or material financial matters which may impact upon the going concern basis on which the consolidated accounts are prepared.

Matters relating to Yorkshire Water are always discussed first and foremost at the Board of Yorkshire Water Services Limited. The presence of investor directors on the Board of Yorkshire Water Services Limited mean that all stakeholder considerations, including those of the shareholders, are taken into account at the Yorkshire Water level prior to the decision being made. Matters are then escalated to the Kelda Holdings Limited Board as required for ratification. In this way our Board is able to operate effectively with full responsibility for all aspects of the business of the regulated company to the extent permitted under company law.

In addition to the matters reserved to the Kelda Holdings Limited Board, there are a handful of matters reserved for shareholder approval in the Shareholder Agreement signed in 2010. None of these detract from the ability of the Board of Yorkshire Water Services Limited to have full responsibility for the regulated business but instead align to best practice, for example allowing shareholders to approve or otherwise the payment of dividends proposed by the business and the appointment or removal of directors.

Ensuring long term focus

The Board makes all decisions with a view to the longer term. As noted above, the long term strategy of the business was published in 2018 and is due to be reviewed and updated as appropriate in the next 12 to 18 months. This looks 25 years ahead and takes into consideration the long term forecasts for Yorkshire in many areas such as population growth, water consumption and climate change. The five year Business Plan is then aligned to this longer term strategy when it is drawn up and reviewed by the Board. Each year the Board also considers the long term viability of the business and makes a statement on this. Further information on this can be found in [Appendix 4](#)

The Board's leadership and approach to transparency and governance engenders trust in the regulated company and ensures accountability for their actions.

Our approach to transparency and governance

In 2017 we set-up a Social Value Committee with a focus on the social purpose and public accountability of the organisation. We recognise our role as an anchor institution in Yorkshire and that we provide an essential public service, as well as playing a key role in the health, wellbeing and prosperity of the region.

In addition to this, we recognise our position as a regional monopoly and the imperative for high levels of trust in our organisation. We have taken a number of steps to improve our transparency, which are detailed further in the Annual Report and Financial Statements 2019/2020.

We also take our governance seriously and seek to comply wherever we possibly can with the various regulatory and statutory requirements, adhering to best practice wherever possible. The disclosures in this Directors' Report set out our approach to governance and our compliance with such requirements.

Dividend policy

We have a dividend policy which explicitly states that distributions will only be made after an appropriate financial resilience analysis has been undertaken. The policy also states that dividends will be adjusted to reflect and recognise company performance and benefit sharing from service and efficiency performance, as well as the continuing need for the investment of profits in the business and the funding of employee interests.

This policy ensures that delivery for customers and colleagues is not just considered, but factored into any amounts that are to be paid out as dividends.

As noted above, any amounts paid as dividends require shareholder approval and this requires an additional check from shareholders that amounts are being paid out in accordance with the dividend policy.

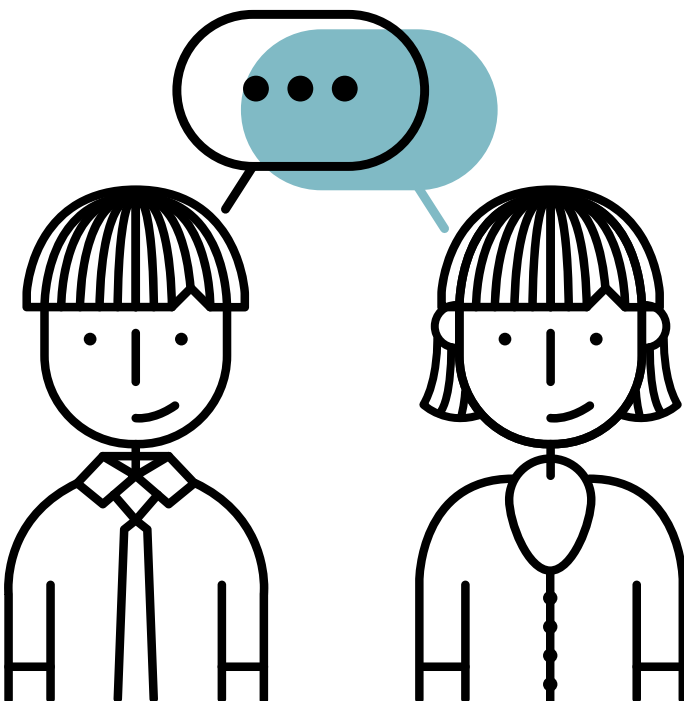
There were no dividends paid in the year for distribution to the ultimate shareholders.

Bonus payments

The measures used in calculating any bonus payments for executive and senior colleagues are set out in the Directors' Remuneration Report in [Appendix 4](#). These include a number of measures relating to delivering for customers and colleagues, including measures around our customer-related performance commitments and colleague engagement, as reflected in our regular colleague engagement surveys.

In addition, the key measures in the Long Term Incentive Plan (LTIP) scheme vesting in 2020 were in relation to customer satisfaction and delivering value for money for customers.

There is therefore a clear correlation between delivering for customers and colleagues and any bonus payments made, which are transparently set out in our Remuneration Report each year.



Assurance of information

We seek to assure information through independent means wherever we can and we detail in this report where information has been independently verified and the three-line assurance process that we have in place to assure the information that we provide to make it as trustworthy as possible.

Boards and their committees are competent, well run, and have sufficient independent membership, ensuring they can make high quality decisions that address diverse customer and stakeholder needs.

As noted above we undertake a board evaluation process each year to assess the competency of our Board. Further information on the process conducted in the year under review is in the Annual Report and Financial Statements 2019/2020.

During the year we have drafted a board skills matrix for internal use which looks at the skills and experience of each of our Board members. This has been used by the Nomination Committee to review the balance of skills and experience on the Board to ensure that this meets the current requirements of the business and that consideration is also being given to any potential future requirements. This identified that the current Board does not have significant experience in relation to technology matters. This has been mitigated through the recruitment of a Chief Information and Technology Officer during the year who, whilst not a Board member, provides regular updates to the Board on all technology matters and is readily available to all Board members to provide insight and expertise on any matters that they wish to raise.

The diversity of the Board is also under continual review by the Nomination Committee. Whilst we have considerable diversity of skills and experience, we do not have the diversity of gender and ethnicity that we would ideally want. This is something that is always taken into account when seeking to recruit to the Board and a Board Appointments Policy is in place which ensures a consistent and fair approach to recruitment is always taken. The fundamental objective of recruitment, however, is to ensure that the best candidate for the role is appointed.

We have provided a report from each of our Board committees as part of our Annual Report and Financial Statements, which sets out the work that each committee has done during the year, the purpose of the committee and the areas for which each committee can be held accountable. We have gone beyond the governance requirements of having an audit, remuneration and nomination committee to also have social value and safety, health and environment committees because we recognise the importance of these two areas and the need for the Board to focus on these matters to enable high-quality decisions to be made, with detailed information available to the Board that takes into account the needs of our customers and other stakeholders.

The Wates Corporate Governance Principles for Large Private Companies

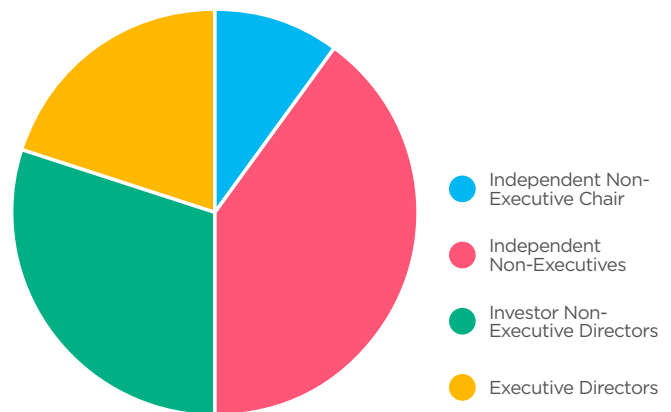
The above principles were published in December 2018 and are a voluntary code for private companies. These contain six principles relating to purpose and leadership, board composition, director responsibilities, opportunity and risk, remuneration and stakeholder relationships and engagement.

The Board has reviewed these principles and considers that it complies with all six. Further information on the way the Board operates in each of the six areas identified is contained throughout the Annual Report and Financial Statements 2019/2020.

Leadership

Our Board composition

As at 31 March 2020, the Board comprises the following:



For the period from 1 April 2019 to 31 May 2019 there were just three Independent Non-Executive Directors alongside the chair, until Andrew Merrick was appointed to the Board with effect from 1 June 2019. In addition there were three Executive Directors from 1 April 2019 until 12 September 2019, when Richard Flint, our Chief Executive, retired from the Board and was replaced by Liz Barber, previously our Director of Finance, Regulation and Markets.

On 1 June 2020 we welcomed Chris Johns to the Board as Chief Financial Officer and therefore post year end the number of Executive Directors has returned to three.

Board committees

The Board has established and delegated specific responsibilities to audit, nomination, remuneration, safety, health and environment and social value committees. Each committee reports back to the Board after each meeting to ensure that the whole Board is aware of the matters considered by the committees.

Each committee has its own report which sets out the membership and attendance at the committee meetings during the year, which can be found in our Annual Report and Financial Statements 2020.

Appointment and replacement of directors

The Articles of Association allow the Board to appoint a new director at any time; however, the appointment is also subject to approval by investors who hold 60.6% of the share capital of the ultimate parent company, Kelda Holdings Limited. This is consistent with the practice of a listed company where the shareholders would approve an appointment at the next annual general meeting.

As a private limited company, we do not hold an annual general meeting and therefore directors are not subject to annual re-election by the shareholders.

The Articles of Association state that the company may remove a director by ordinary resolution with special notice before the expiration of their period of office. There have been no directors removed from office during the year.

Independence

The Board reviews the independence of the independent non-executive directors each year; considering their tenure, relationships and circumstances as well as considering the behaviour of each director at board meetings and whether or not they contribute to unbiased and independent debate. All of the independent non-executive directors and the non-executive chairman were independent upon appointment and the Board believes that all remain wholly independent in relation to the criteria set out in Provision 10 of the UK Corporate Governance Code.

Commitments of the non-executive chairman

Anthony does not currently have any other significant commitments.

Training and development

The Board receives regular updates on governance-related matters and more formal training where appropriate. Potential training needs are discussed as part of individual performance evaluations, plus each director is given the opportunity to flag any additional training requirements as part of the annual board evaluation process.

New directors joining the company are given a broad and comprehensive induction to the business; consisting of site visits, meetings with key personnel and detailed information relating to the business, as well as any training specifically required in relation to the duties of directors and their role on the Board.

Board evaluation

Following our externally facilitated Board evaluation in 2018/2019, there has been significant work around the areas identified for additional focus.

These areas and the progress made during the year are noted below:

Area for additional focus	Progress in 2019/2020
<p>The provision of additional information to the Board on certain specific topics</p>	<p>There has been much work in the year on the Board agenda and this, along with the regular board workshops, has been used to provide additional information to the Board on certain topics. A number of 'deep dives' have taken place during the year, where the Board has heard an in-depth analysis of specific topics with various subject matter experts from across the business providing information directly to the Board.</p>
<p>To develop a comprehensive skills matrix for the Board, to assist in future recruitment and to identify any potential current or future skills gaps</p>	<p>A board skills matrix has been developed in the year which sets out the skills and experience of each of the Board members in the key areas of legal and regulatory matters, corporate governance, risk management, leadership and strategy development, finance, our local community, environmental matters, health and safety, the water sector, infrastructure and engineering, technology, customer services and human resources. This was developed for internal use and is used by the nomination committee to identify current or future skills gaps.</p> <p>The current matrix indicates that the area with the least experience at board level is technology. This is currently being mitigated through the recruitment of our Chief Technology and Information Officer during the year, who provides regular updates to the Board and attends meetings as and when required.</p>
<p>To set aside more time for the Board to consider the culture of the company, to gain a more detailed understanding of the impact of culture on behaviours across the business</p>	<p>The Board has been involved in two working group sessions in the year as part of the development of the new purpose, vision and behaviours for the business; as well as receiving regular updates on the development, the initial launch and the future plans for embedding these behaviours in the business. A significant part of this work involved consideration of the current culture of the business and the desired culture. The behaviours have been set to achieve the desired culture and the Board will monitor how this is embedded in the business through regular feedback from our colleague engagement survey and through our Colleague Engagement Forum.</p> <p>The Board has also spent time in the year considering the feedback from the Colleague Engagement Forum and the culture that this reflects.</p> <p>The Board has also considered its own culture and whether this reflects the desired culture in the business, through its sessions with Mark Goodridge, which are described further in the Annual Report and Financial Statements 2019/2020.</p>

For the 2019/2020 year we have undertaken an internal evaluation, consisting of one-to-one meetings between the company secretary and each board member. The output from these meetings was then collated and presented back to the Board for discussion.

The review concluded that the Board and its committees was operating effectively and continued to demonstrate a strong culture of trust and openness between Board members, a high level of integrity across the Board and a strong commitment to Yorkshire Water and a desire to do the right thing. It was also acknowledged that there was a good level of challenge in Board meetings with respect for differing opinions and the opportunity for all to articulate their views.

Board members also noted that there had been improvement in the year in more effectively prioritising key agenda items and increasing understanding of a number of areas of the business through site visits and greater direct interaction with colleagues across the business.

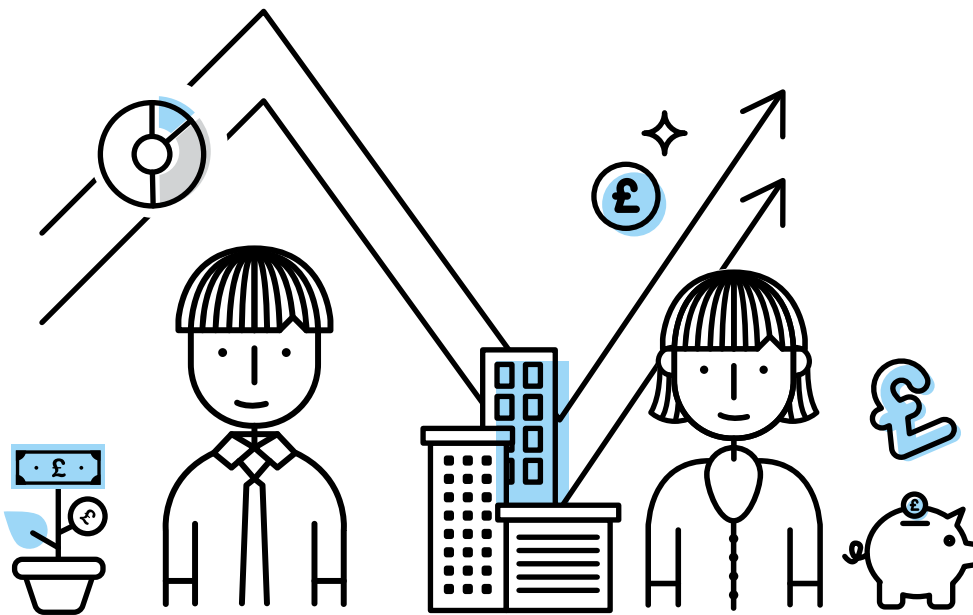
The review also highlighted the following areas for focus in 2020/2021:

- An improvement in the presentation of certain Board papers, to provide greater clarity around the key points for Board consideration amongst the wealth of information currently provided.
- Specific focus by the Board on a number of topics during the year, in relation to the delivery of the new Business Plan, ongoing strategic development and transformational change.
- The remit of the Committees to be reviewed to ensure that the Board and the Committees combine in the most optimal way possible to ensure key matters receive an appropriate level of focus at Board level, without unnecessary duplication.

An action plan has been developed and agreed by the Board and the progress made will be reported in our Corporate Governance Statement for the year ended 31 March 2021.

In addition to the annual board evaluation, the chairman meets with each board member individually on at least an annual basis to discuss their own performance and to identify any areas for development or potential training needs. The senior independent director also gathers feedback separately on the performance of the chairman and feeds this back to him at least annually.

8. Regulatory information



In this section

The purpose of our regulatory financial information is for our stakeholders to understand how statutory financial accounting information, published under the Companies Act requirements, translates to the income, costs, assets, liabilities and cash flows of the appointed water and wastewater business of Yorkshire Water Services Limited, under regulatory accounting standards.

The section is structured as follows

This regulatory information section contains specific financial and non-financial performance information that is required under the Regulatory Accounting Guidelines (RAGs) issued by Ofwat.

- Regulatory financial reporting takes information from published statutory financial statements and adjusts that information to take account of differences between statutory financial reporting in accordance with UK Generally Accepted Accounting Principles (UK GAAP) and Regulatory Accounting standards (RAGs). On adoption of new UK GAAP there was a choice between Financial Reporting Standards, FRS101 and FRS102. We have elected to report under FRS102.
- Price control and other segmental reporting financial information, which sets out financial information by price control and underlying operational processes.
- Performance summary for our performance commitments.
- Additional regulatory information as required by Ofwat.
- Cost assessment tables providing information on the allocation of expenditure to different investment categories and information on the drivers of expenditure to support the development of cost models and comparative analysis.

Where further explanation of specific information is required, technical notes are included as appropriate.

Where specific reference is made to tables and lines within the tables, they will be shown in the commentary as either Table 1A Line 1 or 1A.1, for example.

All tables have been published in an Excel spreadsheet alongside this APR document. The tables can be found at: yorkshirewater.com/reports

Summary of our overall financial performance

The information on this page is as per the Annual Report Financial Statements. Click here for a link yorkshirewater.com/reports

Our revenue (the income we receive for the services we provide) has increased to £1,063.4m (2018/2019: £1,059.2m). This is due to the inflationary annual price increase, offset by a shortfall in billed income for both household and non-household due to tariff assumptions, such as consumption, and new customer connections at the time the billing was calculated for 2019/2020. Ofwat allows us to collect this difference over the next few years through adjustments to future tariffs.

Operating costs continue to be tightly managed. Total costs of £842.9m (2018/2019: £795.3m) were in line with plan, except for £5.7m additional bad debt provision which has been included at March 2020 to reflect the impact of Covid-19 and the resulting lockdown on the wider economy. These costs exclude exceptional items.

Exceptional costs of £8.1m (2018/2019: £34.4m) are largely associated with extreme weather events relating to climate change (£8.0m). In preparation for AMP7 we have reviewed activities and structures of the support functions resulting in £2.4m reorganisational costs. Offsetting these exceptional costs we have recognised an exceptional profit on the sale of our non-household retail business (£3.4m).

The above movements in revenue and operating costs result in a decrease in adjusted EBITDA to £553.2m (2018/2019 £570.6m).

Revenue

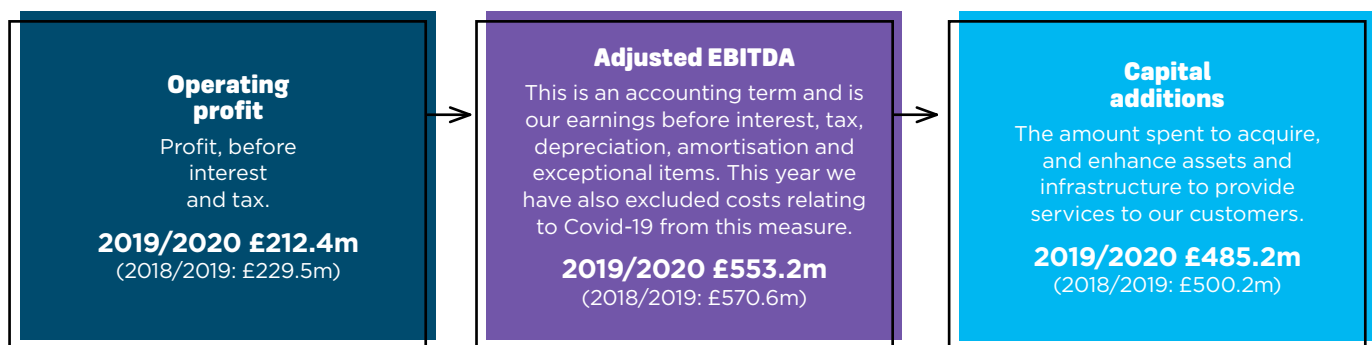
This is the income received for services provided.

2019/2020 £1,063.4m
(2018/2019: £1,059.2m)

Operating costs

These are the payments for the day to day operation of our business, such as operating and maintaining our network and treatment works, paying our staff and energy bills. These costs exclude exceptional items.

2019/2020 £842.9m
(2018/2019: £795.3m)



Capital additions for 2019/2020 were £485.2m (2018/2019: £500.2m; see note 12 to the financial statements). Our programme of investment to drive Upper Quartile performance in Leakage, Supply Interruptions, Water Quality and Pollution has continued, and this year expenditure was £106.7m across numerous projects. Other key areas of investment in 2019/2020 included our continuing SAP project, work to install a new anaerobic

digestion facility at our treatment works in Huddersfield, and inlet improvements and the refurbishment of our sludge treatment facility at our wastewater treatment works in Hull. £1.6m (2018: £12.7m) of additional capital expenditure was incurred in 2019/2020 relating to flood remediation as a result of incidents in 2015, November 2019 and January 2020.

Regulatory financial information

The information in this section comprises the following tables.

- [Table 1A](#): Income statement
- [Table 1B](#): Statement of comprehensive income
- [Table 1C](#): Statement of financial position
- [Table 1D](#): Statement of cash flows
- [Table 1E](#): Net debt analysis (appointed activities)
- [Table 1F](#): Financial flows

Where further explanation of specific information is required, technical notes are included as appropriate. Whilst the statutory column is based on the Annual Report and Financial Statement, there are some presentational differences.

Table 1A – Income statement

For the 12 months ended 31 March 2020

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
1A.1 Revenue	£m	3	1063.389	8.428	14.604	-6.176	1057.213
1A.2 Operating costs	£m	3	-860.879	-15.714	-12.756	-2.958	-863.837
1A.3 Other operating income	£m	3	7.787	0.000	0.000	0.000	7.787
1A.4 Operating profit	£m	3	210.297	-7.286	1.848	-9.134	201.163
1A.5 Other income	£m	3	2.138	10.907	0.140	10.767	12.905
1A.6 Interest income	£m	3	50.508	0.000	0.000	0.000	50.508
1A.7 Interest expense	£m	3	-193.002	-16.882	0.000	-16.882	-209.884
1A.8 Other interest expense	£m	3	0.000	0.000	0.000	0.000	0.000
1A.9 Profit before tax and fair value movements	£m	3	69.941	-13.261	1.988	-15.249	54.692
1A.10 Fair value gains/(losses) on financial instruments	£m	3	-35.906	0.000	0.000	0.000	-35.906
1A.11 Profit before tax	£m	3	34.035	-13.261	1.988	-15.249	18.786
1A.12 UK Corporation tax	£m	3	-14.032	0.000	-0.382	0.382	-13.650
1A.13 Deferred tax	£m	3	-21.730	4.960	0.000	4.960	-16.770
1A.14 Profit for the year	£m	3	-1.727	-8.301	1.606	-9.907	-11.634
1A.15 Dividends	£m	3	-110.029	0.000	0.000	0.000	-110.029
A – Tax analysis							
1A.16 Current year	£m	3	15.276	0.000	0.382	-0.382	14.894
1A.17 Adjustments in respect of prior years	£m	3	-1.244	0.000	0.000	0.000	-1.244
1A.18 UK Corporation tax	£m	3	14.032	0.000	0.382	-0.382	13.650
B – Analysis of non-appointed revenue			Non-appointed				
1A.19 Imported sludge	£m	3	0.000				
1A.20 Tankered waste	£m	3	-5.107				
1A.21 Other non-appointed revenue	£m	3	-9.497				
1A.22 Revenue	£m	3	-14.604				

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1A takes information from the statutory accounts and captures the adjustments needed to show the regulatory income statement for the appointed business. Adjustments include both differences between UK Generally Accepted Accounting Principles (UK GAAP) and Regulatory Accounting Guidelines (RAG), and the removal of non-appointed income and costs. The UK GAAP versus RAG differences are further detailed in the table on page 159.

The appointed business is defined as the regulated activities of the appointee, that is those activities necessary to fulfil the functions and duties of a water and sewerage undertaker. The non-appointed business encompasses those activities where we are not a monopoly supplier, or the activity involves the optional use of an asset owned by the appointed business (examples include shared services to the Group and the treatment of tankered waste).

Financial Performance

The increase in appointed revenue to £1057.2m (2018/2019: £1050.7m) is due to the inflationary annual price increase, offset by a shortfall in billed income for both household and non-household due to tariff assumptions, such as consumption and new customer connections at the time the billing was calculated for 2019/2020. Ofwat allows us to collect this difference over the next few years through adjustments to future tariffs.

Non-appointed revenue of £14.6m is primarily made up of, £5.1m from imported tankered waste, £4.3m from Safemove (provides drainage and water searches for property buyers), £3.2m from Kelda Non-Regulated companies, £1.0m from our largest trade customer, Syngenta; £0.7m related to meter reading; and £0.3m other movements.

Operating costs continue to be tightly managed. Total appointed costs of £863.8m (2018/2019: £838.3m) were in line with plan, except for £5.7m additional bad debt provision which has been included at March 2020 to reflect the impact of Covid-19 and the resulting lockdown on the wider economy.

Operating costs include £11.5m of exceptional costs (2018/2019: £34.4m), including:

- £8.0m associated with extreme weather events relating to climate change.
- In preparation for AMP7 we have reviewed activities and structures of the support functions resulting in £2.4m reorganisational costs.

Included within other operating income is £3.4m of exceptional net profit on the sale of our non-household retail business.

Whilst we have delivered operating cost efficiencies, operating expenditure pressures arising from external factors include:

- The period between November 2019 and February 2020 brought a series of extreme weather events which had a significant impact on our customers and communities and widely affected our assets.
- The rapid onset of the Covid-19 pandemic in the last months of the financial year meant that we needed to make major and rapid changes to the company's operations to ensure that we could continue to provide an essential service whilst protecting the health and safety of our colleagues and customers.
- The extreme wet weather conditions between November 2019 to February 2020 resulted in an increase in rainfall compared to prior years resulting in an increase in energy costs across the sewerage network.
- Increased imported commodity cost pressures, such as chemicals have continued. As with other businesses we are seeing that the cost of buying from overseas businesses is increasing, which is commonly considered to be due to the effects of Brexit.
- An increase in employment costs due to insourcing of leakage detection staff in readiness for enhanced AMP7 regulatory targets starting in 2020.
- Enhanced levels of service investment has increased further to improve some of the common performance commitments by increasing sewer rehabilitation, reducing backlog of jobs and job baskets and more focused investigations of the sewer network.
- Further increases in contracted services costs to help prevent and mitigate pollution and compliance failures.

Yorkshire Water holds £1,289.0m notional value of inflation linked swaps on which the Company receives interest based on the London Interbank Offered Rate (LIBOR) and pays interest based on inflation (RPI).

There has been a reduction in market expectations of future LIBOR as well as future RPI rates. This means that the future expectations of the net amount payable/receivable on the Company's inflation linked swaps (i.e. the LIBOR linked interest receivable versus the inflation linked interest payable) is higher than that assumed last year. This in turn is largely responsible for the £35.9m loss (2018/2019¹: £245.9m loss) on the fair value on financial instruments shown in Line 10. As in the previous year net fair value charges of £35.9m includes £29.0m in relation to the RPI uplift on inflation linked and interest rate swaps. There has also been a presentational change in terms of accounting for movements on derivatives in the Annual Reporting and Financial Statements (ARFS). Adopting the 'single line of account' policy under IAS¹, the interest and fair value income is presented within finance costs and fair value charges, where it was previously presented as part of interest receivable.

¹As mentioned above there has been a presentational change in terms of accounting for movements on derivatives in the ARFS. We have restated comparatives in the ARFS to reflect this change. The restated APR figures for 2018/2019 are presented on page 158.

Line description		Units	Reported APR 2018/2019	Adjustment	Restarted APR 2018/2019
Line 1A.6. Interest income	£m	3	114.872	-64.320	50.552
Line 1A.7. Interest expense	£m	3	-267.697	63.071	-204.626
Line 1A.10. Fair value gains/(losses) on financial instruments	£m	3	-247.226	1.249	-245.977
Total	£m	3	-400.051	0.000	-400.051

A dividend of £110.0m was paid in the year to our parent company (2018/2019: £79.5m), utilised as follows:

	2019/ 2020 £m	2018/ 2019 £m
Gross dividends	110.0	79.5
Dividends used to make inter-company interest payments	(47.8)	(46.7)
Dividends used to pay head office costs and Kelda Finance interest	(62.2)	(32.8)
Dividends paid to the ultimate shareholders	-	-

'Dividends used to make inter-company interest payments' of £47.8m (2018/2019: £46.7m) were paid to Kelda Eurobond Co. Limited (a Kelda Group company). This is to enable Kelda Eurobond Co. Limited to pay Yorkshire Water interest (plus an element of capital: £8.1m) on two loans that Yorkshire Water has previously made to Kelda Eurobond Co. Ltd.

The 2019/2020 dividend payments include £30.1m to cover Kelda head office costs and Finance interest for the 2020/2021 financial year.

The Company's dividend policy is to:

- Deliver real growth in dividends recognising the management of economic risks, the continuing need for investment of profits in the business, and to pay additional dividends which reflect efficiency improvement and particularly improvements beyond those allowed in the determination of price limits.
- To pay dividends in respect of the non-regulated business reflecting the profitability of those activities.
- Where it is foreseeable that the Company will have sufficient profits available for distribution, to continue to pay annual dividends consistent with this policy. The Company can also pay special dividends as part of any capital reorganisation which the Board concludes to be in the best interests of the Company and complies with its obligations under its licence.

The Directors consider that the dividends paid in the year are in accordance with these principles.

Technical notes

There has been an under-recovery of wholesale revenue of £36.466m (3.53%) in 2019/2020. The difference will be accounted for through the wholesale forecasting revenue incentive mechanism (WFRIM). We will be submitting the final version within the PR19 blind year reconciliation model.

The table on page 159 shows the detailed GAAP adjustments that are made to the income statement as detailed in the statutory accounts to derive the income statement for the appointed business. The net adjustment of £8.301m has decreased from the previous year (£14.6m in 2018/2019) in relation to capitalised interested and related deferred tax. Expenditure on assets under construction has decreased from the previous year, resulting in a decrease in interest expense. Deferred tax in 2018/2019 was calculated at 17%, whereas in 2019/2020 the deferred tax was calculated at 19%.

Line description		Units	Grants & Contribution Income	IFRIC 18 Adopted Sewers	Capitalisation of Interest and Related Depreciation	IFRS 15 Revenue Recognition	Total
Line 1A.1. Revenue	£m	3	-8.779	-2.128		19.335	8.428
Line 1A.2. Operating Costs	£m	3			3.621	-19.335	-15.714
Line 1A.5. Other Income	£m	3	8.779	2.128			10.907
Line 1A.7. Interest expense	£m	3			-16.882		-16.882
Line 1A.13. Deferred tax	£m	3			4.960		4.960
Total	£m	3	0.000	0.00	-8.301	0.000	-8.301

The most significant differences between statutory financial reporting in accordance with FRS 102 and regulatory financial reporting are:

- Grants and contribution income totaling £8.8m recognised in revenue for statutory reporting is reclassified in other income for regulatory financial reporting. As such, this is a presentational adjustment only.
- Adopted sewers income of £2.1m recognised in revenue for statutory reporting is reclassified in other income for regulatory financial reporting. As such, this is a presentational adjustment only.
- Interest that is capitalised, and the related depreciation, in the statutory accounts is removed for regulatory financial reporting. The adjustments increase the regulatory interest expense by £16.9m, reduce related asset depreciation by £3.6m and reduces the associated deferred tax debit by £5.0m. The net effect of this adjustment is a £8.3m decrease to the regulatory profit for the year.
- £19.3m of billed and unbilled amounts receivable, have not been recognised as revenue in the statutory accounts in the current year, on the basis that they are not probable of collection in accordance with the statutory accounts accounting policy. This reduction in revenue is offset by a consequential reduction in the bad debt charge and bad debt provision of the same amount. In line with RAG guidelines, this adjustment has been reversed in the income statement for the appointed business.
- Under FRS102, we have not changed our accounting treatment of leases and this is consistent with previous years.

Table 1B – Statement of comprehensive income

For the 12 months ended 31 March 2020

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
1B.1 Profit for the year	£m	3	-1.727	-8.301	1.606	-9.907	-11.634
1B.2 Actuarial gains/(losses) on post employment plans	£m	3	0.000	0.000	0.000	0.000	0.000
1B.3 Other comprehensive income	£m	3	-165.436	0.000	0.000	0.000	-165.436
1B.4 Total Comprehensive income for the year	£m	3	-167.163	-8.301	1.606	-9.907	-177.070

The statement of comprehensive income sets out all items which result in a change to our balance sheet reserves. The statutory loss for the year of £1.7m is adjusted for other comprehensive expense of £165.4m. This principally comprises a revaluation loss on fixed assets before taxation of £178.5m plus related deferred tax on the revaluation of £18.5m, less the net effect of cash flow hedges amounting to £5.8m, plus net movement on the pension scheme of £0.4m.

In respect of the fixed asset revaluation, we have a policy under FRS 102 of holding infrastructure assets (networks), residential properties, non-specialised properties and rural estates under a valuation model. The fair value of assets must be reviewed periodically under FRS 102.

The infrastructure assets have been revalued during the year resulting in a reduction in fair value of £178.5m before deferred tax. The valuation amount was established by reviewing the discounted cash flows of Yorkshire Water to establish the assets' value in use. This was cross referenced against recent market data regarding Regulated Capital Value (RCV) multiples realised in transactions of similar infrastructure businesses to make sure the valuation was not misaligned to market valuation. There is uncertainty in the forecast cash flows as a result of Covid-19 and also the decision to ask Ofwat to refer the Final Determination (FD) to the CMA. An assumption underpins the infrastructure asset cash flows that Covid-19 will have short-term timing and unpredictable impacts, and the impact was removed from the financial modelling, and instead increased uncertainty was factored into the discount rate applied to the future cash flows.

The statutory accounting policy is that external valuations on properties are performed on a periodic basis. An interim valuation is recorded in intervening years based on directors' valuations. The external valuations undertaken at 31 March 2019 have been considered at 31 March 2020 by the directors, who concluded that the current book values are not materially different to current market values. Following the outbreak of Covid-19, there has been increased uncertainty in the property market, increasing the judgement taken over the year end valuation. Management have performed an extensive review of the portfolio and concluded that no material changes are required.

The cash flow hedges arise from energy price swaps which hedge our exposure to energy price risk by exchanging the day ahead index price of energy for a fixed price. These swaps meet the criteria to be designated as a cash flow hedge and the change in the fair value of the energy price swap of £5.8m has been recognised directly in reserves through the statement of comprehensive income.

There is a net actuarial gain on the pension scheme of £0.4m within Yorkshire Water. The defined benefit plan is a multi-employer scheme, and the sponsoring employer is Kelda Group Limited.

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1C – Statement of financial position

For the 12 months ended 31 March 2020

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities	
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments		
A – Non-current assets								
1C.1	Fixed assets	£m	3	7845.464	-135.265	3.042	-138.307	7707.157
1C.2	Intangible assets	£m	3	157.738	0.000	0.000	0.000	157.738
1C.3	Investments – loans to group companies	£m	3	949.329	0.000	0.000	0.000	949.329
1C.4	Investments – other	£m	3	2.245	0.000	0.000	0.000	2.245
1C.5	Financial instruments	£m	3	166.590	0.000	0.000	0.000	166.590
1C.6	Retirement benefit assets	£m	3	0.000	0.000	0.000	0.000	0.000
1C.7	Total non-current assets	£m	3	9121.366	-135.265	3.042	-138.307	8983.059
B – Current assets								
1C.8	Inventories	£m	3	3.438	0.000	0.000	0.000	3.438
1C.9	Trade & other receivables	£m	3	281.397	0.000	2.925	-2.925	278.472
1C.10	Financial instruments	£m	3	0.000	0.000	0.000	0.000	0.000
1C.11	Cash & cash equivalents	£m	3	262.368	0.000	0.000	0.000	262.368
1C.12	Total current assets	£m	3	547.203	0.000	2.925	-2.925	544.278
C – Current liabilities								
1C.13	Trade & other payables	£m	3	-275.052	0.000	-0.408	0.408	-274.644
1C.14	Capex creditor	£m	3	-109.126	0.000	0.000	0.000	-109.126
1C.15	Borrowings	£m	3	-374.889	0.000	0.000	0.000	-374.889
1C.16	Financial instruments	£m	3	0.000	0.000	0.000	0.000	0.000
1C.17	Current tax liabilities	£m	3	0.000	0.000	0.000	0.000	0.000
1C.18	Provisions	£m	3	-11.245	0.000	0.000	0.000	-11.245
1C.19	Total current liabilities	£m	3	-770.312	0.000	-0.408	0.408	-769.904
1C.20	Net current assets/(liabilities)	£m	3	-223.109	0.000	2.517	-2.517	-225.626

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1C – Statement of financial position (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
D – Non-current liabilities							
1C.21 Trade & other payables	£m	3	-2.970	0.000	0.000	0.000	-2.970
1C.22 Borrowings	£m	3	-5223.222	0.000	0.000	0.000	-5223.222
1C.23 Financial instruments	£m	3	-2134.142	0.000	0.000	0.000	-2134.142
1C.24 Retirement benefit obligations	£m	3	0.000	0.000	0.000	0.000	0.000
1C.25 Provisions	£m	3	0.000	0.000	0.000	0.000	0.000
1C.26 Deferred income – G&C's	£m	3	-303.601	-1.663	-1.890	0.227	-303.374
1C.27 Deferred income – adopted assets	£m	3	-183.082	19.185	0.000	19.185	-163.897
1C.28 Preference share capital	£m	3	0.000	0.000	0.000	0.000	0.000
1C.29 Deferred tax	£m	3	-359.020	25.700	0.000	25.700	-333.320
1C.30 Total non-current liabilities	£m	3	-8206.037	43.222	-1.890	45.112	-8160.925
1C.31 Net assets	£m	3	692.220	-92.043	3.669	-95.712	596.508
E – Equity							
1C.32 Called up share capital	£m	3	11.000	0.000	0.000	0.000	11.000
1C.33 Retained earnings & other reserves	£m	3	681.220	-92.043	3.669	-95.712	585.508
1C.34 Total Equity	£m	3	692.220	-92.043	3.669	-95.712	596.508

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1C adjusts the Balance Sheet as at 31 March 2020 detailed in the ARFS and makes adjustment for the differences between UK statutory financial reporting and regulatory financial reporting, together with removal of the non-appointed assets and liabilities. This then details the Balance Sheet of the appointed business.

The table below details the total adjustment of £92.043m to retained earnings and reserves and the corresponding adjustments to fixed assets, deferred income and deferred tax. This comprises the differences between statutory and RAG definitions which are the balance sheet equivalent adjustments to those income statement adjustments described in more detail previously on Table 1A.

Line description	Units	DPS	Grants & Contribution Income	IFRIC 18 Adopted Sewers	Capitalisation of Interest and Related Depreciation	IFRS 15 Revenue Recognition	Total
Line 1C.1 Fixed assets	£m	3			-135.265		-135.265
Line 1C.9 Trade and other receivables	£m	3				0.000	0.000
Line 1C.26 Deferred income - G&C's	£m	3	-1.663				-1.663
Line 1C. 27 Deferred income - adopted assets	£m	3		19.185			19.185
Line 1C. 29 Deferred tax	£m	3			25.700		25.700
Line 1C.33 Retained earnings & other reserves	£m	3	1.663	-19.185	109.565		92.043
Total	£m	3	0.000	0.000	0.000	0.000	0.00

Technical notes

As detailed in Table 1B and the statutory accounts, infrastructure assets (networks), residential properties, non-specialised properties and rural estates are held under a revaluation model, rather than historical cost. Whilst regulatory accounting guidance refers only to historical cost, given that UK GAAP FRS102 offers the choice between historical cost and valuation, and the regulatory guidance does not identify the requirement to re-state fixed assets for those adjustments, no adjustment has been made. This is consistent with the treatment in 2018/2019.

Table 1D – Statement of cash flows

For the 12 months ended 31 March 2020

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities	
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments		
A – Statement of cash flows								
1D.1	Operating profit	£m	3	210.297	-7.286	1.848	-9.134	201.163
1D.2	Other income	£m	3	28.515	-26.377	0.000	-26.377	2.138
1D.3	Depreciation	£m	3	326.282	-3.621	0.163	-3.784	322.498
1D.4	Amortisation – G&C's	£m	3	-10.907	10.907	0.000	10.907	0.000
1D.5	Changes in working capital	£m	3	-2.113	0.000	-0.140	0.140	-1.973
1D.6	Pension contributions	£m	3	0.000	0.000	0.000	0.000	0.000
1D.7	Movement in provisions	£m	3	-3.442	0.000	-1.871	1.871	-1.571
1D.8	Profit on sale of fixed assets	£m	3	-2.143	0.000	0.000	0.000	-2.143
1D.9	Cash generated from operations	£m	3	546.489	-26.377	0.000	-26.377	520.112
1D.10	Net interest paid	£m	3	-117.257	0.000	0.000	0.000	-117.257
1D.11	Tax paid	£m	3	-17.126	0.000	0.000	0.000	-17.126
1D.12	Net cash generated from operating activities	£m	3	412.106	-26.377	0.000	-26.377	385.729
C – Investing activities								
1D.13	Capital expenditure	£m	3	-512.423	0.000	0.000	0.000	-512.423
1D.14	Grants & Contributions	£m	3	0.000	26.377	0.000	26.377	26.377
1D.15	Disposal of fixed assets	£m	3	2.242	0.000	0.000	0.000	2.242
1D.16	Other	£m	3	3.442	0.000	0.000	0.000	3.442
1D.17	Net cash used in investing activities	£m	3	-506.739	26.377	0.000	26.377	-480.362
1D.18	Net cash generated before financing activities	£m	3	-94.633	0.000	0.000	0.000	-94.633

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1D – Statement of cash flows (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities	
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments		
D – Cash flows from financing activities								
1D.19	Equity dividends paid	£m	3	-110.029	0.000	0.000	0.000	-110.029
1D.20	Net loans received	£m	3	418.860	0.000	0.000	0.000	418.860
1D.21	Cash inflow from equity financing	£m	3	0.000	0.000	0.000	0.000	0.000
1D.22	Net cash generated from financing activities	£m	3	308.831	0.000	0.000	0.000	308.831
1D.23	Increase (decrease) in net cash	£m	3	214.198	0.000	0.000	0.000	214.198

We are not required to publish a cash flow statement in our statutory accounts of YWS as the consolidated financial statements of Kelda Eurobond Co Limited include the equivalent disclosures. The company has also taken certain exemptions under FRS 102 available in respect of the disclosures required by FRS 102.11 *Basic Financial Instruments* and FRS 102.12 *Other Financial Instrument Issues*.

The cash flow information in Table 1D is derived from the published Profit and Loss account and Balance Sheet information. Similar to Tables 1A and 1C, Table 1D captures the adjustments needed to both reflect differences between statutory financial reporting in accordance with UK GAAP and regulatory financial reporting, and remove non-appointed cash flows to determine the cash flow statement for the appointed business.

Overall, there was a net cash increase of £214.198m for 2019/2020. Cash generated from operations of £520.1m was primarily offset by:

- Cash investment in fixed assets including investment in intangible assets of £512.4m.
- Interest paid of £117.3m on borrowings taken out to fund historical and current capital investment programmes.
- Dividends paid to fund interest on other borrowings taken out on behalf of Yorkshire Water elsewhere in the group and dividends to the owners of Yorkshire Water totalling £110.0m as detailed in Table 1A commentary.

Included in Line 1D.16 is the net proceeds from disposal of the Non-Household Retail business of £3.4m.

£26.377m in relation to Grants and Contribution has been treated as cash generated from operations in the statutory cash flow. In accordance with the RAGs this is presented in investing activities in Table 1D.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1E – Net debt analysis (appointed activities)

For the 12 months ended 31 March 2020

Line description		Units	DPs	Interest rate risk profile			
				Fixed rate	Floating rate	Index linked	Total
1E.1	Borrowings (excluding preference shares)	£m	3	2492.520	1303.422	1795.931	5591.873
1E.2	Preference share capital	£m	3				0.000
1E.3	Total borrowings	£m	3				5591.873
1E.4	Cash	£m	3				-67.962
1E.5	Short term deposits	£m	3				-180.115
1E.6	Net debt	£m	3				5343.796
1E.7	Gearing	%	2				76.88%
1E.8	Adjusted gearing	%	2				77.80%
1E.9	Full year equivalent nominal interest cost	£m	3	71.489	14.159	174.999	260.647
1E.10	Full year equivalent cash interest payment	£m	3	71.489	14.159	84.075	169.723
A – Indicative interest rates							
1E.11	Indicative weighted average nominal interest rate	%	2	2.87%	1.09%	9.74%	4.66%
1E.12	Indicative weighted average cash interest rate	%	2	2.87%	1.09%	4.68%	3.04%
1E.13	Weighted average years to maturity	nr	2	12.54	6.50	23.58	14.68

Table 1E contains information about our financing structure and the associated interest costs of that financing.

Interest payable and interest receivable on our borrowings is on either a fixed rate, floating rate or inflation linked basis and the company manages the issuance of new debt to ensure that Yorkshire Water's debt maturity profile avoids repayment concentrations, meaning that we avoid the situation where large amounts of debt must be re-paid at the same time. This assists with the company's future refinancing requirements. Our debt has a weighted average years to maturity (line 1E.13) of approximately 15 years, which is consistent with the planned approach to the company's financing requirements.

All figures in Table 1E have been calculated in reference to 'RAG 4.08 – Guideline for the table definitions in the annual performance report'. Borrowings have been calculated on a notional basis so not to include any fair value adjustments based upon our interpretation of Ofwat's guidance. This means, consistent with the prior year, there is a difference between borrowings reported in Table 1C and Table 1E and the table on page 167 provides a reconciliation of the difference.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Reconciliation of borrowing amounts contained within Table 1C (lines 15 & 22) to Table 1E (line 1)	£m
Table 1C:	£m
1C.15 – Borrowings (Current liabilities)	-374.9
1C.22 – Borrowings (Non-Current liabilities)	-5223.2
Table 1C – Borrowings	-5598.1
Adjustments:	
(i) Fair value adjustments of bonds held in subsidiary companies included in table 1C but not included in table 1E	145.9
(ii) Collateralised loan included in table 1C but not included in table 1E	14.3
(iii) Accretion of IL swaps not included in table 1C but included in table 1E	-154.0
Total adjustments	6.2
Table 1E – Borrowings	-5591.9

Table 1E Line 1: Borrowings (excluding preference shares)

Fixed rate debt has increased year-on-year due to the issue of £750m fixed rate bonds which was offset by the maturity of a £275m fixed rate bond and amortisation of European Investment Bank fixed rate loans.

Floating rate debt has reduced marginally due to amortisation of finance leases, amortisation of European Investment Bank floating rate loans and a marginal reduction in year-end drawings on the revolving credit facility.

Index linked debt has increased due to indexation in the year.

Table 1E Lines 2 and 3:

These are calculated cells.

Table 1E Line 4: Cash

This reports cash in hand and at bank at the year-end.

Table 1E Line 5: Short term deposits

This line reports investments which are readily convertible into known amounts of cash

Table 1E Line 6: Net debt

This is a calculated cell.

Table 1E Line 7: Gearing

This contains Yorkshire Water's regulatory gearing, the calculation of which is "Net Debt" as provided in Table 1E Line 6, divided by the company's RCV as provided in Table 4C Line 5.

Table 1E Line 8: Adjusted gearing

This represents Yorkshire Water Senior RAR (the definition of which is contained within the terms of Yorkshire Water's Whole Business Securitisation structure).

Actual and forecast amounts of Yorkshire Water's Senior RAR are published twice a year within Compliance Certificates (which is required as part of the terms of Yorkshire Water's Whole Business Securitisation structure). These can be found within the 'Investor Centre' section of the Kelda Group website at keldagroup.com

Table 1E Lines 9 to 12:

These lines contain the full year equivalent nominal and cash interest along with indicative weighted average interest rates.

Fixed interest has decreased year-on-year as the new fixed rate bonds were raised at a lower average rate than the maturing bonds.

Retail price inflation has increased from 2.4 per cent at 31 March 2019 to 2.6 per cent at 31 March 2020, which is the primary cause of the increase in the weighted average nominal interest rate of indexed linked debt.

Table 1E Line 13: Weighted average years to maturity

The weighted average maturity has risen slightly as the maturity of the new fixed rate bonds issued has been partially offset by the natural reduction in maturity of other debt being one year on.

Technical notes

Yorkshire Water and its financing subsidiaries raise debt finance from a number of sources including, amongst other areas, bank debt, bond debt and finance leases. Any borrowings raised by Yorkshire Water’s financing subsidiaries are on-lent to Yorkshire Water, with Yorkshire Water paying interest to those subsidiaries on the same terms as the financing subsidiaries have borrowed at. This is illustrated in the diagram below.

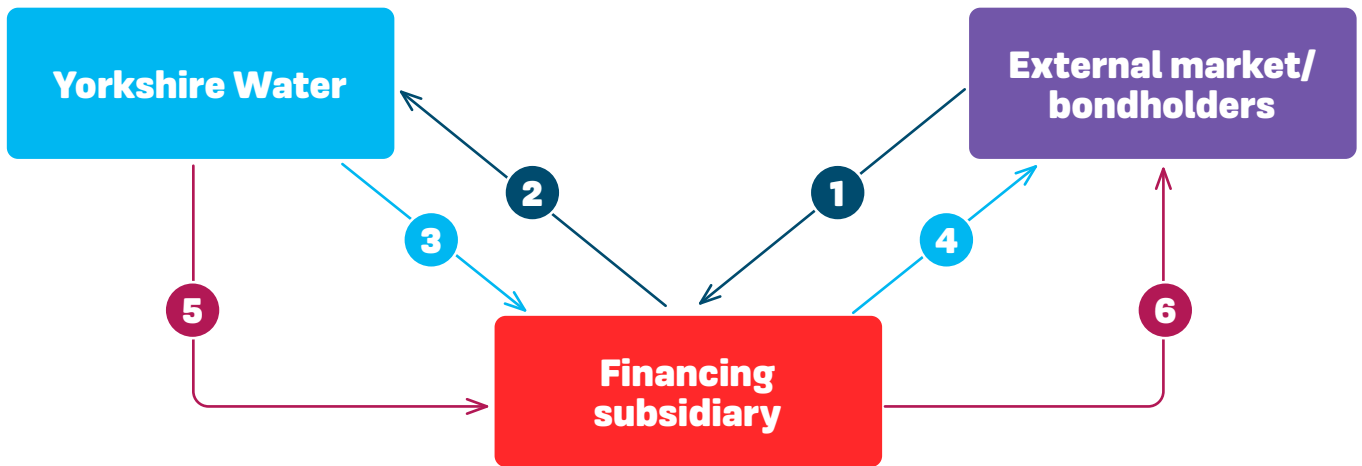


Illustration of borrowing by Yorkshire Water finance subsidiary and on-lending to Yorkshire Water

Key to the diagram above:

A. Debt raised

1. Financing subsidiary raises £100m fixed rate bond from the external market with a coupon payable of 5.0% per annum with a maturity of 10 years.
2. Financing subsidiary lends the £100m debt raised to Yorkshire Water.

B. Annual interest payments

3. Yorkshire Water pays £5m interest to Financing subsidiary on an annual basis.
4. Financing subsidiary pays £5m interest to external bond holders on an annual basis.

C. Debt repaid

5. Yorkshire Water pays back £100m to Financing subsidiary on maturity date.
6. Financing subsidiary repays bond holders £100m on maturity date.

Table 1F – Financial flows (Price Base – 2012-2013 RPI Average)

For the 12 months ended 31 March 2020

				12 Months ended 31 March 2020					
Line description		Units	DPs	%			£m		
				Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity
A									
1F.1	Return on regulatory equity	£m	3	5.65%	3.57%	5.65%	122.363	77.273	77.273
1F.2	Actual performance adjustment 2010-15	£m	3	1.08%	0.68%	1.08%	23.390	14.771	14.771
1F.3	Adjusted Return on regulatory equity	£m	3	6.73%	4.25%	6.73%	145.753	92.044	92.044
1F.4	Regulatory equity	£m	3	2165.725	2165.725	1367.661			
B – Financing									
1F.5	Gearing	£m	3	0.00%	2.42%	2.42%	0.000	33.058	33.058
1F.6	Variance in corporation tax	£m	3	0.00%	-0.26%	-0.40%	0.000	-5.535	-5.535
1F.7	Group relief	£m	3	0.00%	0.00%	0.00%	0.000	0.000	0.000
1F.8	Cost of debt	£m	3	0.00%	2.05%	3.96%	0.000	44.341	54.144
1F.9	Hedging instruments	£m	3	0.00%	-1.16%	-2.24%	0.000	-25.144	-30.703
1F.10	Financing total	£m	3	6.73%	7.30%	10.46%	145.753	138.764	143.008
C – Operational Performance									
1F.11	Totex out/(under) performance	£m	3	0.00%	-0.83%	-1.31%	0.000	-17.953	-17.953
1F.12	ODI out/(under) performance	£m	3	0.00%	1.28%	2.02%	0.000	27.673	27.673
1F.13	Retail out/(under) performance	£m	3	0.00%	-0.88%	-1.39%	0.000	-18.993	-18.993
1F.14	Other exceptional items	£m	3	0.00%	0.00%	0.00%	0.000	0.000	0.000
1F.15	Operational performance total	£m	3	0.00%	-0.43%	-0.68%	0.000	-9.273	-9.273
1F.16	Total earnings	£m	3	6.73%	6.87%	9.78%	145.753	129.491	133.735
1F.17	RCV growth from RPI inflation	£m	3	2.59%	2.59%	2.59%	56.092	56.092	35.422
1F.18	Total shareholder return	£m	3	9.32%	4.46%	12.37%	201.846	185.583	169.157
1F.19	Net dividend	£m	3	4.00%	2.42%	3.83%	86.629	52.395	52.395
1F.20	Retained value	£m	3	5.32%	7.04%	8.54%	115.217	133.188	116.762
D – Dividends reconciliation									
1F.21	Gross dividend	£m	3	4.00%	4.28%	6.77%	86.629	92.628	92.628
1F.22	Interest received on intercompany loans	£m	3	0.00%	1.86%	2.94%	0.000	40.233	40.233
1F.23	Net dividend	£m	3	4.00%	2.42%	3.83%	86.629	52.395	52.395

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1F – Financial flows (Price Base – 2012-2013 RPI Average) (continued)

For the 12 months ended 31 March 2020

				Average 2015-2019					
Line description		Units	DPs	%			£m		
				Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity
A									
1F.1	Return on regulatory equity	£m	3	5.65%	3.60%	5.65%	118.730	75.552	75.552
1F.2	Actual performance adjustment 2010-15	£m	3	1.48%	0.94%	1.48%	31.101	19.791	19.791
1F.3	Adjusted Return on regulatory equity	£m	3	7.13%	4.54%	7.13%	149.831	95.342	95.342
1F.4	Regulatory equity	£m	3	2101.413	2101.413	1337.197			
B – Financing									
1F.5	Gearing	£m	3	0.00%	2.60%	2.60%	0.000	34.745	34.745
1F.6	Variance in corporation tax	£m	3	0.00%	-0.68%	-1.07%	0.000	-14.336	-14.336
1F.7	Group relief	£m	3	0.00%	0.58%	0.92%	0.000	12.288	12.288
1F.8	Cost of debt	£m	3	0.00%	0.84%	1.57%	0.000	17.573	21.016
1F.9	Hedging instruments	£m	3	0.00%	-1.48%	-2.84%	0.000	-31.131	-37.914
1F.10	Financing total	£m	3	7.13%	6.39%	8.31%	149.831	114.481	111.141
C – Operational Performance									
1F.11	Totex out/(under) performance	£m	3	0.00%	-0.27%	-0.42%	0.000	-5.682	-5.682
1F.12	ODI out/(under) performance	£m	3	0.00%	0.61%	0.95%	0.000	12.736	12.736
1F.13	Retail out/(under) performance	£m	3	0.00%	-0.48%	-0.75%	0.000	-10.074	-10.074
1F.14	Other exceptional items	£m	3	0.00%	-0.05%	-0.07%	0.000	-0.979	-0.979
1F.15	Operational performance total	£m	3	0.00%	-0.19%	-0.30%	0.000	-3.999	-3.999
1F.16	Total earnings	£m	3	7.13%	6.20%	8.01%	149.831	110.482	107.142
1F.17	RCV growth from RPI inflation	£m	3	2.58%	2.58%	2.58%	54.216	54.216	34.500
1F.18	Total shareholder return	£m	3	9.71%	8.78%	10.59%	204.047	164.699	141.642
1F.19	Net dividend	£m	3	4.00%	1.80%	2.84%	84.057	37.913	37.913
1F.20	Retained value	£m	3	5.71%	6.98%	7.76%	119.991	126.786	103.729
D – Dividends reconciliation									
1F.21	Gross dividend	£m	3	4.00%	4.33%	6.80%	84.057	90.895	90.895
1F.22	Interest received on intercompany loans	£m	3	0.00%	2.52%	3.96%	0.000	52.982	52.982
1F.23	Net dividend	£m	3	4.00%	1.80%	2.84%	84.057	37.913	37.913

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 1F has been developed by Ofwat to improve financial transparency. It aims to enable a comparison between actual financial flows to the company's investors under the actual capital structures which companies have adopted, and what they would have been under the structure Ofwat have used for setting the prices that customers pay.

In order to illustrate this difference in structures the table includes the following three columns:

- **Notional returns and notional regulatory equity** – The value column in £m represents the notional returns set by Ofwat as part of the PR14 final determination. The percentage column represents the notional return divided by the notional regulated equity, which is calculated based on Ofwat's PR14 notional equity level of 37.5%.
- **Actual returns and notional regulatory equity** – The value column in £m represents the actual returns earned by the Company. The percentage column represents the actual return divided by the notional regulated equity, which is calculated based on Ofwat's PR14 notional equity level of 37.5%.
- **Actual returns and actual regulatory equity** – The value column in £m represents the actual returns earned by the Company. The percentage column represents the actual return divided by our actual regulated equity, which is calculated based on our average level of equity for the year (24% for the current year).

As our actual regulated equity (24%) is lower than Ofwat's notional regulated equity (37.5%), the actual return on actual equity column will show different percentage returns for the same performance in £m terms. In our case, as we have higher leverage than Ofwat's notional company, any underperformance will adversely impact returns disproportionately for shareholders. Conversely, any outperformance will deliver proportionately greater returns.

Section A:

Table 1F Line 1: Return on regulatory equity

This value has been taken from the PR14 final determination weighted average cost of capital, this is 5.65% for the period 2015-2020. This was set by Ofwat in December 2014.

Table 1F Line 2: Actual performance adjustment 2010-2015

This has been calculated by taking the PR09 out/(under) performance adjustments contained within our PR14 final determination, divided by our regulated equity. The performance adjustments include values for:

- Operating cost and capital expenditure efficiencies delivered during the 2010-2015 period.
- Revenue correction mechanism (RCM) adjustments for variations in allowed and actual revenues during the 2010-2015 period.
- Totex menu additional income.

Table 1F Line 3: Adjusted Return on regulatory equity

This is a calculated line.

Table 1F Line 4: Regulatory equity

Notional regulatory equity

This has been calculated as 62.5% of the average RCV value which was published within our final determination, this value was given as at 2012/2013 average prices and therefore no conversion was required.

Actual regulatory equity

This has been calculated using the actual average gearing level, using the opening and closing net debt as published within Table 1E of the APR.

As our gearing has been above the notional level of gearing of 62.5%, (on average within AMP6 our gearing has been 76%) our actual regulated equity is lower than the notional regulated equity.

Section B: Financing

Table 1F Line 5: Gearing

This has been calculated in line with Ofwat guidance, being the variance between the actual average gearing (using the opening and closing net debt as published within Table 1E of the APR) and the notional gearing, which is then multiplied by the variance in the cost of equity to debt.

The positive actual return of 2.42% in 2019/2020 and the cumulative impact over AMP6 of 2.6% is due to our gearing being higher than Ofwat's notional level of gearing.

Whilst our gearing is higher than Ofwat's notional level of gearing our securitised structure protects customers and lenders, with a greater proportion of risk being transferred to our shareholders in exchange for this increased return. The tax benefit resulting from the increased interest costs arising from our more highly geared structure has been passed to our customers through a bill reduction.

Table 1F Line 6. Variance in corporation tax

This has been calculated in line with Ofwat guidance, the calculation is shown below:

	Price base	2015/2016	2016/2017	2017/2018	2018/2019	2018/2019
Tax allowance per PR14 FD	2012/2013 average	1.4	6.8	5.1	5.8	7.3
Tax receivable/(payable) on current year profit/loss	2012/2013 average	(12.2)	(18.1)	(6.5)	6.2	(1.5)
Prior year adjustments – HMRC	2012/2013 average	2.4	-	-	-	-
Deferred capital allowances	2012/2013 average	(24.2)	(6.9)	(6.9)	(19.0)	(11.3)
Calculated tax charge	2012/2013 average	(34.1)	(25.0)	(13.4)	(12.8)	(12.8)
Variance in corporation tax	2012/2013 average	(32.7)	(18.2)	(8.3)	(7.0)	(5.5)

Within the 2019/2020 year we have a tax charge of £1.5m prior to any adjustments made to capital allowances and the utilisation of group relief.

This difference between Ofwat's forecast tax allowance and our actual tax for 2019/2020 of £1.5m has then been adjusted for deferred capital allowances of £11m resulting in the overall variance of £6m.

The average impact of the variation in tax across AMP6 is (0.7%), however this is offset by the average position on the group relief in Table 1F Line 7 of 0.6%.

Table 1F Line 7: Group relief

This has been calculated in line with Ofwat guidance, the calculation is shown below:

	Price Base	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Group relief utilised	2012/2013 average	36.4	25.0	13	13	13
Group relief paid	2012/2013 average	-	-	(13)	(13)	(13)
Line 1F.7	Group relief	36.4	25.0	-	-	-

From 2017/2018 all losses surrendered to Yorkshire Water by other group companies have been paid for in full at the current rate of corporation tax, so there is no financial benefit shown within the table. Prior to 2017/2018 we did not pay for group relief, resulting in the benefit shown within the above table.

Table 1F Line 8: Cost of debt

The cost of debt impact (excluding hedging instruments) has been calculated in line with Ofwat guidance.

The net actual interest paid as reported in table 1A has been adjusted for inter-company interest and then divided by our average net debt (using the opening and closing net debt as reported in table 1E) to calculate the actual nominal cost of debt. To ensure consistency with 2015/2016 to 2017/2018 calculations we have included £87.10m for 2018/2019 and £29m for 2019/2020 which have been moved from table "1A.7 interest expense" to "1A.10 Fair value gains/(losses) on financial instruments". This adjustment is explained in the commentary for table 1A.

Average RPI within the year has then been deducted from the actual nominal cost of debt to calculate the actual real cost of debt.

The difference between the actual real cost of debt and the 2.59% that was included within the PR14 WACC is then calculated.

At PR14 Ofwat's assumed average RPI was 2.8%, in 2015/2016 and 2016/2017 the actual average RPI was below this level at 1.05% and 2.16% respectively; however in 2017/2018 and 2018/2019 the actual average RPI's of 3.74% and 3.06% respectively have been above the forecast RPI. 2019/2020 RPI is 2.59%, therefore back below the 2.8% forecast.

We seek to mitigate RPI risk by having index-linked debt within our portfolio of debt.

Actual returns and notional regulated equity

The difference calculated above is then multiplied by the average RCV and the notional level of gearing (62.5%).

An adjustment is then made for corporation tax at the standard rate.

An adjustment is then made to exclude the element of this variance which is attributed to hedging instruments, reported in line 1F.9.

Actual returns and actual regulated equity

The difference calculated above is then multiplied by the average RCV and the actual average level of gearing (using the opening and closing net debt reported in table 1E).

An adjustment is then made for corporation tax at the standard rate.

An adjustment is then made to exclude the element of this variance which is attributed to hedging instruments, reported in line 1F.9.

Table 1F Line 9: Hedging instruments

We have assessed the impact of our hedging instruments on our overall cost of debt. In the current year we have calculated that our hedging instruments have increased our overall nominal interest rate by 0.86% from 3.80% to the 4.66% stated in Table 1E.

Table 1F Line 10: Financing total

This is a calculated cell.

Section C: Operational performance**Table 1F Line 11: Totex out/(under) performance**

This is taken from the APR calculation for table 4H.5 RORE.

The negative return reflects the significant level of re-investment over and above cost efficiencies previously delivered, to improve operational performance for customers.

Table 1F Line 12: ODI out/(under) performance

This is taken from the APR calculation for table 4H.5 RORE.

The positive return reflects ODI rewards earned for delivering operating performance in excess of our PR14 performance commitments.

Table 1F Line 13: Retail out/(under) performance

This is taken from the APR calculation for table 4H.5 RORE.

Table 1F Line 14: Other exceptional items

We have included the PR19 assessment of SIM on this line. We have followed the guidance provided by Ofwat in "IN20/03 - Expectations for monopoly company annual performance reporting 2019/2020". The total adjustment has been deflated to 2012/2013 price base and included equally across the first four years (2015-2019) only.

Table 1F Line 15: Operational performance total

This is a calculated cell.

Table 1F Line 16: Total earnings

This is a calculated cell.

Table 1F Line 17: RCV growth from RPI inflation

This is the average RPI for 2019/2020.

Table 1F Line 18: Total shareholder return

This is a calculated cell.

Table 1F Line 19: Net dividend

This is a calculated cell.

Actual dividends are lower as a result of our decision to reduce leverage to improve our financial resilience.

Table 1F Line 20: Retained value

This is a calculated cell.

Section D: No section D included on table 1F**Section E: Dividends reconciliation****Table 1F Line 21: Gross dividend**

We have included the gross dividends that were paid from the appointed company within the relevant years.

This has been deflated to 2012/2013 average prices.

Table 1F Line 22: Interest received on intercompany loans

We have included the value that the appointed company receives in the year on inter-company loans.

This has been deflated to 2012/2013 average prices.

Table 1F Line 23: Net dividend

This is a calculated cell.

Price control and other segmental reporting

The information in this section comprises various financial analyses as required by Ofwat, with a brief description of significant variances compared to previous years:

- [Table 2A](#): Segmental income statement
- [Table 2B](#): Totex analysis – wholesale water and wastewater
- [Table 2C](#): Operating cost analysis – retail
- [Table 2D](#): Historic cost analysis of tangible fixed assets – wholesale and retail
- [Table 2E](#): Analysis of ‘grants and contributions’ and land sales – wholesale
- [Table 2F](#): Revenue by customer type – household
- [Table 2G & 2H](#): Revenues by tariff type – non-household water and wastewater
- [Table 2I](#): Revenue analysis and wholesale control reconciliation
- [Table 2J](#): Infrastructure network reinforcement costs
- [Table 2K](#): New connections reconciliation

Where further explanation of specific information is required, technical notes are included as appropriate.

Table 2A – Segmental income statement

For the 12 months ended 31 March 2020

Table 2A is a summary table showing retail and wholesale revenue and expenditure, including any recharges associated with principle use of assets.

Line description	Units	DPs	Retail	
			Household	Non-household
2A.1 Revenue – price control	£m	3	66.055	7.779
2A.2 Revenue – non price control	£m	3	0.000	0.000
2A.3 Operating expenditure	£m	3	-65.615	-14.362
2A.4 Depreciation – tangible fixed assets	£m	3	-2.224	-1.851
2A.5 Amortisation – intangible fixed assets	£m	3	-0.557	0.000
2A.6 Other operating income	£m	3	0.000	3.442
2A.7 Operating profit before recharges	£m	3	-2.341	-4.992
A – Recharge in respect of ‘principal use’ assets				
2A.8 Recharges from other segments	£m	3	-2.066	0.000
2A.9 Recharges to other segments	£m	3	0.000	0.000
2A.10 Operating profit	£m	3	-4.407	-4.992
2A.11 Surface water drainage rebates	£m	3		

The Thames Tideway Tunnel (TTT) column is not applicable to Yorkshire Water.

Key

Input cell
 Calculation cell
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Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2A – Segmental income statement (continued)

For the 12 months ended 31 March 2020

Table 2A is a summary table showing retail and wholesale revenue and expenditure, including any recharges associated with principle use of assets.

Line description	Units	DPs	Wholesale							Total
			Water resources	Water Network Plus	Water total	Wastewater Network Plus	Sludge	Waste-water total	TTT	
2A.1 Revenue – price control	£m	3		437.778	437.778	543.431		543.431	0.000	1055.043
2A.2 Revenue – non price control	£m	3		1.377	1.377	0.793		0.793	0.000	2.170
2A.3 Operating expenditure	£m	3	-28.827	-219.076	-247.903	-181.004	-32.453	-213.457	0.000	-541.337
2A.4 Depreciation – tangible fixed assets	£m	3	-9.282	-112.372	-121.654	-163.015	-18.677	-181.692	0.000	-307.421
2A.5 Amortisation – intangible fixed assets	£m	3	-0.084	-0.576	-0.660	-13.862	0.000	-13.861		-15.078
2A.6 Other operating income	£m	3	0.000	1.333	1.333	3.012	0.000	3.012		7.787
2A.7 Operating profit before recharges	£m	3			70.271			138.226	0.000	201.164
A – Recharge in respect of ‘principal use’ assets										
2A.8 Recharges from other segments	£m	3	-0.572	-11.983	-12.555	-12.950	-1.892	-14.842		-29.463
2A.9 Recharges to other segments	£m	3	0.000	0.000	0.000	29.451	0.000	29.451		29.451
2A.10 Operating profit	£m	3			57.716			152.835	0.000	201.152
2A.11 Surface water drainage rebates	£m	3								0.313

The Thames Tideway Tunnel (TTT) column is not applicable to Yorkshire Water.

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2B – Totex analysis – wholesale water and wastewater

For the 12 months ended 31 March 2020

This table breaks down wholesale totex expenditure into the price controls required to be reported in accordance with the regulatory accounting guidelines specified by Ofwat. This is an aggregation of the information held in tables 4D and 4E (these tables are supported by specific commentary).

Further commentary on capital expenditure is detailed in Table 4B.

Line description	Units	DPs	Water Resources	Water Network Plus	Wastewater Network Plus	Sludge	TTT	Total
A – Operating expenditure								
2B.1	Power	£m	3	2.220	25.837	33.242	-3.071	58.228
2B.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000	-2.262	-2.262
2B.3	Abstraction charges/discharge consents	£m	3	5.549	0.004	6.264	0.000	11.817
2B.4	Bulk supply/Bulk discharge	£m	3	3.804	0.000	0.000	0.000	3.804
2B.5	Other operating expenditure – renewals expensed in year (Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000
2B.6	Other operating expenditure – renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000
2B.7	Other operating expenditure – excluding renewals	£m	3	9.331	158.902	121.463	36.373	326.069
2B.8	Local authority and Cumulo rates	£m	3	7.923	32.878	20.035	1.413	62.249
2B.9	Total operating expenditure excluding third party services	£m	3	28.827	217.621	181.004	32.453	459.905
2B.10	Third party services	£m	3	0.000	1.455	0.000	0.000	1.455
2B.11	Total operating expenditure	£m	3	28.827	219.076	181.004	32.453	461.360
B – Capital Expenditure								
2B.12	Maintaining the long term capability of the assets – infra	£m	3	7.787	29.044	34.315	0.000	71.146
2B.13	Maintaining the long term capability of the assets – non-infra	£m	3	1.388	73.923	83.927	79.530	238.768
2B.14	Other capital expenditure – infra	£m	3	0.718	40.755	44.421	0.000	85.894
2B.15	Other capital expenditure – non-infra	£m	3	3.313	42.965	63.903	2.326	112.507
2B.16	Infrastructure network reinforcement	£m	3	0.000	4.418	2.767	0.000	7.185
2B.17	Total gross capital expenditure excluding third party services	£m	3	13.206	191.105	229.333	81.856	515.500
2B.18	Third party services	£m	3	0.000	0.000	0.000	0.000	0.000
2B.19	Total gross capital expenditure	£m	3	13.206	191.105	229.333	81.856	515.500

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2B – Totex analysis – wholesale water and wastewater (continued)

For the 12 months ended 31 March 2020

This table breaks down wholesale totex expenditure into the price controls required to be reported in accordance with the regulatory accounting guidelines specified by Ofwat. This is an aggregation of the information held in tables 4D and 4E (these tables are supported by specific commentary).

Further commentary on capital expenditure is detailed in Table 4B.

Line description	Units	DPs	Water Resources	Water Network Plus	Wastewater Network Plus	Sludge	TTT	Total
C – Grants and contributions								
2B.20 Grants and contributions	£m	3	0.233	15.950	10.590	0.000		26.773
2B.21 Totex	£m	3	41.800	394.231	399.747	114.309	0.000	950.087
D – Cash Expenditure								
2B.22 Pension deficit recovery payments	£m	3	0.000	0.000	0.000	0.000		0.000
2B.23 Other cash items	£m	3	0.000	0.000	0.000	0.000		0.000
E – Total								
2B.24 Totex including cash items	£m	3	41.800	394.231	399.747	114.309	0.000	950.087

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Overall totex

Overall wholesale totex in 2019/2020 is above the funding within the final determination increasing by £24m from our previous forecast in 2012-13 prices, £11m due to excluding the adjustment for the penalty reinvestment and £14m due to an increase in forecast spend.

The water totex programme is again over its in year final determination, however, there has been a year-on-year reduction within clean water opex which incurred exceptional costs due to the dry weather in 2018. The wholesale water capex programme spend in year has allowed us to continue to target upper quartile performance in leakage and interruptions to supply with both performance commitments achieving better than target service levels and outperformance incentive payments.

Wastewater totex is also more than the final determination in the current report year. The reduction in clean water operating costs has been offset by an increase in waste operating costs relating to the recovery of service after a series of flooding incidents. The wholesale wastewater capex programme spend is also higher than in year final determination which again relates to a change in the timing of investment relating to changes made to the National Environment Programme (NEP) quality programme after the final determination and the reinvestment of savings to fund the continuation of the upper quartile programme targeting improvements in internal sewer flooding and pollution with both performance commitments achieving better than target service levels and outperformance incentive payments.

Further details of the changes in both operating costs and capital costs from the latest reported position are identified below:

Table 2B Lines 1-11: Operating expenditure

2019/2020 wholesale operating expenditure in total is broadly consistent to 2018/2019. However, there has been a year-on-year reduction within clean water which incurred exceptional costs due to the dry weather in 2018. The reduction in clean water costs was offset by an increase in waste operating costs relating to a series of flooding incidents. The main movements in wholesale operating expenditure are described below:

- Between November 2019 and February 2020 severe flooding occurred across the United Kingdom. The first wave of flooding mainly affected Yorkshire and the Humber, the East Midlands and the West Midlands. Further isolated flooding incidents occurred in December and January, before the second main wave of flooding, caused by Storms Ciara and Dennis, in February 2020. The events resulted in damage to our assets and increased operational mitigation costs.
- The ongoing operational sludge mitigation costs resulting from the severe floods in December 2015 have reduced by £2.6m from £6.3m in 2018/2019 to £3.7m in 2019/2020.

- The reduction in clean water costs year-on-year are associated with exceptional costs that were experienced in the dry summer of 2018, partially offset by increase in leakage costs to improving operational performance ahead of leakage reduction targets in AMP7.
- Further clean water cost increases are associated with above inflationary increase on chemical prices.

A new version of SAP has been implemented during the financial year (SAP S4 replacing SAP ECC), and a further review of operating cost allocations and SAP processes has been undertaken to strengthen our compliance with Regulatory Accounting Guidelines. Whilst technical changes have been made in the underlying system, the previous processes and allocation methods were found to be robust and are unchanged in principle from the previous APR submission.

Further explanation of significant operating expenditure movements for each of the four price controls (water resources, water Network Plus, wastewater Network Plus and sludge) are detailed below, together with technical notes.

Water Resources

The year-on-year reduction for water resources relates to the high exceptional drought costs associated with the dry and hot summer of 2018, which were not experienced in 2019/2020. Wet weather has comparatively less impact on the water price control than wastewater and typically results in reduced demand, fewer network repairs due to more stable ground conditions, and increased treatment costs from higher turbidity levels in river sources.

In the summer of 2018, Yorkshire Water's raw water network was used to pump water large distances across the region to optimise water resources, which significantly increased energy costs. Other than this, there are no significant underlying year-on-year movements in operating expenditure associated with water resources.

Water Network Plus

Similarly, with Water Resources, this price control has seen a reduction in operating costs from 2018/2019 principally as a result of costs associated with the exceptional 2018 summer which was not repeated in 2019/2020.

There have been underlying increases in costs for the water treatment upstream service due to an increase in chemical prices of 8% which was significantly in excess of general inflation. This has been compounded with an increase in chemical consumption due to heavy rainfall in 2019/2020 impacting raw water quality.

Treated water distribution price control has also seen a slight increase in costs in 2019/2020 due to a deliberate proactive investment programme to improve leakage performance, including the insourcing of leakage detection resources.

Wastewater Network plus

The increase in costs in this price control are primarily within the Sewage Collection upstream services, where increased investment was planned to improve performance in readiness for enhanced AMP7 regulatory targets (starting April 2020). This proactive activity also involved insourcing the below ground sewer maintenance team, which resulted in a slight increase in overhead allocations where relevant costs are applied by headcount. Increased investment is targeted to improve some of the common performance commitments by increasing sewer rehabilitation, reducing the chance of repeat incidents by minimising any backlog of jobs, and more focused proactive investigation and repairs to the sewer network. Increases in sewage collection upstream services costs have also resulted from the ownership transfer of pumping stations which were previously private. Many of these pumping stations required significant levels of investment and maintenance to bring them into line with company and industry standards.

As with the drive for operational performance improvements in sewage collection, a further investment increase was planned within sewage treatment (mostly consumables and contracted services) to reduce pollution risks and reduce compliance failure. Following efficiencies including chemical dosing optimisation, the underlying sewage treatment upstream service costs have been broadly consistent with previous years. The increase in costs is due to flooding related costs for affected assets, which incurred from November 2019 through to the end of the financial year, and an increase in power consumption cost due to higher than average flows.

Bioresources

The reduction in operating costs for bio resources is due to asset improvements made in this area, with the retirement of outdated incinerator technology. An unreliable and expensive incinerator, which frequently required mitigation costs during operational failures, has been replaced by an anaerobic digestion plant which is considerably more reliable, efficient and generates electricity. This asset has been now been fully tested and optimised to increase energy generation and sludge treatment. The management team have worked hard to reduce the continuing expenditure from asset outage (sludge mitigation costs) associated from the asset damage arising from the December 2015 floods, which has also contributed towards reduced operating costs year on year (£2.6m). All assets impacted by the December 2015 floods, are expected to be operational in 2020/2021, which would see further improvements in this price control.

The sludge transport price control within bioresources has seen a reduction of costs, primarily associated with readiness for the outsource of this upstream service of bioresources.

Technical notes

The operating cost lines in the tables have not been adjusted to exclude the pension deficit contribution. This is because Yorkshire Water's defined benefit scheme is accounted for under the FRS102 accounting standard which applies the same rules as a defined contribution scheme. Historical pension scheme deficit cannot be allocated between the different group entities. This results in all cash contributions being recognised as operating expenditure, including pension deficit contributions. The treatment by Yorkshire Water is different to most other WASC's who have adopted IFRS and are required to follow defined benefit pension scheme accounting, therefore excluding cash contributions in excess of the IAS 18 defined benefit pension cost from the operating expenditure. The unit rate shown on tables 4D and 4E is calculated using the operating costs line, therefore, Yorkshire Water's rate appear slightly higher than the other companies who exclude these pension contributions. We confirmed this approach with Ofwat previously and, consistent with previous APR reporting, have continued to adopt this principle in the 2019/2020 APR.

Table 2B Lines 12-21: Capital expenditure and Grants and contributions

Gross regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes in the current reporting year was £515.5m. With the associated income totalling £26.8m the net expenditure in the current reporting year was £488.7m.

Within our gross capital expenditure, we have included 2020-2025 transition expenditure of £6.2m. This is per 'IN 20/03' published in April 2020 which requested that we deviate from RAG 4.08 by including expenditure related to our AMP7 transition programme.

Excluding 2020-2025 transition expenditure our gross regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes in the current reporting year was £509.3m. With the associated income totalling £26.8m the net expenditure in the current reporting year was £482.6m. All further commentary below also excludes any 2020-2025 transition expenditure.

A total of £200.7m has enabled us to deliver our National Environment Programme (NEP) quality programme outputs, drive improvements on four of our performance commitments to deliver upper quartile performance in AMP7 as well as supporting any statutory requests for new assets as part of our supply demand programme supporting development across the region.

The remaining £308.7m has been to maintain our infra and non-infra asset base which, despite the extreme weather events we have experienced throughout this AMP period, has resulted in all four Stability and Reliability (S&R) baskets remaining stable.

Over the AMP6 period a total of £2,141.5m of gross regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes has been invested including the AMP6 transition spend of £15.2m in 2014/2015. This includes a total of £46.4m investment that was required to repair or replace our assets damaged during the extreme flooding events we have experienced over the AMP period which has been claimed through our insurance and offset within our operating costs.

Not included in the above gross expenditure is investment totalling £99.6m which has subsequently been reallocated each year to operating costs in line with the Regulatory Accounting Guidelines (RAG) as this is associated with International Accounting Standard (IAS) 16 minor repair, inspection and investigation investment.

Over the full AMP period a total of £134.5m of grants and contributions have been received, a further breakdown of these is reported in [Table 2E](#) along with detailed commentary explaining variances to the original plan.

The total net regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes for the AMP6 period is £2,007.0m. After adjusting this for investment relating to flood events and IAS16 the total regulatory capital expenditure for AMP6 is £2,059.7m. This is a variance of 1.0% when compared to the capital element of the totex final determination of £2,080.6m.

Table 2C – Operating cost analysis – retail

For the 12 months ended 31 March 2020

Table 2C further breaks down the retail operating costs included in [Table 2A](#) into cost categories.

Line description	Units	DPs	Household	Non-Household	Total
Operating expenditure					
2C.1 Customer services	£m	3	27.207	1.906	29.113
2C.2 Debt management	£m	3	4.029	0.000	4.029
2C.3 Doubtful debts	£m	3	24.080	6.155	30.235
2C.4 Meter reading	£m	3	1.524	0.055	1.579
2C.5 Services to developers	£m	3		1.009	1.009
2C.6 Other operating expenditure	£m	3	8.775	5.237	14.012
2C.7 Total operating expenditure excluding third party services	£m	3	65.615	14.362	79.977
2C.8 Third party services operating expenditure	£m	3	0.000	0.000	0.000
2C.9 Total operating expenditure	£m	3	65.615	14.362	79.977
2C.10 Depreciation – tangible fixed assets	£m	3	2.224	1.851	4.075
2C.11 Amortisation – intangible fixed assets	£m	3	0.000	1.983	1.983
2C.12 Total operating costs	£m	3	67.839	18.196	86.035
2C.13 Debt written off	£m	3	17.708	3.002	20.710

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Household retail operating costs

Household retail operating costs have increased by £6.9m to £67.8m in 2019/2020. The principal reasons for the increase relate to bad debt provisioning and the increased focus on customer service ahead of the new AMP7 performance measures:

- There has also been an increase in the bad debt charge as there has been a reform of the benefits system by the Government (Universal Credit). This has resulted in a reduction in customers who use the Water Direct scheme from the Department of Work and Pensions to pay their water bills, under which payment was more certain. Furthermore, the increase in doubtful debts for year ended 31 March 2020 has been impacted by Covid-19, where subsequent general economic pressures from reduced economic activity continues to bring further uncertainty to the payment of domestic bills.
- A further increase is from a planned focus and investment for customer service, which has involved the creation of a new Customer Experience Directorate within Yorkshire Water. This team has significantly increased its focus for performance measures for AMP7.

Non-household retail operating costs

The non-household part of the business has now been disposed of during the financial year. Non-household retail operating costs increased to £18.2m in 2019/2020, an increase of £1.6m compared to £16.6m in 2018/2019. The majority of this increase relates to one-off costs associated with potential bad debts arising from the impact of Covid-19 on business customers.

2D – Historic cost analysis of fixed assets – wholesale & retail

For the 12 months ended 31 March 2020

Line description	Units	DPs	Wholesale					Total	
			Water Resources	Water Network Plus	Wastewater Network Plus	Sludge	TTT		
A – Recharge in respect of ‘principal use’ assets									
2D.1	At 1 April 2019	£m	3	382.129	4717.090	5290.098	570.882		11018.130
2D.2	Disposals	£m	3	-6.881	-133.719	-166.023	-51.666		-360.675
2D.3	Additions	£m	3	10.696	168.110	214.109	61.961		456.734
2D.4	Adjustments	£m	3	-6.641	-81.121	-90.691	0.000		-178.453
2D.5	Assets adopted at nil cost	£m	3	0.000	0.000	11.657	0.000		11.657
2D.6	At 31 March 2020	£m	3	379.303	4670.360	5259.150	581.177	0.000	10947.393
B – Depreciation									
2D.7	At 1 April 2019	£m	3	-76.575	-1664.289	-1308.139	-208.498		-3293.391
2D.8	Disposals	£m	3	6.881	133.719	165.924	51.666		360.576
2D.9	Adjustments	£m	3	0.000	0.000	0.000	0.000		0.000
2D.10	Charge for the year	£m	3	-9.282	-112.372	-163.015	-18.677		-307.421
2D.11	At 31 March 2020	£m	3	-78.976	-1642.942	-1305.230	-175.509	0.000	-3240.236
2D.12	Net book amount at 31 March 2020	£m	3	300.327	3027.418	3953.920	405.668	0.000	7707.157
2D.13	Net book amount at 1 April 2019	£m	3	305.554	3052.801	3981.959	362.384	0.000	7724.739
D – Depreciation charge for year									
2D.14	Principal services	£m	3	-9.282	-112.372	-163.015	-18.677		-307.421
2D.15	Third party services	£m	3	0.000	0.000	0.000	0.000		0.000
2D.16	Total	£m	3	-9.282	-112.372	-163.015	-18.677	0.000	-307.421

Table 2D analyses changes in the fixed assets of both wholesale and retail activities of Yorkshire Water.

Our accounting policies in relation to fixed assets and depreciation are set out in full in note 1 of the statutory Annual Report and Financial Statements which can be found on our reports page here: yorkshirewater.com/reports

The table above details that the net book value of fixed assets at 31 March 2020 amounts to £7,707m, a decrease of £18m since the start of the year. This movement includes fixed asset additions of £456m less a depreciation charge in the year of £308m.

The additions in 2019/2020 are slightly below that in 2018/2019 (£15m) as is typical towards the end of an AMP period as the majority of the asset investment projects have completed before the final year of the AMP period.

We see a significant increase in disposals, largely of assets with zero net book value. In addition, the incinerator assets have been fully written off as they have been replaced towards the end of the AMP period.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

2D – Historic cost analysis of fixed assets – wholesale & retail (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Retail	
			Household	Non-household
A – Recharge in respect of ‘principal use’ assets				
2D.1 At 1 April 2019	£m	3	45.413	12.518
2D.2 Disposals	£m	3	-2.282	-0.104
2D.3 Additions	£m	3	1.831	0.027
2D.4 Adjustments	£m	3	0.000	0.000
2D.5 Assets adopted at nil cost	£m	3	0.000	0.000
2D.6 At 31 March 2020	£m	3	44.962	12.441
B – Depreciation				
2D.7 At 1 April 2019	£m	3	-30.168	-5.722
2D.8 Disposals	£m	3	2.282	0.104
2D.9 Adjustments	£m	3	0.000	0.000
2D.10 Charge for the year	£m	3	-2.224	-1.851
2D.11 At 31 March 2020	£m	3	-30.110	-7.469
2D.12 Net book amount at 31 March 2020	£m	3	14.852	4.972
2D.13 Net book amount at 1 April 2019	£m	3	15.245	6.796
D – Depreciation charge for year				
2D.14 Principal services	£m	3	-2.224	-1.851
2D.15 Third party services	£m	3	0.000	0.000
2D.16 Total	£m	3	-2.224	-1.851

Technical notes

As noted in Table 1C, Yorkshire Water elects under FRS102 to hold infrastructure and land/property assets at valuation rather than historic cost. Due to a downward revaluation of £178m, we have seen a reduction in 2019/2020 in Table 2D.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2E – Analysis of ‘grants and contributions’ and land sales – wholesale

For the 12 months ended 31 March 2020

Line description	Units	DPs	Current year				
			Full recognised in Income statement	Capitalised and amortised (in Income statement)	Fully netted off capex	Total	
A – Grants and contributions – water							
2E.1 Connection charges	£m	3	0.000	5.205	0.000	5.205	
2E.2 Infrastructure charge receipts	£m	3	0.000	3.113	0.000	3.113	
2E.3 Requisitioned mains	£m	3	0.000	4.935	0.000	4.935	
2E.4 Other contributions (price control)	£m	3	0.000	0.397	0.000	0.397	
2E.5 Diversions	£m	3	0.000	2.533	0.000	2.533	
2E.6 Other contributions (non-price control)	£m	3	0.000	0.000	0.000	0.000	
2E.7 Total	£m	3	0.000	16.183	0.000	16.183	
2E.8 Value of adopted assets	£m	3	0.000	0.000		0.000	
B – Grants and contributions – wastewater							
2E.9 Infrastructure charge receipts	£m	3	0.000	5.630	0.000	5.630	
2E.10 Requisitioned sewers	£m	3	0.000	1.291	0.000	1.291	
2E.11 Other contributions (price control)	£m	3	0.000	1.347	0.000	1.347	
2E.12 Diversions	£m	3	0.000	2.322	0.000	2.322	
2E.13 Other contributions (non-price control)	£m	3	0.000	0.000	0.000	0.000	
2E.14 Total	£m	3	0.000	10.590	0.000	10.590	
2E.15 Value of adopted assets	£m	3	0.000	11.657		11.657	
B – Grants and contributions – TTT							
2E.9 Infrastructure charge receipts	£m	3				0.000	
2E.10 Requisitioned sewers	£m	3				0.000	
2E.11 Other contributions (price control)	£m	3				0.000	
2E.12 Diversions	£m	3				0.000	
2E.13 Other contributions (non-price control)	£m	3				0.000	
2E.14 Total	£m	3	0.000	0.000	0.000	0.000	
2E.15 Value of adopted assets	£m	3	0.000	0.000		0.000	
			Current year		Current year		
			Water	Wastewater	TTT	Total	
C – Movements in capitalised grants and contributions							
2E.16 Brought forward	£m	3	168.216	280.796		449.012	
2E.17 Capitalised in year	£m	3	16.183	10.590	0.000	26.773	
2E.18 Amortisation (in income statement)	£m	3	-4.681	-3.833		-8.514	
2E.19 Carried forward	£m	3	179.718	287.553	0.000	467.271	
D – Land sales							
2E.20 Proceeds from disposals of protected land	£000	3	64.410	648.261		712.671	

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2E provides information on capital contributions. In total £26.8m of capital contributions have been received in the current reporting year on the water and wastewater wholesale programmes. Water and wastewater wholesale capital contributions in total across this AMP of £134.5m are higher than that allowed in the final determination of £117.2m.

Table 2E Lines 1-8: Grants and contributions – water

Capital contributions totalling £16.2m on the water programme in the current year are higher than that allowed in the final determination of £15.1m. Capital contributions in total across this AMP totalling £84.2m are higher than that allowed in the final determination of £59.0m

Of this in-year total, £5.2m is the income we have received from developers for new connections which has reduced in the current report year from the average seen over the AMP period of £7.4m. No investment and income associated with Section 45 new connections was allowed for in the FD both in-year and for the AMP period leading to additional income of £34.9m in total being received in comparison to the original plan.

Water infrastructure charge receipts totalling £3.1m have been received in-year, again a reduction against the average seen over the AMP period of £5.4m, but this is in line with the new charging arrangements agreed at the start of the previous report year which reduced the water charge in comparison to that allowed in the final determination. The agreed change in our charging arrangements part way through the AMP period has resulted in a reduction in income of £13.1m against our original plan of £37.9m for the AMP period.

Also, as part of the new charging arrangements we have seen an increase in the current report year with regards to income on requisitioned water mains with a total of £4.9m contributions being received in the current report year against the final determination in-year allowance of £2.5m. Although these charging arrangement changes were agreed in the previous reporting year, we have only seen the real impact of these changes in the current year resulting in us receiving £2.5m more income across the AMP period than allowed for in our original plan of £9.5m.

In the current report year there has been a small amount of income received as contributions in other areas of the programme totalling £0.4m. Again, no allowance was made for these in the original plan.

The remaining income on the water programme relates to income received due to requests to divert our water mains assets which totals £2.5m in the current report year which is in line with the final determination allowance in our original plan. Overall across the AMP period we have received capital contributions totalling £9.8m in comparison to the final determination plan of £11.7m, a reduction of £1.9m which is reflective of the lower level of diversion activity requested than that allowed for in the original plan. This is offset with a reduction in the gross expenditure on mains diversions.

Table 2E Lines 9-15: Grants and contributions – wastewater

Capital contributions totalling £10.6m on the wastewater programme in the current year are lower than that allowed in the final determination of £14.4m. Capital contributions in total across this AMP totalling £50.3m are again lower than that allowed in the final determination of £58.2m

Wastewater infrastructure charge receipts totalling £5.6m have been received in-year which is in line with the average seen over the AMP period of £5.4m but is lower than the £9.8m final determination allowance. This, as with the water infrastructure charge, is reflective of the new charging arrangements agreed at the start of the previous report year which reduced the wastewater charge in comparison to that allowed in the final determination. The agreed change in our charging arrangements part way through the AMP period has resulted in a reduction in income of £9.3m against our original plan of £36.7m for the AMP period.

Also, as part of the new charging arrangements we have seen an increase in the current report year with regards to income on requisitioned sewers, with a total of £1.3m contributions being received against the final determination in-year allowance of £0.6m. We have received a higher contribution rate across the AMP period on sewer requisitions to that allowed for in the original plan which, along with the changes to the charging arrangements, has increased the amount of income we have received across the overall AMP period by £4.2m to £7.2m in total.

In the current report year there has been £1.3m of income received as contributions in other areas of the programme with no allowance made for these in the original plan. The majority of this is associated with income received from developers wanting to utilise our existing wastewater treatment works site at Stocksbridge for further new development. This is a site where we have a new quality obligation, so this income has been allocated against sewage treatment base and other drivers to reflect the solution being delivered.

The remaining income on the wastewater programme relates to income received due to requests to divert our sewer assets which totals £2.3m in the current report year which is lower than the final determination allowance in our original plan of £3.9m. Overall across the AMP period we have received capital contributions totalling £8.2m in comparison to the final determination plan of £18.6m. This is a reduction of £10.4m which is reflective of the lower level of diversion activity requested than that allowed for in the original plan which is offset with a reduction in the gross expenditure on sewer diversions.

Table 2F – Household – revenues by customer type

For the 12 months ended 31 March 2020

Line description	Wholesale charges revenue £m	Retail revenue £m	Total revenue £m	Number of customers (000s)	Average household retail revenue per customer £
2F.1 Unmeasured water only customer	12.796	0.734	13.530	54.497	13
2F.2 Unmeasured wastewater only customer	14.509	0.878	15.387	56.830	15
2F.3 Unmeasured water and wastewater customer	365.151	25.091	390.242	850.036	30
2F.4 Measured water only customer	8.305	0.851	9.156	55.758	15
2F.5 Measured wastewater only customer	9.899	0.788	10.687	58.616	13
2F.6 Measured water and wastewater customer	338.187	37.713	375.900	1114.036	34
2F.7 Total	748.847	66.055	814.902	2189.773	30

Table 2F contains analysis of household retail revenues and customer numbers by customer type.

The number of unmeasured water and wastewater customers has decreased this year by 32,748 from last year. This has been offset by a 41,673 increase in the number of measured water and wastewater customers.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2G – Non-household water – revenues by tariff type

For the 12 months ended 31 March 2020

Line description	Wholesale charges revenue £m	Retail revenue £m	Total revenue £m	Number of customers (000s)	Average household retail revenue per customer £
A – Non-Default tariffs					
2G.1 Total non-default tariffs			0.000		0
B – Default tariffs					
2G.2 n/a			0.000		0
2G.3 n/a			0.000		0
2G.4 n/a			0.000		0
2G.5 n/a			0.000		0
2G.6 Water unmetered	0.510	0.682	1.192	18.169	38
2G.7 Water 0 – 5 MI	26.040	0.935	26.975	98.708	9
2G.8 Water supplies 5 to 50 MI	9.751	0.219	9.970	0.585	374
2G.9 Water supplies 50 MI and over	10.761	1.062	11.823	0.070	15171
2G.10			0.000		0
2G.11			0.000		0
2G.12			0.000		0
2G.13			0.000		0
2G.14			0.000		0
2G.15			0.000		0
2G.16			0.000		0
2G.17			0.000		0
2G.18			0.000		0
2G.19			0.000		0
2G.20			0.000		0
2G.21 Total default tariffs	47.062	2.898	49.960	117.532	25
2G.22 Total	47.062	2.898	49.960	117.532	25
				Number of customers (000s)	Average non-household retail revenue per customer £
C – Revenue per customer					
2G.23 Total				96.919	30

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2G contains an analysis of non-household water revenues and customer numbers by customer type.

The categories are identified in the table shown in the table on the previous page.

The total amount of revenue taken from non-household water customers for the year 2019/2020 was £50m compared to £106.0m in 2018/2019, a decrease of £56m (52.8%). This net reduction in revenue is driven by the sale of the non-household business on 1 October 2019, along with the impact of the annual tariff increases and additional customer billing opportunities since market opening, as identified by our data improvement programme.

The amount of revenue relating to wholesale for 2019/2020 is £47.1m compared to £100m in 2018/2019; this is a reduction of £52.9m (52.9%). Variances to the amount of wholesale revenue assumed at the FD are contained in [Table 2I](#).

The amount of revenue relating to retail for 2019/2020 is £2.9m compared to £6m for 2018/2019; this is a reduction of £3.1m (51.7%). Whilst a reduction in the overall result, increased profits in the larger bands are a result of the way falling block tariffs changed in the market in this financial year.

As of 31 September 2019 (the final day before the sale of the non-household business), the number of non-household water customers was 96,919 compared to 114,040 customers in 2018/2019, a decrease of 17,121 (15.0%).

Please note that due to non-household customers choosing to no longer receive their retail services from Yorkshire Water the total wholesale water revenue in this table does not equal the sum of lines 1 and 2 of [Table 2I](#). A reconciliation is provided within the commentary of [Table 2I](#).

Table 2H – Non-household wastewater – revenues by tariff type

For the 12 months ended 31 March 2020

Line description	Wholesale charges revenue £m	Retail revenue £m	Total revenue £m	Number of connections (000s)	Average non-household retail revenue per connection £
A – Non-Default tariffs					
2H.1 Total non-default tariffs			0.000		0
B – Default Tariffs					
2H.2 n/a			0.000		0
2H.3 n/a			0.000		0
2H.4 n/a			0.000		0
2H.5 n/a			0.000		0
2H.6 n/a			0.000		0
2H.7 n/a			0.000		0
2H.8 n/a			0.000		0
2H.9 Sewerage unmetered	0.876	1.121	1.997	17.902	63
2H.10 Wastewater 0 – 5 MI	27.048	2.516	29.564	81.014	31
2H.11 Trade Effluent 0 – 5 MI	1.723	0.132	1.855	1.707	77
2H.12 Wastewater services 5 to 50 MI	11.884	0.284	12.168	0.289	983
2H.13 Wastewater services 50 MI and over	9.645	0.231	9.876	0.018	12833
2H.14			0.000		0
2H.15			0.000		0
2H.16			0.000		0
2H.17			0.000		0
2H.18			0.000		0
2H.19			0.000		0
2H.20			0.000		0
2H.21			0.000		0
2H.22			0.000		0
2H.23			0.000		0
2H.24 Total default tariffs	51.176	4.284	55.460	100.930	42
2H.25 Total	51.176	4.284	55.460	100.930	42
				Number of customers (000s)	Average non-household retail revenue per customer £
C – Revenue per customer					
2H.26 Total				80.860	53

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2H contains analysis of non-household wastewater revenues and customer numbers by customer type. The categories are identified in table 2H.

The total amount of revenue taken from non-household wastewater customers for the year 2019/2020 was £55.5m compared to £111.3m in 2018/2019, this is a reduction of £55.8m (50.1%). This net reduction in revenue is driven by the combination of, the sale of the non-household business on 1 October 2019 along with the impact of the annual tariff increases and additional wholesale charging corrections identified by our data improvement programme.

The amount of revenue relating to wholesale for 2019/2020 is £51.2 compared to £106.8m in 2018/2019, this is a reduction of £55.6m (52.1%). Variances to the amount of wholesale revenue assumed at the final determination are contained in [Table 2I](#).

The amount of revenue relating to retail for 2019/2020 is £4.3m compared to £4.5m for 2018/2019. This is a reduction of £0.2m (4.4%).

As of 31 September 2019 (the final day before the sale of the non-household business), the number of non-household wastewater customers was 80,860 compared to 95,483 customers in 2018/2019, a decrease of 14,623 (15.3%).

Please note that due to non-household customers choosing to no longer receive their retail services from Yorkshire Water, the total wholesale wastewater revenue in this table does not equal the sum of lines 5 and 6 of [Table 2I](#). A reconciliation is provided within the commentary of [Table 2I](#).

Table 2I – Revenue analysis and wholesale control reconciliation

For the 12 months ended 31 March 2020

Line description		Units	DPs	Household	Non-household	Total
A – Wholesale charge – water						
2I.1	Unmeasured	£m	3	177.493	1.133	178.626
2I.2	Measured	£m	3	152.149	107.003	259.152
2I.3	Third party revenue	£m	3	0.000	0.000	0.000
2I.4	Total	£m	3	329.642	108.136	437.778
B – Wholesale charge – wastewater						
2I.5	Unmeasured	£m	3	214.964	2.335	217.299
2I.6	Measured	£m	3	204.242	119.439	323.681
2I.7	Third party revenue	£m	3	0.000	2.451	2.451
2I.8	Total	£m	3	419.206	124.225	543.431
B – Wholesale charge – TTT						
2I.5	Unmeasured	£m	3			0.000
2I.6	Measured	£m	3			0.000
2I.7	Third party revenue	£m	3			0.000
2I.8	Total	£m	3	0.000	0.000	0.000
2I.9	Wholesale Total	£m	3	748.848	232.361	981.209
C – Retail revenue						
2I.10	Unmeasured	£m	3	26.703	1.803	28.506
2I.11	Measured	£m	3	39.352	5.379	44.731
2I.12	Other third party revenue	£m	3	0.000	0.597	0.597
2I.13	Retail total	£m	3	66.055	7.779	73.834
D – Third party revenue – non-price control						
2I.14	Bulk Supplies – water	£m	3			0.101
2I.15	Bulk Supplies – wastewater	£m	3			0.000
2I.16	Other third party revenue	£m	3			1.455
E – Principal services – non-price control						
2I.17	Other appointed revenue	£m	3			0.614
2I.18	Total appointed revenue	£m	3			1057.213

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2I – Revenue analysis and wholesale control reconciliation (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Household	Non-household	TTT	Total	
E – Principal services – non-price control							
2I.19	Wholesale revenue governed by price control	£m	3	437.778	543.431	0.000	981.209
2I.20	Grants & contributions	£m	3	13.650	8.268		21.918
2I.21	Total revenue governed by wholesale price control	£m	3	451.428	551.699	0.000	1003.127
2I.22	Amount assumed in wholesale determination	£m	3	464.670	567.881		1032.551
2I.23	Adjustment for in-period ODI revenue	£m	3	0.000	0.000		0.000
2I.24	Adjustment for WRFIM	£m	3	-3.438	5.274		1.836
2I.25	Total assumed revenue	£m	3	461.232	573.156	0.000	1034.388
2I.26	Difference	£m	3	-9.804	-21.457	0.000	-31.261

Wholesale price control adjustments

Table 2I calculates the difference within the wholesale water and wastewater price controls between actual revenue received and revenue allowed at the Final Determination.

We continue to note that inconsistencies between the categories of revenue and capital contributions which we are asked to report by within Table 2I and those which were included within our price controls at the Final Determination leads to an incorrect level of variance being reported within line 2I.26. The table on page 195 captures the adjustments we are required to make to allow the actual revenues and capital contribution to be compared consistently with the Final Determination. This method of disclosure has been previously agreed with Ofwat.

We continue to report in line with the guidance we received from Ofwat in 2015/2016. Specifically, we have continued to make an adjustment to remove the actual s45 connection charges from our reported grants and contributions. The aim of this adjustment was to recognise the data input error we made in our PR14 submission which led to our Wholesale Water price control not correctly reflecting the forecast income from s45 connection charges.

Ofwat's Final Determination (FD19) did not recognise this adjustment.

In recognition that this matter remains unresolved we have taken this step to maintain consistency in reporting across the price control period 2015-2020, this appears to be the best approach to take at this time.

We note that this matter is within the scope of the redetermination of the CMA and we will take the appropriate steps in line with the redetermination when it is received.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Line description	Units	DPs	Water	Wastewater	Total
2l.19 Wholesale revenue governed by price control	£m	3	437.778	543.431	981.209
2l.20 Grants and contributions	£m	3	13.650	8.268	21.918
2l.21 Total revenue governed by wholesale price control	£m	3	451.428	551.699	1003.127
Less: capital contributions connection charges s45	£m	3	-5.205	-2.219	-5.205
Total revenue governed by wholesale price control – adjusted	£m	3	446.223	551.699	997.922
2l.22 Amount assumed in wholesale determination	£m	3	464.670	567.881	1032.551
2l.23 Adjustment for the in-period ODI revenue	£m	3	0.000	0.000	0.000
2l.24 Adjustment for WRFIM	£m	3	-3.438	5.274	1.836
2l.25 Total assumed revenue	£m	3	461.232	573.156	1034.388
2l.26 Difference – adjusted revenue	£m	3	-15.009	-21.457	-36.466
Difference – adjusted revenue	%	3	-3.25%	-3.74%	-3.53%

The adjustment for wholesale water is:

- Reduction of £5.205m of grants and contributions for 'connection charges (s45)', which were not included within the PR14 wholesale water revenue control.

In 2019/2020 we have seen a large under recovery of our wholesale revenues, this was due to our forecast assumptions not being in line with the actuals that we have observed.

We have further developed our forecasting approach to address this within our 2020/2021 tariff setting process. However, please note that we were unable to anticipate the impact of the Covid-19 pandemic on our customers and anticipate further variances in 2020/2021.

Wholesale water price control

The received wholesale water revenue, after the adjustments, recovered for 2019/2020 is £446.223m compared to that assumed at the Final Determination of £461.232m, a difference of (£15.009m) – (3.25%).

The difference will be taken into account through the wholesale forecasting revenue incentive mechanism (WFRIM). We will be submitting the final version within the PR19 blind year reconciliation model.

Wholesale wastewater price control

The actual wholesale water revenue, after the adjustments, recovered for 2019/2020 is £551.699m compared to that assumed at the Final Determination of £573.156m, a difference of (£21.457m) – (3.74%).

The difference will be taken into account through the wholesale forecasting revenue incentive mechanism (WFRIM). We will be submitting the final version within the PR19 blind year reconciliation model.

Reconciliation of non-household wholesale revenue

The guidance for the APR 2019/2020 states that the value of wholesale water revenue and non-household wastewater revenue, shown on [Tables 2G](#) and [2H](#) respectively, should tie back to the total non-household wholesale revenue shown on [Table 2I](#). However, since the opening of the non-household retail market on the 1 April 2017 customers have chosen to no longer receive their retail services from Yorkshire Water, and so the wholesale revenues associated with these customers are not shown on [Tables 2G](#) and [2H](#).

The following table shows the variance:

	NHH wholesale water (£m)	NHH wholesale wastewater (£m)	Total NHH wholesale revenue (£m)
2I	108.136	121.774	229.910
2G and 2H	47.062	51.176	98.238
Variance External Retailers	61.074	70.598	131.672

Table 2J – Infrastructure network reinforcement costs

For the 12 months ended 31 March 2020

Line description	Units	DPs	Network reinforcement capex	On site/site specific capex (memo only)
A – Wholesale water Network Plus (treated water distribution)				
2J.1 Distribution and trunk mains	£m	3	3.779	0.000
2J.2 Pumping and storage facilities	£m	3	0.639	0.000
2J.3 Other	£m	3	0.000	0.000
2J.4 Total	£m	3	4.418	0.000
B – Wholesale wastewater Network Plus (sewage collection)				
2J.5 Foul and combined systems	£m	3	2.767	0.000
2J.6 Surface water only systems	£m	3	0.000	0.000
2J.7 Pumping and storage facilities	£m	3	0.000	0.000
2J.8 Other	£m	3	0.000	0.000
2J.9 Total	£m	3	2.767	0.000

This is only the second year for separately reporting any water or wastewater network reinforcement costs, as a result of the change to our charging arrangements, which requires us to ensure the income received as part of the infrastructure charge receipts is offset by expenditure in the relevant asset base over a rolling five-year period. As reported last year, a new process has been developed to ensure that we now capture any off-site network reinforcement costs which has resulted in the creation of new investment categories to capture and report this expenditure.

Table 2J Lines 1-4 Wholesale water Network Plus (treated water distribution)

The water infrastructure network reinforcement expenditure totalling £4.4m within the year mostly relates to the network reinforcement activity that has taken place within Harrogate, an investment of £2.5m in 2019/2020. Between Studley and Birkby Nab £0.5m has been spent installing a second main (2km) alongside the route of the existing one to provide the hydraulic capacity for future demand. A further £1.1m has been invested at Harrogate High level (delivering 1.7km of pipework) and £0.7m at Harrogate Low level (delivering 2.6km of pipework). Activity in Knaresborough has continued where we have spent £0.4m within the year as part of a 4-phase project to deliver 1.6km of mains.

Table 2J Lines 5-9 Wholesale wastewater Network Plus (sewage collection)

The wastewater infrastructure network reinforcement expenditure totalling £2.8m relates to ongoing activity started last year in Waverley (South Yorkshire) regarding the construction of two rising mains and a gravity sewer.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 2K – Infrastructure charges reconciliation

For the 12 months ended 31 March 2020

Line description	Units	DPs	Water	Wastewater	Total
A – Impact of infrastructure charge discounts					
2K.1 Infrastructure charges	£m	3	3.113	5.630	8.743
2K.2 Discounts applied to infrastructure charges	£m	3	0.003	0.063	0.066
2K.3 Gross infrastructure charges	£m	3	3.116	5.693	8.809
B – Comparison of revenue and costs					
2K.4 Variance brought forward	£m	3			6.474
2K.5 Revenue	£m	3	3.116	5.693	8.809
2K.6 Costs	£m	3	-4.418	-2.767	-7.185
2K.7 Variance carried forward	£m	3	-1.302	2.926	8.098

Table 2K line 2 reports the discount applied to the infrastructure charge for new development. The only input cells in the above table are for 2K.2: Discounts applied to infrastructure charges and 2K.4: Variance brought forward. Therefore, if further detail of the costs included in this table are required these can be found in the commentary for Table 2J – Infrastructure Network Reinforcement Costs and Table 2E – Analysis of Capital Contributions and Land Sales. As this commentary states, this is a new process and work is ongoing to ensure that all off-site costs are being captured and reported to improve both revenue and cost allocations going forward.

The applicable infrastructure charge is calculated on the information the customer provides. The clean and foul water discount, if applicable, would be a percentage reduction based on the water usage below 125L per person per day. The surface water discount would be applicable if the development was disposing surface water to a source other than an existing public sewer. Infrastructure credits for brownfield development have not been included in this reporting line. The onus is on the customer to apply for discounts during the application for a water supply. The customer is responsible for providing all the relevant information to determine if the discounts are applicable.

The reported figures are relatively low. We believe this is due to Yorkshire Water not effectively promoting the discount combined with a reliance on the developer/customer applying for the discount.

In future, we will aim to provide a better customer experience by promoting the discounts and environmental incentives to developers more than we currently do, and proactively applying the discount where applicable.

Our new charging arrangements took effect from the start of the previous report year which reduced our infrastructure connection charge rates for both water and wastewater. We anticipated an immediate shift to the lower infrastructure connection charge but with some developments already agreed and in contract at the previous higher rate, this resulted in the income being reported last year being a mixture of both the old and new charges so the variance between revenue and costs was £6.5m. This was split £3.1m water and £3.4m wastewater.

In the current report year the costs totalling £4.4m on water network reinforcement have been greater than the income resulting in the variance to carry forward for water reducing to from £3.1m to £1.8m. Whilst the costs totalling £2.8m on wastewater network reinforcement are lower than the income resulting in the variance to carry forward for wastewater increasing from £3.4m to £6.3m. These variances are for information purposes only as they are not included within the table. The total variance carried forward is £8.1m which can be found in the reporting table.

As agreed, this variance carried forward will be tracked each year until 2023 where upon a review of the infrastructure connection charges will be undertaken to ensure that the revenue and costs reported are adjusted to be in balance.

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Outcome performance summary

There are four tables of information within this section:

- [Table 3A](#) provides information on our 26 performance commitments.
- [Table 3B](#) provides information on the sub-measures that support four of our performance commitments called Stability and Reliability (S&R) measures.
- [Table 3C](#) provides information on abstraction incentive mechanisms (AIM).
- [Table 3D](#) provides a breakdown of information that supports our customer service measure, the Service Incentive Mechanism (SIM).

Table 3A – Outcome performance table

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 outperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 outperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (£m, to 4 dp)
1	PR14YKY-WSW_WA1	WA1: Drinking water quality	%	Mean zonal compliance (%)	3	99.962	99.949	No	-		Underperformance payment	-0.8920		
2	PR14YKY-WSW_WA2	WA2: Significant drinking water events which require corrective action	nr	No. of corrective actions required by DWI with respect to potentially significant events notified	0	5	1	Yes						
3	PR14YKY-WSW_WA3	WA3: Drinking water contacts	nr	No. of contacts (discolouration, taste & odour and illness) in line with DWI reporting	0	7964	6368	No	-		Underperformance payment	-0.8580		
4	PR14YKY-WSW_WA4	WA4: Water quality stability and reliability factor	category	Asset health indicator	na	Stable	Stable	Yes	-		-			
5	PR14YKY-WSW_WB1	WB1: Leakage	nr	Megalitres per day (MI/d)	1	289.8	270.8	Yes	-		Outperformance payment	0.1616		
6	PR14YKY-WSW_WB2	WB2: Water supply interruptions	time	Minutes lost per property per year	2	10.46	7.56	Yes	-		Outperformance payment	10.2268		
7	PR14YKY-WSW_WB3	WB3: Water use	nr	Litres per head per day (l/h/d)	1	133.5	135	Yes						

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3A – Outcome performance table (continued)

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 outperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 outperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (£m, to 4 dp)
8	PR14YKY-WSW-WB4	WB4: Water network stability and reliability factor	category	Asset health indicator	na	Stable	Stable	Yes	-		-			
9	PR14YKY-WSW-WC1	WC1: Length of river improved (note: PC is part of a total commitment at Appointee level – see also SB4)	nr	Kilometres (km) of river improved (modelled length)	0	40	107	Yes	-		Outperformance payment	0.3068		
10	PR14YKY-WSW-WC2	WC2: Solutions delivered by working with others (note: PC is part of a total commitment at Appointee level – see also SB3)	nr	No. of solutions delivered by working with others	0	11	11	Yes	-		Outperformance payment	0.0725		
11	PR14YKY-WSW-WC3	WC3: Amount of land conserved and enhanced (total cumulative area) (note: PC is part of a total commitment at Appointee level – see also SB5)	nr	No. of hectares of land conserved & enhanced (cumulative)	0	11524	11806	Yes	-		Underperformance payment deadband	0.0000		
12	PR14YKY-WSW-WC4	WC4: Recreational visitor satisfaction	text	Assessment of customer satisfaction (qualitative survey)	na	Published	Published	Yes						

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3A – Outcome performance table (continued)

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 outperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 outperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (£m, to 4 dp)
13	PR14YKY-WSW_WD1	WD1: Proportion of energy use generated by renewable technology (note: PC is part of a total commitment at Appointee level – see also SC1 and RC1)	%	% of energy use generated by renewable technology	0	11	15	Yes						
14	PR14YKY-WSW_WD2	WD2: Proportion of waste diverted from landfill (re-used and recycled) (note: PC is part of a total commitment at Appointee level – see also SC2 and RC2)	%	% of waste diverted from landfill (re-used and recycled)	0	100	100	Yes						
15	PR14YKY-WSWW_SA1	SA1: Internal sewer flooding incidents	nr	No. of internal sewer flooding incidents	0	1692	1602	Yes	-		Outperformance payment	9.0270		
16	PR14YKY-WSWW_SA2	SA2: External sewer flooding incidents	nr	No. of external sewer flooding incidents	0	9116	9139	Yes						

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3A – Outcome performance table (continued)

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 outperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 outperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (£m, to 4 dp)
17	PR14YKY-WSWW-SA3a	SA3a: Pollution incidents – category 1 and 2	nr	No. of pollution incidents (cats 1 and 2)	0	11	7	No						
18	PR14YKY-WSWW-SA3b	SA3b: Pollution incidents – category 3	nr	No. of pollution incidents (cat 3)	0	188	159	Yes	-		Outperformance payment	9.6269		
19	PR14YKY-WSWW-SA4	SA4: Sewer network stability and reliability factor	category	Asset health indicator	na	Stable	Stable	Yes	-		-			
20	PR14YKY-WSWW-SB1	SB1: Number of Yorkshire's designated bathing waters that exceed the required quality standard	nr	No. of bathing waters exceeding required standard	0	17	16	Yes						
21	PR14YKY-WSWW-SB2	SB2: Wastewater quality stability and reliability factor	category	Asset health indicator	na	Stable	Stable	Yes	-		-			
22	PR14YKY-WSWW-SB3	SB3: Solutions delivered by working with others (note: PC is part of a total commitment at Appointee level – see also WC2)	nr	No. of solutions delivered by working with others	0	11	11	Yes	-		Outperformance payment	0.0000		

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3A – Outcome performance table (continued)

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 outperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 outperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (£m, to 4 dp)
23	PR14YKY-WSWW_SB4	SB4: Length of river improved (against WFD component measures) (note: PC is part of a total commitment at Appointee level – see also WC1)	nr	Kilometres (km) of river improved (modelled length)	0	0	352	Yes	-		Underperformance payment	-0.2925		
24	PR14YKY-WSWW_SB5	SB5: Amount of land conserved and enhanced (total cumulative area) (note: PC is part of a total commitment at Appointee level – see also WC3)	nr	No. of hectares of land conserved & enhanced (cumulative)	0	11524	11806	Yes	-		Underperformance payment deadband	0.0000		
25	PR14YKY-WSWW_SC1	SC1: Proportion of energy use generated by renewable technology (note: PC is part of a total commitment at Appointee level – see also WD1 and RC1)	%	% of energy use generated by renewable technology	0	11	15	Yes						

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3A – Outcome performance table (continued)

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 overperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 overperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 overperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 overperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 overperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 overperformance payment or underperformance payment (£m, to 4 dp)
26	PR14YKY-WSWW_SC2	SC2: Proportion of waste diverted from landfill (re-used and recycled) (note: PC is part of a total commitment at Appointee level – see also WD2 and RC2)	%	% of waste diverted from landfill (re-used and recycled)	0	100	100	Yes						
27	PR14YKY-HHR_RA1	RA1: Service incentive mechanism (SIM)	score	Service incentive mechanism (SIM) score	1	84	83.2	No						
28	PR14YKY-HHR_RA2	RA2: Service commitment failures	nr	No. of GSS (Guaranteed Standards of Service) events	0	14221	15140	Yes						
29	PR14YKY-HHR_RA3	RA3: Overall customer satisfaction (CCWater annual tracking survey)	%	% overall customer satisfaction (CCWater tracking survey)	0	95% (water), 88% (waste-water)	94% Water 90% Sewerage	Yes						
30	PR14YKY-HHR_RB1	RB1: Cost of bad debt to customers (expressed as proportion of bill)	%	Cost of bad debt as % of average annual bill	2	3.02	3.06	Yes						

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3A – Outcome performance table (continued)

For the 12 months ended 31 March 2020

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2018-19 performance level – actual (for information)	2019-2020 performance level – actual	2019-2020 PCL met?	2019-2020 outperformance payment or underperformance payment – in-period ODIs (indicator)	2019-2020 outperformance payment or underperformance payment – in-period ODIs (£m, to 4 dp)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (indicator)	2019-2020 outperformance payment or underperformance payment – ODIs payable at the end of AMP6 (£m, to 4 dp)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (indicator)	31 March 2020 forecast – total AMP6 outperformance payment or underperformance payment (£m, to 4 dp)
31	PR14YKY-HHR_RB2	RB2: Number of people who we help to pay their bill	nr	No. of customers who are assisted to pay their bill	0	31606	35939	Yes						
32	PR14YKY-HHR_RB3	RB3: Value for money (CCWater annual tracking survey)	%	% customer satisfaction (CCWater tracking survey)	0	77% (Water), 79% (waste-water)	79% Water 80% Sewerage	Yes						
33	PR14YKY-HHR_RC1	RC1: Proportion of energy use generated by renewable technology (note: PC is part of a total commitment at Appointee level – see also WD1 and SC1)	%	% of energy use generated by renewable technology	0	11	15	Yes						
34	PR14YKY-HHR_RC2	RC2: Proportion of waste diverted from landfill (re-used and recycled) (note: PC is part of a total commitment at Appointee level – see also WD2 and SC2)	%	% of waste diverted from landfill (re-used and recycled)	0	100	100	Yes						

Please see [Section 4](#) of this APR (Review of our performance) for an explanation of our performance against our performance commitments. We have moved all of our commentary relating to our performance to [Section 4](#) following feedback from our customers. This allows our customers and stakeholders to see all the information on performance commitments in one place.

Key

Input cell
 Calculation cell
 Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 3B – Sub-measure performance table

For the 12 months ended 31 March 2020

Row	Unique ID	"PC/ sub- measure ID"	PC/sub-measure	Unit	Decimal places	2018-19 performance level – actual	2019-2020 performance level – actual	2019- 2020 PCL met?
1	PR14YKYWSW_WA4	00	WA4: Water quality stability and reliability factor	category	na	Stable	Stable	Yes
2	PR14YKYWSW_WA4	01	WTW coliform non-compliance	%	3	0.021	0.028	Yes
3	PR14YKYWSW_WA4	02	SR coliform non-compliance	%	2	0	0	Yes
4	PR14YKYWSW_WA4	03	Turbidity	nr	0	0	0	Yes
5	PR14YKYWSW_WA4	04	Enforcements	nr	0	0	0	Yes
6	PR14YKYWSW_WA4	05	Reactive equipment failures	nr	0	3768	3410	Yes
7	PR14YKYWSW_WB4	00	WB4: Water network stability and reliability factor	category	na	Stable	Stable	Yes
8	PR14YKYWSW_WB4	01	Total bursts	nr	0	8254	6203	No
9	PR14YKYWSW_WB4	02	Interruptions >12 hours	nr	0	414	963	No
10	PR14YKYWSW_WB4	03	DG2 low pressure	nr	0	9	14	Yes
11	PR14YKYWSW_WB4	04	Customer contacts for discolouration (nr per 1,000 population)	nr	3	0.699	0.548	Yes
12	PR14YKYWSW_WB4	05	Distribution index TIM (100 – mean zonal compliance)	%	3	0.127	0.216	No
13	PR14YKYWSW_WB4	06	Reactive equipment failures	nr	0	911	928	Yes
14	PR14YKYWSWW_SA4	00	SA4: Sewer network stability and reliability factor	category	na	Stable	Stable	Yes
15	PR14YKYWSWW_SA4	01	Sewer collapses	nr	0	255	279	No
16	PR14YKYWSWW_SA4	02	Pollution incidents (CSO, RM, FS and SPS)	nr	0	172	137	Yes
17	PR14YKYWSWW_SA4	03	Properties flooded due to other causes	nr	0	393	345	No
18	PR14YKYWSWW_SA4	04	Properties flooded due to overloaded sewers, excluding severe weather	nr	0	8	53	Yes
19	PR14YKYWSWW_SA4	05	Sewer blockages	nr	0	16860	16960	Yes
20	PR14YKYWSWW_SA4	06	Reactive equipment failures	nr	0	3537	4191	Yes
21	PR14YKYWSWW_SB2	00	SB2: Wastewater quality stability and reliability factor	category	na	Stable	Stable	Yes
22	PR14YKYWSWW_SB2	01	Sewage treatment works non-compliance	nr	0	6	2	No
23	PR14YKYWSWW_SB2	02	Population equivalent non-compliance	%	1	0	0	Yes
24	PR14YKYWSWW_SB2	03	Reactive equipment failures	nr	0	10035	10059	Yes

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

As part of our commitment to make sure we meet our customer promises we have four performance commitment measures called Stability and Reliability (S&R) factors. The four measures are:

- Water quality S&R factor – monitors how well our water treatment works are performing.
- Water network S&R factor – monitors how well our clean water network is performing.
- Sewer network S&R factor – monitors how well our wastewater network is performing.
- Wastewater quality S&R factor – monitors how well our wastewater treatment works are performing.

These measures reflect our duty to provide water and wastewater services and protect public health over the long and short term.

These measures are made up of a number of sub-measures. We report our overall S&R performance in Table 3A. Table 3B provides the detail of all the sub measures.

Overall S&R performance is assessed by reviewing performance of all the sub measures. This evaluation is undertaken on an annual and a five-yearly basis to categorise each S&R factor under one of three headings ‘improving’, ‘stable’ or ‘deteriorating’. A deteriorating assessment means that Yorkshire Water could be penalised. More information on how this assessment is made and a subsequent penalty calculated (if applicable) is available in our Stability and Reliability Factor guide on our website yorkshirewater.com/delivering-on-our-performance

Overall, we are reporting ‘stable’ performance for 2019/2020 across all four of our S&R measures.

Water quality Stability & Reliability factor

Table 3B Line 1: Water quality Stability and Reliability factor

This is the overall performance commitment. This measure is an overall assessment of long-term stability and reliability for water quality, based on the following basket of indicators:

- Water treatment works coliforms non-compliance (%)
- Service reservoir coliforms non-compliance (%)
- Turbidity (number)
- Enforcement (incidents number)
- Reactive equipment failures (number)

Overall, we are reporting ‘stable’ performance for 2019/2020.

Table 3B Line 2: Water treatment works coliform non-compliance

This indicator measures the number of water treatment works with determinations containing coliforms as a percentage of the number of determinations of water leaving treatment works taken at frequencies required by regulation 13 (schedule 3, table 3, item 2), as specified in regulation 4 (schedule 1, table A, part II, item 1) of the ‘Water Supply (Water Quality) Regulations 2000’ (and its equivalent in Wales). This information is given in the Chief Inspector of the Drinking Water Inspectorate’s Annual Report in the calendar year.

There has been a slight increase to the figure reported – from 0.021 last year to 0.028 this year. This was due to an increase in the number of water treatment works (WTWs) with coliform exceedances. There were coliform detections at five works outlets compared to three WTWs with total coliform exceedances last year. Two of the coliform detections were from independent outlets of the same WTW, meaning four works had failures overall:

- Chellow Heights WTW had a single coliform detection on 16/08/2019.
- Holmbridge WTW had a single coliform detection on 30/07/2019.
- Great Heck No.2 WTW had a single coliform/E.coli detection on 24/09/2019.
- Elvington WTW had a single coliform/E. coli detection on 01/11/2019.

None of the sites reporting a detection had previously reported a coliform detection in AMP6.

Root-cause analysis investigations were carried out into all failures. Investigations demonstrated that upstream treatment processes were well operated at the time of sample collection and contact with chlorine-based compounds was above the disinfection target.

For Great Heck No.2 WTW the cause was found to be a below ground substandard joint on recently installed pipework to raise the borehole well-head above normal ground level. For the remaining sites, the cause was attributed to ingress due to deterioration of access hatches or roof/wall joints.

A robust programme of contact tank, clear water tank, and treated water tank inspections are included in the enhanced inspection regime. This programme has been further reviewed to include additional proactive high risk point external inspections at WTWs.

Table 3B Line 3: Service reservoir coliform non-compliance

This indicator measures the number of service reservoirs with more than 5% of sample determinations containing coliforms expressed as a percentage of total number of service reservoirs.

This measure continues to stay at zero as it has been since 2013.

There were nine total coliform detections at service reservoirs this year compared to four last year. The performance in 2018 had been the best ever recorded and was likely influenced by the atypical weather conditions. The performance in 2019 is considered reversion to normal expectation of performance levels.

The highest percentage fail rate at any service reservoir was 3.33%, well below the 5% threshold.

Each instance of failure is investigated thoroughly, and reports are provided to the Drinking Water Inspectorate (DWI). No follow-up actions were taken by the DWI in 2019.

Site name	Grand Total	% Failure
North Newbald CRE	30	3.33
Boothroyd No 2 SRE	47	2.13
Westborough SRE	47	2.13
Garforth Cliff SRE	51	1.96
Morley CRE	51	1.96
Almondbury No 2 SRE	52	1.92
Hainworth No 1 SRE	52	1.92
Stockdale Farm SCT	52	1.92
Wetherby SRE	52	1.92

Table 3B Line 4: Water treatment works turbidity

This indicator measures the number of operational potable water treatment works and sources whose turbidity 95 percentile is less than a 0.5NTU threshold.

The number of works remains at zero.

The highest turbidity 95 percentile value was for Hutton Cranswick WTW (0.44NTU). The same works was subject to a single regulatory failure against the standard for turbidity on 04/12/2017 (1.44NTU). The failure in 2017 was subsequently shown to be related to disturbance within the sample line associated with the tap the sample was collected from, which was a continuously running ‘surrogate’ tap within the WTW building and not the compliance monitoring point. However, there was no exceedance of the 1.0NTU standard in any samples collected from Hutton Cranswick WTW in 2019.

There were three regulatory WTW turbidity fails in 2019, a deterioration compared to zero in 2018. Each instance of failure was investigated thoroughly, and reports provided to the DWI. No adverse comment was received.

Table 3B Line 5: Enforcement actions considered for microbiological standards

This indicator measures the number of enforcement actions as initiated by the DWI. There have been zero enforcement actions this reporting period.

Table 3B Line 6: Reactive equipment failures

This indicator measures the number of works orders created reactively for water quality assets. Works raised as part of planned servicing are not included unless the asset has failed. There were 3,410 works orders created over the last year, which is below the lower tramline.

Water networks Stability & Reliability factor

Table 3B Line 7: Water networks Stability and Reliability factor

This is the overall performance commitment. This measure is an overall assessment of long-term stability and reliability for the water network, based on the following basket of indicators:

- Total bursts (number)
- Interruptions greater than 12 hours (number)
- Low pressure (number)
- Customer contacts for discolouration (number per 1,000 population)
- Distribution index TIM (as 100 minus Mean Zonal Compliance) (%)
- Reactive equipment failures (number)

Overall, we are reporting ‘stable’ performance for 2019/2020.

Table 3B Line 8: Total bursts

Total bursts refers to the number of mains bursts within the reporting year. Mains bursts include all physical repair work to mains from which water is lost, which is attributable to pipes, joints or joint material failures or movement, or caused or deemed to be caused by conditions or original pipe laying or subsequent changes in ground conditions.

The mains bursts repair figure has decreased this year to 6,203 from 8,254 in 2018/2019. This is above the reference level of 6,000 but below the high tramline level of 7,710.

This year’s performance is third lowest within AMP6. We believe weather conditions experienced in the past year contributed to the number of mains repairs being much lower than the previous year. The summer of 2019 was one of the wettest we have experienced, and the winter of 2019/2020 was wet but not as cold when compared to previous years. It is usually the winter months (December to February) that have the biggest impact on mains repair performance. Due to our large proportion of cast iron water mains (approximately 50% of the network), freeze-thaw events throughout the winter usually result in an increase in the number of repairs we carry out due to the inflexibility of these mains.

Over the past year we have invested, as part of our leakage upper quartile project, in techniques such as acoustic loggers and satellite technology that have helped with both the speed of leak identification and also our ability to find leaks on smaller diameter pipes (supply pipes and communication pipes). Going forward, we will be introducing semi-structural relining for water mains. This will provide a financial efficiency to be able to invest in an increased length of the network in comparison to mains renewal. We will also look to implement more pressure management schemes and will utilise the triOpsis system to record photographs of all repair and maintenance jobs to validate mains repairs and thereby increase the accuracy of reporting for this measure.

Table 3B Line 9: Unplanned interruptions greater than 12 hours

This indicator measures the number of properties affected by unplanned supply interruptions with a duration of more than twelve hours. The measure is derived from the Water Supply Interruptions performance data (Table 3A line 6). The reference level (target) for this measure is 220 properties per year. Our performance this year was 963 properties from 37 separate incidents, up from 414 last year.

Performance against the target has been challenging due to some larger interruption events causing severe impacts to multiple properties, despite an overall decrease in total bursts as discussed above. Analysis of confirmed incidents identified that there are some key factors that have contributed to the decline in performance in 2019/2020. The introduction of Yorkshire Water’s Health and Safety Improvement Plan has improved our approach to working in the highway, excavation and repair, and colleague working times, but at the expense of our operational response times. We are working to control these performance risks whilst maintaining the positive steps taken to ensure colleague safety. This includes the introduction of additional supply restoration plant and equipment, enhancing our approach to the provision of traffic management equipment, and reviewing and amending working patterns. These actions will improve our ability to respond to network failures and manage prolonged operational events.

Table 3B Line 10: DG2 low pressure

This sub-measure refers to the number of properties which have received, and are likely to continue to receive, pressure below the reference level when demand is not normal. The reference level of service is a flow of 9 L/min at a pressure of 10m head on the customer side of the main stop tap.

The number of properties on the register has increased from 9 to 14. There have been 10 properties added to the register. Five properties were removed due to management of capital schemes. None of the properties currently on the register are on joint supplies. The trend over the past five years has been stable and consistently under the target of 15 properties.

Table 3B Line 11: Consumer contacts discolouration

This indicator measures the number of customer contacts regarding discolouration divided by 1,000 population. This is a calendar year measure.

We have reported a slight improvement from the previous year (0.548 contacts per 1,000 population compared with 0.699 contacts per 1,000 population for APR 2018/2019).

This data excludes 176 contacts related to notified events. This is consistent with Drinking Water Inspectorate (DWI) reported numbers and DWI advice stating that exclusion of contacts received during notified events is required.

The decrease in contact rate is likely to be related to continuation of long-term initiatives to target historic sediments within supply zones and to ‘condition’ trunk mains to greater flow rates. A total of 1,084 local zones were flushed during 2019. However, it is also relevant that demand conditions were less challenging than in 2018. Flushing activity has continued despite the good performance in order to prevent a future reversion to normal demand conditions inconveniencing customers.

Table 3B Line 12: Distribution maintenance index

This indicator measures the arithmetic mean of the zonal compliance values for Yorkshire Water zones and supply pipes for turbidity, iron and manganese only (as 100-mean zonal compliance).

There was a deterioration for the Distribution Index (TIM) measure from 99.873% (0.127% failure) in 2018 to 99.784% (0.216% failure) in 2019.

There was an increase in the overall number of regulatory failures for turbidity, iron, and manganese. In total, there were 27 regulatory fails for affected parameters in 2019 compared to 16 in 2018. The largest contribution to the number of fails was iron exceedances. There were 23 iron failures in 2019 (compared to 15 in 2018). There were also 2 turbidity failures (compared to 0 in 2018) and 2 manganese fails (compared to 1 fail in 2018).

Fails also occurred across more water supply zones (18 zones in 2019 compared to 12 zones in 2018). Only five water supply zones reported more than one failure.

The cause of the deterioration in performance for Distribution Index (OPI TIM) compared to previous years is not straightforward. In-depth analysis indicates that the period of most unusual aesthetic metals performance was the first half of 2019, in particular during January (5 failures) and February (3 failures). It is considered likely that aesthetic metals performance in the early periods of 2019 remained impacted by the very unusual weather and demand conditions of 2018.

The programme of targeted flushing of the network has continued throughout 2019 and we expect this will result in further improvements to average and outlier performance. We are also working with Sheffield University to identify if improvements can be made to the design of flushing programmes.

Table 3B Line 13: Reactive equipment failures

This indicator measures the number of works orders created reactively for water network assets. There were 928 works orders created over the last year, which is below the lower tramline.

Sewer network Stability & Reliability factor

Table 3B Line 14: Sewer network Stability and Reliability factor

This is the overall performance commitment. This measure is an overall assessment of long-term stability and reliability for the wastewater network, based on the following basket of indicators:

- Sewer collapses
- Pollution incidents (CSO, RM, FS & SPS)
- Properties flooded due to other causes
- Properties flooded due to overloaded sewers, excluding severe weather
- Sewer blockages
- Reactive equipment failures.

The measure excludes assets transferred to Yorkshire Water in October 2011, because there is not enough data on this asset base to allow meaningful analysis.

Overall, we are reporting 'stable' performance for 2019/2020.

Table 3B Line 15: Sewer collapses

The total number of sewer collapses on the legacy network assets has increased 9% from 255 in 2018/2019 to 279 in 2019/2020. This performance is above the reference level of 255 set for AMP6. However, it is in line with performance for this AMP with the average performance for the five years being 251.

	2015/2016	2016/2017	2017/2018	2018/2019
Rising Main burst	89	59	94	88
Gravity collapse	172	184	124	167
Total Gravity Collapse & RM	261	243	218	255
Percentage RM to total RM & Gravity collapse	34.00	24.28	43.12	29.02

Table 3B Line 16: Pollution incidents

This indicator measures the number of category 1-3 unconsented and consented pollution incidents on combined sewage overflow, foul/combined sewer, foul manhole, foul rising mains, sewage pipe bridges, syphons and sewage pumping stations. Pollution is reported as a calendar year measure January to December. The total number of pollution incidents for 2019/2020 is 137. This represents an improvement from last year's figure of 172.

This year we submitted our Pollution Incident Reduction Plan for 2020-2025, which explains how we will reduce pollutions incidents across our asset base. We have also developed a programme of environmental investment and investigation needs that will be delivered through AMP7.

This programme focuses on the investments required to enhance our wastewater treatment capabilities and protect the environment. This includes investigations to understand and inform future investment needs.

Table 3B Line 17: Properties flooded due to other causes

This indicator measures the number of properties affected by flooding incidents from equipment failures, blockages or collapses (collectively grouped as other causes). This includes properties where an uninhabited cellar is the only part affected by the flooding. All properties flooded due to other causes are included where the flooding incident was caused by factors beyond our control. A property affected by more than one incident under this definition is reported as one property.

This sub-measure has been above the upper tramline for the two previous years. However, in 2019/2020 there was an improvement in performance relative to previous years (345 in 2019/2020 compared with 393 in 2018/2019), which brings the figure below the upper tramline.

During 2019/2020 we insourced service partner colleagues to create a new operating model. This transformation was initially challenging, and performance was impacted in the short term by resource levels and training impact. However, we are now beginning to see improvements in performance as a result of the new model. In future, we will continue to develop our proactive programme of works, with a particular focus on areas performing poorly at present.

Table 3B Line 18: Properties flooded due to overloaded sewers, excluding severe weather

This indicator measures the number of properties affected by flooding incidents due to overloaded sewers in rainfall events occurring more frequently than or equal to 1 in 20 years. The reported number excludes flooding in rainfall events less frequent than 1 in 20 and flooding incidents via the sewers caused by high river levels, inundation due to surface run-off or overflowing watercourses.

This year we have seen an increase in performance compared to recent years. However, the reported figure of 53 remains below the reference level for overloaded sewer Stability and Reliability sub-measure reference of 72.

The high level of incidents seen in 2019/2020 has been influenced by weather conditions, with over 50% of the incidents occurring during the severe weather events in November 2019 and February 2020. The number of properties excluded due to severe weather is 16.

Table 3B Line 19: Sewer blockages

This indicator measures the number of sewer blockages cleared.

This measure has increased in 2019/2020 to 16,960 from 16,860 in 2018/2019, a change of 0.5%. This is below the AMP6 reference value of 20,695.

Table 3B Line 20: Reactive equipment failures

This indicator measures the number of works orders created reactively for wastewater network assets. There were 4,191 works orders created over the last year, which is below the lower tramline.

Wastewater quality Stability & Reliability factor

Table 3B Line 21: Wastewater quality Stability and Reliability factor

This is the overall performance commitment. This measure is an overall assessment of long-term stability and reliability for wastewater quality, based on the following basket of indicators:

- Sewage treatment works non-compliance
- Population equivalent % non-compliance
- Reactive equipment failures

Overall, we are reporting 'stable' performance for 2019/2020.

Table 3B Line 22: Sewage treatment works non-compliance

This indicator measures the number of discharges failing upper tier, non-sanitary and look up table (LUT) consents. The data is derived from the Environment Agency Performance Tracker and in turn verified using our own weekly compliance report to ensure the records match.

There were two failing sewage treatment works (STWs) in 2019. This matches the best performance that has been achieved in the past and is a reduction from the previous year. Throughout the AMP period we have been below the upper limit of eight failing works.

There was one look up table failure and one upper tier failure resulting from a self-reported pollution incident.

The look up table failure occurred at Foulridge STW as a result of three exceedances in consecutive months. Two of the exceedances were linked and occurred within a short timescale of each other (17 days). Improvement measures were put in place as a result of the early investigations, but site performance was slow to recover and was exacerbated by weather conditions at the time. The final exceedance occurred as a result of some engineering work that was taking place on site, which disturbed the tank contents. This was a short duration incident that was picked up by the sample being taken. Site improvements included site drainage, network flow conditions and reducing overland flow that had been getting into the process. The completion of the quality phosphorous removal scheme has ensured that the site now has additional tertiary treatment.

The upper tier failure at Williamthorpe STW occurred as a result of a self-reported pollution incident. It was caused by an unfortunate series of engineering failures and an asset being put back in service following an engineering fix. A reminder of the change management procedure was issued to Operations after this failure occurred and was a reminder that assets that had been off for a period of time have the potential to impact performance.

Table 3B Line 23: Population equivalent non-compliance

This indicator measures the population equivalent of the discharges failing look up table (LUT) consents. Performance in this area has been the same as in the 2018/2019 and is reported as 0.0%. Performance is at reference level for this measure.

In recent years, look up table failures have been relatively few and far between. This is because the nature of look up table non-compliances means that investigation and intervention can be carried out at an early stage (i.e. when a site picks up one or two sample exceedances).

Table 3B Line 24: Reactive equipment failures

This indicator measures the number of works orders created reactively for wastewater quality assets. There were 10,059 works orders created over the last year, which is below the lower tramline.

Table 3C – AIM (Abstraction Incentive Mechanism) table

For the 12 months ended 31 March 2020

Row	Abstraction site	Decimal places	2019-2020 AIM performance [MI]	2019-2020 normalised AIM performance [nr]	Cumulative AIM performance 2016-17 onwards [MI]	Cumulative normalised AIM performance 2016-17 onwards [nr]	Contextual information relating to AIM performance
1	N/a	0	0	0	0	0	N/a
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
Total			0.0	0.00	0.0	0.00	

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 - Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Water supplies are provided by taking, or abstracting, water from one of three types of water sources; groundwater, rivers and upland reservoirs. All three are used together to provide our region's water supply. However, water abstraction can cause damage to the water environment and ecology and so the Environment Agency provides protection through abstraction licensing. Abstraction licences detail how much water can be abstracted to ensure there is sufficient downstream flow in rivers and streams.

Table 3C provides information on abstraction mechanisms. The Abstraction Incentive Mechanism (AIM) was introduced by Ofwat to encourage water companies to reduce the environmental impact of abstraction at sensitive sites during periods of low water flows.

In October 2013, we were provided with a list of Yorkshire Water abstractions associated with environmental flow surface water bodies (Bands 1, 2, 3) potentially impacted by the Water Framework Directive (WFD). The list was compiled by the Environment Agency and sent to Yorkshire Water by Ofwat.

A Band 3 surface water body is one where there is a high confidence that the flow in the water body is not adequate to support good ecological status (GES). Band 2 water bodies reflect moderate confidence and Band 1 water bodies reflect low confidence that the flow is not adequate to support GES.

At the time of the PR14 business plan submission, just two licences were left that were potentially suitable for inclusion in AIM: Hazel Head Springs and the River Laver Intakes. These sites were subsequently investigated by the Environment Agency, and in both cases the Environment Agency recommended that the sites should be removed from AIM.

We have no AIM sites, so Table 3C has null entries for all data.

Table 3D: SIM (Service Incentive Mechanism) score table

For the 12 months ended 31 March 2020

Line description		Units	DPs	Score
A - Qualitative performance				
3D.1	1st survey score	nr	2	4.32
3D.2	2nd survey score	nr	2	4.01
3D.3	3rd survey score	nr	2	4.26
3D.4	4th survey score	nr	2	4.43
3D.5	Qualitative SIM score (out of 75)	nr	2	63.75
3D.6	Total contact score	nr	2	16.58
3D.7	Quantitative SIM score (out of 25)	nr	2	19.47
3D.8	Total annual SIM score (out of 100)	nr	2	83.22

Table 3D provides further information on our customer service measure, the Service Incentive Mechanism (SIM). SIM is a performance commitment that was introduced by Ofwat in 2010. The overall SIM performance is included in [Table 3A](#) and an explanation of SIM can be found in [Section 4](#) of this Annual Performance Report. This table provides a further breakdown of the SIM performance.

The overall SIM Score is based on qualitative (75%) and quantitative (25%) elements. The qualitative score is produced from surveys carried out with customers who have had contact with us within a defined period. The quantitative element has historically looked at the number of written complaints received and at what stage of the complaints procedure they were, as well as unwanted telephone contacts. These elements are combined to give an overall SIM Score out of 100.

The SIM measure ceased as of the 1 April 2019 as a regulatory measure and has been replaced with a new Customer Measure of Experience (C-Mex) for 2020 onwards. In order to provide a comparative score to SIM for 2019/2020, Ofwat has provided a proxy calculation. The qualitative element is taken from the C-MeX Customer Service Survey and the quantitative from the number of written complaints only. The methodology and satisfaction scales in the survey do not match but give an indication of performance in customer experience. The quantitative element of the measure is very different and no longer includes unwanted telephone calls. Direct comparisons are not therefore possible.

It was not possible to target and track performance in 2019/2020 as the proxy calculation was not published until April 2020. We were however able to compare our performance to other water companies in the survey and monitor written complaint volumes.

Using the proxy calculation, performance this year is lower than 2018/2019. This means we have not achieved our performance commitment target, which is to improve year-on-year.

We have seen an increase in escalated written complaints across all areas of the business and a rise in first stage wastewater complaints, with an increase of around 75% from last year. However, the number of billing first stage complaints has continued to reduce and there has been a slight reduction in water related complaints.

There were two main contributing factors to the increase in waste complaints and lower satisfaction scores. The primary cause was the short-term impact of our wastewater insourcing transformation project on extending the timeliness of response and resolution for customers as we adapted to our new way of working. In addition to this, there were several significant storm events in the past year that placed additional pressure on our field teams as well as on our sewer networks. We know that these storm events caused repeat instances of flooding in some areas that caused further customer dissatisfaction.

On a positive note, despite the challenges faced with the current Covid-19 situation, during March 2020 we have seen improvements in our time to respond and resolve customer issues as a result of our shift to insource operations within customer field services. Although there was a negative impact on service during the transformation, resources are now embedded and we have more capacity to cope with incidents due to increased numbers of colleagues, more response vehicles, and new ways of working including working hours to meet customer demand.

Key

 Input cell  Calculation cell

Please refer to 'RAG 4.08 - Guideline for the table definitions in the annual performance report for the reporting year 2019-2020 and the information notice 'Expectations for monopoly company annual performance reporting 2019-2020'

Additional regulatory information

The information in this section details further regulatory financial and non-financial information as required by Ofwat, with a brief description of significant variances compared to previous years. The information in this section comprises the following tables.

- [Table 4A](#): Non-financial information. Number of properties and volumes
- [Table 4B](#): Wholesale totex analysis
- [Table 4C](#): Impact of AMP performance to date on Regulatory Capital Value (RCV)
- [Table 4D](#): Totex analysis for wholesale water by upstream category
- [Table 4E](#): Totex analysis for wholesale wastewater by upstream category
- [Table 4F](#): Operating costs associated with running the household retail business
- [Table 4G](#): Wholesale current cost financial performance
- [Table 4H](#): Financial metrics
- [Table 4I](#): Financial derivatives

Table 4A – Non-financial information – number of properties and volumes

For the 12 months ended 31 March 2020

Line description	Units	DPs	Current year		
			Unmeasured	Measured	
Retail					
A – Household					
4A.1	Number of void households	000s	3	63.553	54.233
4A.2	Per capita consumption (excluding supply pipe leakage) l/h/d	l/h/d	2	158.23	112.52
			Water	Wastewater	
Wholesale					
B – Volume (Ml/d)					
4A.3	Bulk supply export	Ml/d	3	0.286	0.000
4A.4	Bulk supply import	Ml/d	3	59.939	0.000
4A.5	Distribution input	Ml/d	3	1,246.040	

This table provides information regarding water consumption, vacant households (voids) and wholesale water and wastewater volumes.

Table 4A Line 1: Number of void households

Unmeasured household void properties have increased from 61,602 customers in 2018/2019 to 63,553 customers in 2019/2020, an increase of 1,951 customers.

Measured household void properties have increased from 50,682 customers in 2018/2019 to 54,233 customers in 2019/2020, an increase of 3,551 customers.

Table 4A Line 2: Per capita consumption (excluding supply pipe leakage)

We have to complete analysis of the annual water balance to support our reporting of unmeasured and measured per capita consumption (PCC) values and distribution input. This process reports water delivered and the components of the water balance. The water balance allocates water going into supply from our treatment works (distribution input) across the different components of demand – customer consumption, leakage and company operational use. An output of the process is estimated values for both unmeasured and measured household PCC and distribution input.

4A.2 (column 1) Unmeasured household

Unmeasured household per capita consumption (PCC) has increased slightly in 2019/2020. The weather in the summer of 2019 was not as warm and dry as that of summer 2018. Although the summer of 2019/2020 saw reduced demand compared to 2018/2019, the winter months saw greater water usage, like that in 2017/2018. Quadrant analysis of temperature and rainfall data for the period 2009 to 2020 has shown 2019/2020 to be a warm, wet year when compared to previous years. As the definition for PCC is based on consumption in dry year conditions, the application of an additional dry year uplift factor to PCC was considered appropriate for 2019/2020 to reflect what PCC would have been in a dry year.

Before applying this factor, unmeasured household PCC in 2019/2020 was lower than that in 2018/2019. However, after applying this factor to account for the warm, wet weather, the 2019/2020 reported PCC value was 158.23l/h/d. Overall, estimated unmeasured household PCC was 2.0% higher in 2019/2020 than in the previous report year. This means that water demand was comparable to last year where a dry-year uplift was not applied.

Household demand was higher at the end of the year, in March 2020, when compared to previous years. This high usage has continued into April 2020. It is thought that this increase in usage is due to a combination of warm and dry weather conditions and the increased number of people based at home during the global Covid-19 pandemic. We therefore expect PCC to increase in 2020/2021.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

4A.2 (column 2) Measured household

The same dry year uplift was applied to the measured household PCC. This means that overall measured household PCC is greater in 2019/2020 than the previous year, with reported PCC increasing by 1.0l/h/d (0.9%).

Table 4A Line 3: Bulk supply export

We export small volumes of treated water (less than 0.5MI/d) to Anglian Water at Finningley. The export is estimated based on meter readings obtained from two flow meters. This year’s reported volume is as normal and in line with previous years. The estimate for this year has been agreed in writing, by emails between Yorkshire Water and Anglian Water colleagues.

We export a very small volume of treated water (less than 0.01MI/d) to Severn Trent Water. The export is estimated based on meter readings. This year’s reported volume is as normal and in line with previous years. The estimate for this year has been agreed in writing, by emails between Yorkshire Water and Severn Trent Water colleagues.

Table 4A Line 4: Bulk supply import

We import a volume of raw water from Severn Trent Water from Ladybower Reservoir to Rivelin Lower Reservoir. The data provided for this line is estimated based on daily flow data from Severn Trent’s flow meter. The imports from Severn Trent Water vary according to control lines for stocks in Ladybower Reservoir. 2018/2019 was a dry year, therefore reduced quantities were imported from Severn Trent Water due to lower reservoir stocks. 2019/2020 was a wetter year, thereby allowing for higher imports. The estimate for this year has been confirmed in writing by letter from Severn Trent Water.

Table 4A Line 5: Distribution input

Distribution input is the average amount of potable water entering the distribution system. The data have been obtained from Yorkshire Water’s ‘Water into Supply’ database. Water into Supply data are produced monthly, giving details of water treatment works outputs and demands within the regional forecasting zones.

Average distribution input is 1246MI/d. This is 2.8% lower in 2019/2020 than in the previous report year. We saw high customer demand in the prolonged warm, dry summer months of 2018 and high leakage levels in the first months of the report year following the impact of the ‘Beast from the East’ in March 2018. In 2019/2020, we experienced warm spells during the summer, and then periods of intense rainfall in the autumn, winter and early spring.

Table 4B – Wholesale totex analysis

For the 12 months ended 31 March 2020

Line description	Units	DPs	Current year			Cumulative 2015-2020		
			Water	Wastewater	TTT	Water	Wastewater	TTT
A – Actual totex								
4B.1 Actual totex	£m	3	436.031	514.056	0.000	1853.500	2205.265	
B – Items excluded from the menu								
4B.2 Third party costs	£m	3	1.455	0.000		9.867	0.002	
4B.3 Pension deficit recovery payments	£m	3	6.119	6.248		30.510	34.279	
4B.4 Other 'Rule book' adjustments	£m	3	1.726	2.424		5.496	7.602	
4B.5 Total items excluded from the menu	£m	3	9.300	8.672	0.000	45.873	41.883	0.000
C – Transition expenditure								
4B.6 Transition expenditure	£m	3	-1.159	-5.128		9.017	-0.103	
D – Adjusted Actual totex								
4B.7 Adjusted Actual totex	£m	3	425.572	500.256	0.000	1816.644	2163.279	0.000
4B.8 Adjusted Actual totex base year prices	£m	3	358.265	421.139		1,610.741	1,917.996	
E – Allowed totex								
4B.9 Allowed totex based on final menu choice – base year prices	£m	3	284.201	387.647		1483.671	1938.236	

This table sets out totex expenditure in outturn prices for wholesale operations analysed by price control for the 2019/2020 year, and cumulatively for the AMP.

Gross regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes in the current reporting year was £515.5m. With the associated income totalling £26.8m the net expenditure in the current reporting year was £488.7m.

Within our gross capital expenditure, we have included 2020-2025 transition expenditure of £6.2m. This is per 'IN 20/03' published in April 2020 that requested that we deviate from RAG 4.08 by including expenditure related to our AMP7 transition programme.

Excluding 2020-2025 transition expenditure our gross regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes in the current reporting year was £509.3m. With the associated income totalling £26.8m the net expenditure in the current reporting year was £482.6m.

The following commentary excludes any 2020-2025 transition expenditure, with a separate paragraph provided later to explain the nature of this investment in the report year.

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

A total of £200.7m has enabled us to deliver our NEP quality programme outputs, drive improvements on four of our performance commitments to drive upper quartile performance in AMP7 as well as supporting any statutory requests for new assets as part of our supply demand programme supporting development across the region.

The remaining £308.7m has been to maintain our infra and non-infra asset base which despite the extreme weather events we have experienced throughout this AMP period has resulted in all four Stability and Reliability (S&R) baskets remaining stable.

Over the AMP6 period a total of £2,141.5m of gross regulated capital expenditure associated with the delivery of the wholesale water and wastewater programmes has been invested including the early start spend of £15.2m in 2014/2015. This includes £46.4m in total of investment that was required to repair or replace our assets damaged during the extreme flooding events we have experienced over the AMP period which has been claimed through our insurance and offset within our operating costs.

Not included in the above gross expenditure is investment totalling £99.6m which has subsequently been reallocated each year to operating costs in line with RAG reporting guidelines as this is associated with IAS16 minor repair, inspection and investigation investment.

Over AMP6 a total of £134.5m of grants and contributions have been received, a further breakdown of these reported is in [Table 2E](#) along with detailed commentary explaining variances to original plan.

The total net capital expenditure associated with the delivery of the wholesale water and wastewater programmes for the AMP6 period is £2,007.0m. After adjusting this for investment relating to flood events and IAS16 the total regulatory capital expenditure for AMP6 is £2,059.7m. This is a variance of 1.0% when compared to the capital element of the totex final determination of £2,080.6m.

As part of last year's annual return, we received guidance from Ofwat to exclude any investment within year with regards to the AMP7 transition programme from the APR tables and reference any spend in the commentary for information purpose only. The total reported last year of £0.3m which was associated with early sampling work at Chellow Heights WTW as part of the DWI AMP7 quality programme (£0.04m) and work relating to early design work on the AMP7 wastewater WINEP programme (£0.3m). In the current report year further work has been undertaken in preparation for AMP7 with capital investment totalling £6.2m. As per 'IN 20/03', published in April 2020, we have deviated from RAG 4.08 by including expenditure related to our AMP7 transition programme within this table. The investment this year has allowed early design work to be undertaken by our Strategic Planning Partner on Reservoir safety improvements at Rivelin IRE (£0.2m) and on three of our DWI AMP7 quality outputs at Tophill Low, Oldfield and Sladen Valley (£0.9m) as well as continuing the work started last year on the chemical investigation programme (£3.4m) and wastewater AMP7 WINEP programme (£1.7m). In total across the last two report years a total of £6.5m has been invested on the AMP7 Early Start programme to support the delivery of outputs with early compliance dates.

Table 4C – Impact of AMP performance to date on Regulatory Capital Value (RCV)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Water	Wastewater	TTT
4C.1 Cumulative totex over/underspend so far in the price control period	£m	3	-126.646	72.557	
4C.2 Customer share of cumulative totex over/underspend	£m	3	-61.888	36.206	
4C.3 RCV element of cumulative totex over/underspend	£m	3	53.793	-55.886	
4C.4 Adjustment for ODI outperformance payment or underperformance payment	£m	3	-17.278	0.000	
4C.5 RCV determined at FD at 31 March	£m	3	2891.324	4059.180	
4C.6 Projected 'shadow' RCV	£m	3	2927.839	4003.294	0.000

Table 4C looks at projected adjustments to the Regulatory Capital Value (RCV) that are expected at the next price review.

Table 4C Lines 1-3

These lines have been populated using the PR14 accounting for past performance totex model, as submitted within our PR19 blind year reconciliation submission. These values have been adjusted to March 2020 RPI price base.

Table 4C Line 4

This has been inputted using the updated PR19 blind year reconciliation submission for our ODI performance.

Table 4C Line 5

This has been taken from the Ofwat published RCV as at March 2020 prices.

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 - Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4D – Wholesale totex analysis – water

For the 12 months ended 31 March 2020

Line description	Units	DPs	Water resources		Network Plus				Total	
			Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution		
A – Operating expenditure										
4D.1	Power	£m	3	0.000	2.220	4.411	0.002	9.294	12.130	28.057
4D.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4D.3	Abstraction charges/discharge consents	£m	3	4.969	0.580	0.000	0.000	0.004	0.000	5.553
4D.4	Bulk supply	£m	3	0.000	3.804	0.000	0.000	0.000	0.000	3.804
4D.5	Other operating expenditure – renewals expensed in year (Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4D.6	Other operating expenditure – renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4D.7	Other operating expenditure – excluding renewals	£m	3	0.262	9.069	3.595	1.056	46.621	107.630	168.233
4D.8	Local authority and Cumulo rates	£m	3	0.000	7.923	1.992	0.674	1.179	29.033	40.801
4D.9	Total operating expenditure excluding third party services	£m	3	5.231	23.596	9.998	1.732	57.098	148.793	246.448
4D.10	Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	1.455	1.455
4D.11	Total operating expenditure	£m	3	5.231	23.596	9.998	1.732	57.098	150.248	247.903
B – Capital expenditure										
4D.12	Maintaining the long term capability of the assets – infra	£m	3	0.000	7.787	-0.054	-0.259	-0.025	29.382	36.831
4D.13	Maintaining the long term capability of the assets – non-infra	£m	3	0.000	1.388	2.243	0.407	42.129	29.144	75.311
4D.14	Other capital expenditure – infra	£m	3	0.000	0.718	0.000	0.000	0.139	40.616	41.473

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4D – Wholesale totex analysis – water (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Water resources		Network Plus				Total
			Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
4D.15 Other capital expenditure – non-infra	£m	3	0.000	3.313	0.007	0.018	8.413	34.527	46.278
4D.16 Infrastructure network reinforcement	£m	3	0.000	0.000	0.000	0.000	0.000	4.418	4.418
4D.17 Total gross capital expenditure (excluding third party)	£m	3	0.000	13.206	2.196	0.166	50.656	138.087	204.311
4D.18 Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4D.19 Total gross capital expenditure	£m	3	0.000	13.206	2.196	0.166	50.656	138.087	204.311
C – Grants and contributions									
4D.20 Grants and contributions	£m	3	0.000	0.233	0.000	0.000	0.000	15.950	16.183
4D.21 Totex	£m	3	5.231	36.569	12.194	1.898	107.754	272.385	436.031
D – Cash expenditure									
4D.22 Pension deficit recovery payments	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4D.23 Other cash items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4D.24 Totex including cash items	£m	3	5.231	36.569	12.194	1.898	107.754	272.385	436.031
E – Unit cost information (operating expenditure)									
4D.25 Licenced volume available	MI	3	740462.762						
4D.25 Volume abstracted	MI	3		445977.779					
4D.25 Volume transported	MI	3			275366.503				
4D.25 Average volume stored	MI	3				3139.775			
4D.25 Distribution input volume	MI	3					456050.640		
4D.25 Distribution input volume	MI	3						456050.640	
4D.26 Unit cost	£/MI	3	7.065	52.908	36.308	551.632	125.201	329.455	
4D.27 Population	000s	3	5071.134	5071.134	5071.134	5071.134	5071.134	5071.134	
4D.28 Unit cost	£/pop	3	1.032	4.653	1.972	0.342	11.259	29.628	

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4D provides information relating to water services.

This table provides information about the different activities undertaken as part of delivering upstream services. Water companies typically provide their customers with a water supply and remove their wastewater and sewage. This requires sustainable water resources and water treatment facilities as well as sewerage treatment and disposal facilities. It also requires a network to transport the water and wastewater.

Table 4D Lines 1-11: Operating expenditure

The year-on-year reduction in water resources costs relates to the significant drought costs classified as exceptional in the statutory accounts associated with the dry and hot summer of 2018, which were not experienced in 2019/2020. Wet weather has comparatively less impact on the water price control than wastewater and typically results in reduced demand, fewer network repairs due to more stable ground conditions, and increased treatment costs from higher turbidity levels in river sources.

In the summer of 2018 Yorkshire Water's raw water network was used to pump water large distances across the region to optimise water resources, which significantly increased energy costs. Other than this, there are no significant underlying year-on-year movements in operating expenditure associated with water resources.

Similar to water resources, water treatment has seen a reduction in operating costs from 2018/2019 principally as a result of costs associated with the exceptional summer which was not repeated in 2019/2020.

There have been underlying increases in costs for the water treatment upstream service due to an increase in chemical prices of 8% which was significantly in excess of general inflation. This has been compounded with an increase in chemical consumption due to heavy rainfall adversely impacting raw water quality.

Treated water distribution price control costs have also slightly increased in 2019/2020 due to a deliberate proactive investment programme to improve leakage performance, including the insourcing of leakage detection resources.

The operating cost lines in the tables have not been adjusted to exclude the pension deficit contribution. This is because Yorkshire Water's defined Benefit scheme is accounted for under the FRS102 accounting standard which applies the same rules as a defined contribution scheme. Historical pension scheme deficit cannot be allocated between the different group entities. This results in all cash contributions being recognised as operating expenditure, including pension deficit contributions.

The treatment of pension costs contrasts to most other WASC's who have adopted IFRS and are required to follow defined benefit pension scheme accounting, therefore excluding cash contributions in excess of the IAS 18 defined benefit pension cost from the operating expenditure. The unit rate information on **Tables 4D** and **4E** use the operating costs line to calculate the unit price, as a result Yorkshire Water's rate appear slightly higher than the other companies who exclude these pension contributions. We have confirmed this approach with Ofwat, and it is consistent with that adopted in 2018/2019.

Operating expenditure

Table 4D Lines 12-21: Capital expenditure and Grants and contributions

Gross regulated capital expenditure associated with the delivery of the wholesale water programme in the current reporting year was £204.3m. With the associated income totalling £16.2m the net expenditure in the current reporting year was £188.1m.

Within our gross capital expenditure, we have included 2020-25 transition expenditure of £1.1m. This is per 'IN 20/03' published in April 2020 which requested that we deviate from RAG 4.08 by including expenditure related to our AMP7 transition programme.

Excluding 2020-25 transition expenditure our gross regulated capital expenditure associated with the delivery of the wholesale water programme in the current reporting year was £203.2m. With the associated income totalling £16.2m the net expenditure in the current reporting year was £187.0m.

The commentary below excludes any 2020-25 transition expenditure, with a separate paragraph provided below to explain the nature of this investment in the report year.

A total of £91.3m has enabled us to finalise the delivery of our AMP6 DWI water quality programme improvement outputs, continue to drive improvements on two of our water performance commitments to drive upper quartile performance in AMP7 (Leakage and Interruptions to Supply) as well as funding any statutory requests for new assets as part of our supply demand programme supporting development across the region.

The remaining £111.9m has been to maintain our infra and non-infra asset base which despite the extreme weather events we have experienced throughout this AMP period has resulted in both S&R baskets remaining stable.

Over the AMP6 period a total of £875.3m of gross regulated capital expenditure associated with the delivery of the wholesale water programme has been invested including the transition spend of £10.2m in 2014/2015. This includes £0.5m of investment that was required to repair or replace our water assets, damaged during the extreme flooding events we have experienced over the AMP period, which has been claimed through our insurance and offset within our operating costs.

Not included in the above gross expenditure is investment totalling £55.7m which has subsequently been reallocated each year to operating costs in line with RAG reporting guidelines as this is associated with IAS16 minor repair, inspection and investigation investment.

Over the full AMP period a total of £84.2m of grants and contributions have been received, a further breakdown of these is reported in **Table 2E** along with detailed commentary explaining variances to original plan.

The total net capital expenditure associated with the delivery of the wholesale water programme for the AMP6 period is £791.1m. After adjusting this for investment relating to flood events and IAS16 the total regulatory capital expenditure for AMP6 is £845.2m. This is a variance of 6% when compared to the capital element of the totex final determination of £796.4m

In comparison to last year, net expenditure is 3% higher and has supported the continued delivery of our water and cross-business performance commitments.

As part of last year's annual return we received guidance from Ofwat to exclude any investment within year with regards to the AMP7 transition programme from the APR tables and reference any spend in the commentary for information purposes only. The total reported last year within the water tables was only £0.04m which was associated with early sampling work at Chellow Heights WTW as part of the DWI AMP7 quality programme. In the current report year further work has been undertaken in preparation for AMP7 with investment totalling £1.1m. As per 'IN 20/03', published in April 2020, we have deviated from RAG 4.08 by including expenditure related to our AMP7 transition programme within this table. The investment this year has allowed early design work to be undertaken by our Strategic Planning Partner on Reservoir safety improvements at Rivelin IRE (£0.2m) and on three of our DWI AMP7 quality outputs at Tophill Low, Oldfield and Sladen Valley (£0.9m). In total across the last two report years a total of £1.1m has been invested on the AMP7 transition programme to support the delivery of water outputs with early compliance dates.

Investment to date and in the current report year has allowed us to target our drinking water quality performance and any resulting significant drinking water events and although we have not met the 100% compliance target set for water quality compliance we have delivered high levels of performance within the deadband performance allowed until this final year where we have just hit the underperformance deadband incurring a financial underperformance payment of £0.9m. We always strive to have no significant drinking water events, however we have had one in the current report year, our best in-year performance of the AMP, which is below the maximum allowed level of 6.

In the current report year, we have seen our best ever performance on water quality contacts and although we have not met the extremely stretching targets set, we have further reduced the number of contacts to within 260 incidents of the 6,108 targeted which is a 40% reduction over the AMP period. As we have not met the targeted performance, a financial underperformance payment has been generated, which the Board agreed to re-invest in full to deliver greater service level improvements within the water programme than originally targeted as part of our upper quartile (UQ) plans.

We continue to maintain our stable forecast on our long-term commitments for the water quality and networks Stability and Reliability factor, with most sub-measures meeting the target set - only the 'interruptions to supply' sub-measure was higher this report year than its upper reference.

We have continued the increased level of investment on leakage find and fix as part of our upper quartile programme which has allowed us to finish the AMP period below the original target generating an outperformance payment of £0.2m.

We have also continued the increased level of investment to improve water supply interruptions as part of our upper quartile programme and have again bettered our in-year target performance attracting a reward in the current year of £10.2m.

Total gross capital investment of £43.9m, before the re-allocation of IAS16 repair investment to operating costs, to maintain the long-term capability of the infrastructure water assets has decreased by 24% in comparison to last year's reported number of £57.5m. Once the IAS16 repair investment of £7.1m is reallocated the in-year investment reported in the table totals £36.8m. In the current reporting year the majority of expenditure driving this investment (4D.12) is split over raw water abstraction (£7.8m) and treated water distribution (£29.4m) price controls.

The raw water abstraction investment of £7.8m targets statutory as well as health and safety improvements on our reservoir assets. Most of the investment within the current reporting year has been at our impounding reservoirs (IRE) at Lindley Wood (Otley) and More Hall (Sheffield) (£3.9m). At Lindley Wood we are constructing a new spillway to increase the capacity of the existing one and grouting the masonry joints within the stilling basin. At More Hall we are increasing drawdown capacity by replacing the existing pipework as well as grouting between the spillway invert masonry blocks and raising the spillway. At Warley Moor in Halifax we have invested £1.3m refurbishing and increasing the drawdown of the IRE. There has also been further investment at Redmires and Ten Acres in Sheffield (£0.9m) and Blackmoorfoot in Huddersfield (£0.6m).

Treated water distribution investment (£29.4m) comprises £11.5m relating to annual reactive block allocations to support our leakage improvement plan, by replacing or increasing the number of distribution network assets like communication pipes, stop taps, distribution pipework fittings or pressure reduction or pressure logging devices, to ensure we can better manage our wider water network and grid.

There are numerous other delivery batches to continue our renewal and refurbishment of the water network. Key areas of investment within the period include £0.8m in Pontefract to divert three water mains where Wakefield Metropolitan District Council intends to locate a leisure complex. At Fixby we have capitalised £0.9m of expenditure relating to the emergency repair of a burst distribution main and replacement pipework. In Castleford £0.8m has been invested renewing the service pipes for 429 properties to reduce leakage in the DMA.

We have also invested £0.6m in numerous locations to reduce the size of DMAs as part of our efforts to improve leakage performance.

Overall investment in our long-term clean water non-infrastructure assets in the report year (£75.3m) has reduced marginally versus the prior year (£78.6m).

Expenditure within the year relating to our Management and General (M&G) programme and allocated to our water service was £24.5m. This is then apportioned across the accounting separation categories by the full time equivalent (FTE) allocation supporting each area.

M&G expenditure was across numerous schemes and included continued work migrating to a new SAP platform which went live in July 2019 and is now in phase 2 (£7.4m).

Our project to provide enhanced system data is ongoing (£1.6m) and £1.3m has been allocated to our water service in relation to a scheme to deliver improved IT infrastructure at our data centres providing workplace and application services to users, telephony services and a data network to remote workers. We have also invested £1.6m this year replacing life expired Toughbooks for operational colleagues. Finally, our Land and Property team has invested £1.2m in the year providing structural and refurbishment works to buildings and structures on Yorkshire Water estates.

Within raw water transport (£2.2m) there has been investment within the year of £1.2m on the raw water main between Watersheddles IRE and Oldfield WTW to replace air valves and install a 350mm gate valve.

The water treatment investment (£42.1m) is made up of the annual block (£2.8m) that replaces all MEICA failed assets on a rolling programme. There was £8.2m of expenditure at Elvington WTW where significant works are ongoing to improve key components of the site (lime storage and dosing, poly plant, sodium hydroxide plant, aluminium plant and MSP plant). At Chellow WTW we have invested £2.1m as part of an ongoing scheme to install a new 'run-to-waste' solution which will continue in to AMP7 and £2.0m has been spent as part of our gas replacement programme to remove chlorine and sulphur dioxide gas dosing systems at WTWs. These will be replaced with liquid dosing systems.

Treated water distribution (£29.1m) comprises annual block schemes on which we have invested £5.2m in the year replacing asset life expired and damaged domestic and commercial meters and DMA meters. A further £1.9m has been spent at service reservoirs addressing issues at those which are out of service for cleaning, inspection and improvement and, as part of our water quality improvement plan, installing new roofing membranes. At Hooper covered reservoir we have invested £0.7m installing an adhered sheet membrane to the roof of the North Compartment.

Further detailed information on the expenditure in lines 4D.14 and 4D.15 can be found in the commentary for [Table 4L](#) which identifies all enhancement expenditure by purpose.

Information on the expenditure in line 4D.16 can be found in the commentary for [Table 2J](#).

We have, as in previous years, no capital expenditure reported to 4D.18 third party services.

Please note that following the recent changes that have come into force within Condition F of our licence, that state that all companies must comply with all requirements set out in the Regulatory Accounting Guidelines, we are writing to restate our position with regards to principal use.

We have continued to allocate capital costs using PACE allocation rather than principal use as we still believe that this is the most accurate way to report capital expenditure to meet Ofwat's cost allocation principles.

Therefore, our M&G support programme continues to be proportionately allocated to the water and wastewater programmes in line with our final determination with 48% being allocated to water. Whilst this is consistent with our allocation in the final determination this is not in line with the principle use guidance Ofwat has issued.

While we endeavour to meet all guidance, we have consulted and reviewed different interpretations of the policy and have found that results can vary significantly depending on the interpretation of what is meant by "use". At this time, we have decided, following consultation with our external auditor Jacobs, that until we receive further clarity the most accurate way to allocate costs for these support services remains through proportional allocation, using investment categories linked to service area.

Comparison to PR19 forecast

In comparing our APR return with our PR19 forecast we have used table WS1 (PR19). As this table excludes atypical expenditure, we have incorporated this commentary in to Table 4J that also excludes atypical expenditure.

Table 4D Lines 25-28: Unit Cost Information

Data provided in Line 25 has been reported following guidance provided in 'Disaggregation of wholesale activities - upstream services' of Ofwat RAG 4.08.

Table 4D Line 25: Water resources - Abstraction licences

Licensed volume available is the volume of water available for public water supply. This is the total volume of all live abstraction licences held by Yorkshire Water for the purpose of public water supply. There was a slight increase in licensed abstraction volume in 2019/2020.

Table 4D Line 25: Water resources - Raw water abstraction

Volume abstracted aligns with annual abstraction returns provided to the Environment Agency for each abstraction licence. The abstraction returns to the Environment Agency are reported on a financial year basis by 30 April each year.

Total raw water abstracted in 2019/2020 was 445,977.78MI which is a small decrease from last year (3.8%). This decrease in abstraction can be explained by lower demand for water by household and non-household customers in 2019/2020 compared to the high demand during the dry, warm months experienced in summer 2018.

Table 4D Line 25: Volume transported (Network Plus Raw water transport)

The volume of water transported in 2019/2020 is 275,366.503MI. This has fallen by 9,263.473MI (3.3%) compared to the previous year. 2019/2020 saw more usual weather and rainfall conditions, resulting in fuller reservoirs and lower demand. This enabled greater use of reservoir water and hence reduced the need for transporting water across the region using our grid.

The difference in weather conditions compared to 2018/2019 led to a reduction in abstraction and distribution input, from 2018/2019 (468,276.750MI, equals 1283MI/d) to 2019/2020 (456,125.900MI, equals 1250MI/d). The fall in volume transported was 17,772.209MI, and river abstractions on the rivers Ouse, Ure and Wharfe dropped from 69,084.680MI in 2018/2019 to 50,548.563MI in 2019/2020, a reduction of 18,563.116MI (again because of greater use of reservoir sources).

Table 4D Line 25: Average volume stored (Network Plus Raw water storage)

The average volume of water stored in 2019/2020 was 3,139.775MI. This is a reduction of 218.543MI compared to the average storage in 2018/2019, which was 3,358.318MI.

Table 4D Line 25: Volume from water treatment and 4D.25 Volume DI treated water.

These data report distribution input volume in MI on an annual rather than daily basis.

Distribution input and volume from water treatment is the average amount of potable water entering the distribution system. The data has been obtained from the company's 'Water into Supply' database. Water into Supply data are produced monthly, giving details of water treatment works outputs and demands within the regional forecasting zones.

Distribution input and volume from water treatment is lower in 2019/2020 than in the previous report year. This is because customer demand in 2019/2020 was lower than that observed in the prolonged warm, dry summer months of 2018/2019 and the high leakage levels in the first months of the previous report year, following the impact of the 'Beast from the East' in March 2018.

Table 4D Line 27: Total Population

The total water population for 2019/2020 has been estimated from average property numbers multiplied by occupancy rates for measured and unmeasured households and unmeasured non-households plus the estimated communal (measured non-household) population for the year. Average billed property numbers for the report year for measured households, unmeasured households and unmeasured non-households are obtained from the billing file.

These are multiplied by estimated occupancy rates for the different property categories to give estimated populations. The occupancy rates used were determined through customer research undertaken for the Water Resources Management Plan 2014 (WRMP14).

The estimated populations are then added to the reported communal population (measured non-household population) from the 2011 Census to give the total population.

Total population has increased in the report year by approximately 13,000 people (0.25%) from last year and is expected to increase further in AMP7.

Table 4E – Wholesale totex analysis – wastewater

For the 12 months ended 31 March 2020

Line description	Units	DPs	Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total	
			Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal		
A – Operating expenditure												
4E.1	Power	£m	3	1.768	1.944	0.825	28.496	0.209	0.000	-3.071	0.000	30.171
4E.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	-2.262	0.000	-2.262
4E.3	Discharge consents	£m	3	0.681	0.751	0.583	4.249	0.000	0.000	0.000	0.000	6.264
4E.4	Bulk discharge	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.5	Other operating expenditure – renewals expensed in year (Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.6	Other operating expenditure – renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.7	Other operating expenditure – excluding renewals	£m	3	27.814	27.424	17.302	48.308	0.615	4.836	20.640	10.897	157.836
4E.8	Local authority rates and Cumulo rates	£m	3	0.085	0.080	0.061	19.806	0.003	0.001	1.412	0.000	21.448
4E.9	Total operating expenditure excluding third party services	£m	3	30.348	30.199	18.771	100.859	0.827	4.837	16.719	10.897	213.457
4E.10	Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.11	Total operating expenditure	£m	3	30.348	30.199	18.771	100.859	0.827	4.837	16.719	10.897	213.457

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4E – Wholesale totex analysis – wastewater (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total	
			Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal		
B – Capital Expenditure												
4E.12	Maintaining the long term capability of the assets – infra	£m	3	11.992	13.222	5.535	3.566	0.000	0.000	0.000	0.000	34.315
4E.13	Maintaining the long term capability of the assets – non-infra	£m	3	9.557	9.422	6.275	58.448	0.225	0.557	78.873	0.100	163.457
4E.14	Other capital expenditure – infra	£m	3	17.324	19.101	7.996	0.000	0.000	0.000	0.000	0.000	44.421
4E.15	Other capital expenditure – non-infra	£m	3	10.999	12.072	5.167	35.654	0.011	0.027	2.294	0.005	66.229
4E.16	Infrastructure network reinforcement	£m	3	1.079	1.190	0.498	0.000	0.000	0.000	0.000	0.000	2.767
4E.17	Total gross capital expenditure (excluding third party services)	£m	3	50.951	55.007	25.471	97.668	0.236	0.584	81.167	0.105	311.189
4E.18	Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.19	Total gross capital expenditure	£m	3	50.951	55.007	25.471	97.668	0.236	0.584	81.167	0.105	311.189
C – Grants and contributions												
4E.20	Grants and contributions	£m	3	3.765	4.151	1.738	0.936	0.000	0.000	0.000	0.000	10.590
4E.21	Totex	£m	3	77.534	81.055	42.504	197.591	1.063	5.421	97.886	11.002	514.056
C – Cash Expenditure												
4E.22	Pension deficit recovery payments	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.23	Other cash items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4E.24	Totex including cash items	£m	3	77.534	81.055	42.504	197.591	1.063	5.421	97.886	11.002	514.056

Key

Input cell
 Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4E – Wholesale totex analysis – wastewater (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total
			Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
D – Unit cost information (operating expenditure)											
4E.25	Volume collected	MI	3	296733.762							
4E.25	Volume collected	MI	3		700806.584						
4E.25	Volume collected	MI	3			189217.778					
4E.25	Biochemical Oxygen Demand (BOD)	Tonnes	3				133384.696				
4E.25	Biochemical Oxygen Demand (BOD)	Tonnes	3					5356.315			
4E.25	Volume transported	m3	3						1208982.835		
4E.25	Dried solid mass treated	ttds	3							153.306	
4E.25	Dried solid mass disposed	ttds	3								150.841
4E.26	Unit cost	£/unit	3	102.273	43.092	99.203	756.151	154.397	4.001	109056.397	72241.632
4E.27	Population	000s	3	5217.019	5217.019	5217.019	5217.019	5217.019	5217.019	5217.019	5217.019
4E.28	Unit cost	£/pop	3	5.817	5.789	3.598	19.333	0.159	0.927	3.205	2.089

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4E provides an analysis of all the wholesale wastewater upstream services, from sewerage collection to sludge disposal.

Table 4E Lines 1-11: Capital expenditure and Grants and contributions

The increase in costs in this price control are primarily within the Sewage Collection upstream services, where increased investment occurred to improve operational performance in readiness for enhanced AMP7 regulatory targets (starting April 2020). This also involved the insourcing of the below ground sewer maintenance team, with a consequential slight increase to the overhead allocations where relevant costs are applied by headcount. Increased investment is targeted to improve some of the common performance commitments by increasing sewer rehabilitation, reduce the chance of repeat incidents by minimising any backlog of jobs, and more focused proactive investigation and repairs to the sewer network. Increases in sewage collection upstream services costs have also resulted from the ownership transfer of pumping stations which were previously private. Many of these pumping stations required significant levels of investment and maintenance to bring them into line with company and industry standards.

As with the performance drive in sewage collection, a further investment increase occurred within sewage treatment (mostly consumables and contracted services) to reduce pollution risks and reduce compliance failure. Following efficiencies including chemical dosing optimisation, the underlying sewage treatment upstream service costs have been broadly consistent with previous years, with the increase in costs due to flooding of assets for incidents which incurred from November 2019 through to the end of the financial year, and an increases in power consumption costs due to higher than average wastewater flows.

The operating cost lines in the tables have not been adjusted to exclude the pension deficit contribution. This is because Yorkshire Water's defined benefit scheme is accounted for under the FRS102 accounting standard which applies the same rules as a defined contribution scheme. Historical pension scheme deficit cannot be allocated between the different group entities. This results in all cash contributions being recognised as operating expenditure, including pension deficit contributions.

The treatment of pension costs contrasts to most other WASC's who have adopted IFRS and are required to follow defined benefit pension scheme accounting, therefore excluding cash contributions in excess of the IAS 18 defined benefit pension cost from the operating expenditure. The unit rate information on [Tables 4D](#) and [4E](#) use the operating costs line to calculate the unit price, as a result Yorkshire Water's rate appear slightly higher than the other companies who exclude these pension contributions. We have confirmed this approach with Ofwat, and it is consistent approach with that adopted in 2018/2019.

Table 4E Lines 12-21: Capital expenditure and Grants and contributions

Gross regulated capital expenditure associated with the delivery of the wholesale wastewater programme in the current reporting year was £306.1m. With the associated income totalling £10.6m the net expenditure in the current reporting year was £295.6m.

A total of £113.4m has enabled us to finalise the delivery our NEP wastewater quality programme improvement outputs, continue to drive improvements on our wastewater performance commitments to drive upper quartile performance in AMP7 (Internal Flooding and Pollution), as well as fund any statutory requests for new assets as part of our supply demand programme supporting development across the region.

The remaining £196.8m has been to maintain our infra and non-infra asset base which despite the extreme weather events we have experienced throughout this AMP period has resulted in both Stability and Reliability (S&R) baskets remaining stable.

Over the AMP6 period a total of £1,266.2m of gross regulated capital expenditure associated with the delivery of the wholesale wastewater programme has been invested including the transition spend of £5.0m in 2014/2015. This includes £45.8m of investment that was required to repair or replace our assets damaged during the extreme flooding events we have experienced over the AMP period which has been claimed through our insurance and offset within our operating costs.

Not included in the above gross expenditure is investment totalling £43.9m which has subsequently been reallocated each year to operating costs in line with RAG reporting guidelines as this is associated with IAS16 minor repair, inspection and investigation investment.

Over the full AMP period a total of £50.3m of grants and contributions have been received, a further breakdown of these is reported in [Table 2E](#) along with detailed commentary explaining variances to original plan.

The total net regulated capital expenditure associated with the delivery of the wholesale wastewater programme for the AMP6 period is £1,215.9m (within 5%) when compared to the capital element of the totex FD of £1,284.2m

In comparison to last year, net expenditure is 9% lower and has supported the continued delivery of our wastewater and cross-business performance commitments.

As part of last year's annual return we received guidance from Ofwat to exclude any investment within year with regards to the AMP7 Transition programme from the APR tables and reference any spend in the commentary for information purpose only. The total reported last year (£0.3m) was associated with work relating to early design work on the AMP7 wastewater WINEP programme. In the current report year further work has been undertaken in preparation for AMP7 with investment totalling £5.1m, again not included within the tables as advised last year.

The investment this year has allowed us to continue the work started last year on the chemical investigation programme (£3.4m) and early design work on several sites included as part of the wastewater AMP7 WINEP programme (£1.7m). In total, across the last two report years, £5.4m has been invested on the wastewater AMP7 Transition programme to support the delivery of outputs with early compliance dates.

Investment to date, and in the current report year, has allowed us to continue the increased activity to reduce the number of internal and external flooding incidents our customers suffer due to the failure of our assets as part of our upper quartile programme. We have again bettered our in-year target performance for internal flooding, attracting an in-year outperformance payment of £9.0m and across the AMP period reduced incidents by 18%.

Pollution performance in year has been mixed. In the current year, along with every other year of the current reporting period, we have earned an outperformance payment following a reduction in the number of category 3 incidents from last year, with the current year performance being our best yet, generating an outperformance payment of £9.6m. However, disappointingly we have still seen a high level of category 1 and 2 serious pollution incidents. This is despite increasing the level of activity and expenditure in this area.

We continue to maintain our stable forecast on our wastewater long-term commitments for the sewer networks and wastewater quality Stability and Reliability factor, with all sub-measures within the baskets assessed as stable and below the upper reference limit.

Total gross capital investment of £39.8m, before the re-allocation of IAS16 repair investment to operating costs, to maintain the long-term capability of the infrastructure wastewater assets has reduced by 8% in comparison to last report year. Once the IAS16 repair investment is reallocated the in-year investment reported totals £34.3m.

As in previous returns the total investment on our wastewater base infrastructure assets in Network Plus Sewage Collection has been apportioned across the three categories by the asset registry allocations supporting each area. Investment within the year is £30.8m. Expenditure within the report year includes several annual block schemes (£13.9m) to address ironworks, capital maintenance works on the sewer network and CCTV survey and repairs to reduce internal sewer flooding and pollution incidents. A further £1.7m has been spent at Hookstone Road combined sewer overflow (CSO) in Harrogate where an additional 228m³ of storage with a return sewage pumping station (SPS) is being installed to address repeat pollution incidents. In Brompton we have spent £1.2m in the report year to address several sink holes that appeared in the gardens of five customers.

Expenditure within sewage treatment and disposal this year (£3.6m) is mainly comprised of a single scheme at Withernsea on the east coast (£2.9m). Work commenced this year and will replace the existing Long Sea Outfall (LSO).

This has been impacted by coastal erosion and as part of the scheme will connect up to a new Aero-Fac wastewater treatment facility, which uses an advanced biological aerated facultative treatment process, to be built locally.

Overall investment in our long-term wastewater non-infrastructure assets in the report year (£163.5m) has increased versus the prior year (£158.8m).

Expenditure relating to our M&G programme and allocated to our water service was £34.2m. This is then apportioned across the accounting separation categories by the FTE allocation supporting each area.

M&G expenditure was across numerous schemes and included continued work migrating to a new SAP platform which went live in July 2019 and is now in phase 2 (£10.2m). Our project to provide enhanced system data is ongoing (£2.2m) and £1.7m has been allocated to our wastewater service in relation to a scheme to deliver improved IT infrastructure at our data centres providing workplace and application services to users, telephony services and a data network to remote workers. We have also invested £2.2m this year replacing life expired Toughbooks for operational colleagues.

Expenditure within the Network Plus Sewage Collection price control includes £1.7m on our annual block rolling programme that replaces all Mechanical, Electrical, Instrumentation, Control and Automation (MEICA) failed assets. As part of our Health and Safety programme our annual block scheme has invested £3.9m to ensure compliance with Electricity at Work Regulations (1989) and Dangerous Substances and Explosive Atmospheres Regulations (2002).

Expenditure within Network Plus Sewage Treatment price control includes the annual MEICA block (£5.2m). Further investment is across numerous wastewater treatment works to ensure that we maintain our assets to ensure treatment and safe disposal of all sewerage with significant investment at Beverley STW (£6.4m), Hull STW (£8.7m), Malton (£1.1m), Eastwood (£1.0m) and Worsborough (£0.8m). Three failing works in 2019 were as a result of ultra-violet (UV) consent failures and so we have invested £1.2m on 10 UV assets within the year.

Expenditure within the Sludge price control includes the annual MEICA block (£0.7m). Further investment at our sludge facilities, to ensure that we maintain our assets to ensure treatment and safe disposal of all sludges created by our treatment processes, has seen significant investment in Huddersfield (£34.7m), Hull (£15.4m), Knostrop (£4.6m), Dewsbury (£3.8m) Blackburn Meadows (£2.0m) and Esholt (£2.0m). We have invested £1.2m on the purchase of new centrifuges at South Elmsall, Goole and Keighley Marley and spent £2.5m in the report year on numerous other minor upgrades at sludge treatment facilities (STFs) within the region.

Information on the expenditure in lines 4E.14 and 4E.15 can be found in the commentary for [Table 4M](#).

Information on the expenditure in line 4E.16 can be found in the commentary for [Table 2J](#).

We have, as in previous years, no capital expenditure reported to 4E.18 third party services.

Please note that following the recent changes that have come into force within Condition F of our licence that state that all companies must comply with all requirements set out in the Regulatory Accounting Guidelines we are writing to restate our position with regards to principal use.

We have continued to allocate capital costs using PACE allocation rather than principal use as we still believe that this is the most accurate way to report capital expenditure to meet Ofwat’s cost allocation principles.

Therefore, our management and general support programme continues to be proportionately allocated to the water and wastewater programmes in line with our final determination with 52% being allocated to wastewater. Whilst this is consistent with our allocation in the final determination this is not in line with the principle use guidance Ofwat has issued.

While we endeavour to meet all guidance, we have consulted and reviewed different interpretations of the policy and have found that results can vary significantly depending on the interpretation of what is meant by “use”. At this time, we have decided, following consultation with our external auditor Jacobs, that until we receive further clarity the most accurate way to allocate costs for these support services remains through proportional allocation, using investment categories linked to service area.

Table 4E Line 25: Unit cost information

Volume collected – foul

These are separated by the origin of the wastewater, comprising domestic foul sewage, surface water drainage and highway drainage.

Volume collected foul is the sum of:

- Volume of trade effluent discharged to sewerage system (Trade effluent is any discharge which is not “domestic”)
- Volume of measured household sewage
- Volume of measured non-household sewage
- Volume of unmeasured household sewage
- Volume of unmeasured non-household sewage

The figure reported is a sum over the financial year, reported in Ml/year.

Volume of measured sewage (household and non-household) is sourced from our billing systems and uses measured data to provide the distributed volume and then a 95% returned to sewer rate is applied.

Volume of unmeasured sewage (household and non-household) is calculated using the number of properties from our billing system without a meter and applying an occupancy rate (2.7 people) per household to provide an unmeasured population. A per capita consumption figure (151.37 l/h/d) is then applied to this population figure to provide the volume distributed to the household. This volume then has the 95% returned to sewer calculation applied.

Volume of trade effluent is sourced directly from Table 4R.12, which has been calculated using our billing system of trade effluent customers. The CMOS system only captures retail trade effluent customers (i.e. excludes non appointed customers such as Tanker Trade, Syngenta and Nufarm).

The table below shows the volumes for the five inputs and the total volume reported. Overall, there has been a slight decrease in total volume compared to last year.

Input	Volume (Ml/yr)
Volume measured household	99,259.200
Volume measured non-household	47,470.200
Volume unmeasured household	130,633.150
Volume unmeasured non-household	782.072
Trade effluent (retail only)	18,589.140
Total	296,733.762

Volume collected – surface water drainage and highway drainage

These lines represent the volumes collected by the sewerage network for surface water drainage and highway drainage, respectively. These flows are not specifically measured by the company and have been derived through the application of a number of calculations, based on some high-level property area and impermeability assumptions, and rainfall data utilising secondary sources and third-party systems where necessary.

Consistent with our reporting in previous years, we have assumed the impermeable area drained from domestic properties is on average 125m² across our region. The number of domestic properties connected has been extracted from our billing system as a snapshot in time near the end of the year (including properties not being billed or occupied which continue to drain into our wastewater network). This approach differs to other connected properties data in the APR, which are provided on an average number of properties approach. The data relating to the impermeable area drained from non-household properties is taken from the Central Market Operating System (CMOS) used by the business retail market. This reflects how non-household properties are charged by their retailers for surface water drainage, and we believe this data to be reasonable up to date and accurate.

The CMOS data resulted in an average impermeable area per non-domestic property of 1413m², a reduction of 15m² per property from last year’s data.

Data provided by the Environment Agency ranges from a peak annual rainfall value of 1,800mm and a minimum of 818 mm across our eight representative rainfall gauges. To provide context, the average rainfall across the whole of Yorkshire Water’s region has increased by 56% from 691mm in 2018/2019 to 1,079mm in 2019/2020. This represents a wetter than typical year. In contrast, the 2018/2019 reporting year was relatively dry compared to recent historical averages.

Overall, the volume collected for surface water drainage has increased by 61.9% to 700,806.584MI compared to last year's figure (due to a wetter than average year of rainfall, and greater number of domestic properties connected).

The volumes we report as collected from highway drainage is assessed as a proportion of impermeable area attributed to highways and paths. The resulting figure for this year has also therefore increased by 61.9% to 189,217.778MI relative to last year's reported figure. This is primarily a result of the changes in rainfall across the region.

Biochemical Oxygen Demand – sewage treatment and disposal

This is the total pollution load in tonnes BOD/year that is discharged to the sewerage system. This is interpreted to mean the inclusion of all sources of load, i.e. resident population, holiday population, trade effluent, domestic tanker load. The figure reported is a sum over the financial year, reported in tonnes BOD/year.

The figure reported for 2019/2020 is 133,384.696, which is a 1.4% increase over the previous year. The load increase can be attributed to incremental population increases and increases in trade load as reported in [Table 4S](#) Line 8.

Biochemical Oxygen Demand – imported sludge liquor treatment

To calculate the total amount of BOD, measurements are needed for the liquor volume and concentration of BOD. Currently we do not measure the liquor flows or their concentration of BOD. The pipework is not always accessible and may contain other flows (e.g. rainfall run off, final tank scum traps, etc) that do not meet the definitions. We therefore calculate the theoretical liquor volume from the thickener or de-watered sludge feed flow based on a mass balance using changes in dry solids concentration; this is a standard method.

The reported figure is similar to that reported last year (1.8% higher).

In AMP7, we will be introducing a filtrate and centrate sampling program to allow for real load concentration data in future years. In addition, we will be evaluating the use of filtrate and centrate flow meters to determine return liquor flows rather than the current mass balance approach.

Volume transported

The measure of sludge volume transported is m³ and does not differentiate between liquid and cake. The reported figure represents an increase of approximately 5% transported volume from last year.

Tankered liquid is 102,198m³ higher than last year. More than half of this (60,000m³) is due to increased tankering out of South Elmsall, Marley and Denaby. This was caused by a switch to liquid movements from cake due to asset issues with dewaterers at South Elmsall and Denaby, and the removal of a temporary cake unit at Marley.

Cake movement is down on the previous year. Movement of cake from processing sites has reduced by 44,222m³ from the previous year. This is due to two main reasons:

1. This financial year we did not move cake from our South Elmsall and Marley sites of approximately 9,409m³. This is due to the switch from cake to liquid movements at these sites, as mentioned above.
2. In 2017/2018 and 2018/2019 we exported raw cake from Knostrop due to the ongoing capital scheme to replace the incinerator with the current digestion plant. In 2018/2019 we sent 36,486m³ to third parties from Knostrop. This stopped once the new digester was commissioned.

Dried solid mass treated

This line, and the one below, show how much sludge we produced as a business and how much we disposed (or recycled) in thousand tonnes of dry solids (ttds). These figures are not necessarily the same figure because Yorkshire Water has storage capacity which we may choose to use or not, for strategic reasons. Yorkshire Water also has legacy stocks of material which may need to be disposed in a different year to when the material was produced.

In 2019/2020, we are reporting a slightly higher ttds of sludge treated than in 2018/2019, of 153.306ttds. This is an increase of 1.2% from last year, which is in line with the general trend over AMP6 and reflects increases in the population of Yorkshire, which has increased by approximately 1% a year over AMP6.

Dried solid mass disposed

The total solid mass disposed in 2019/2020 (150.841ttds) is similar to the total produced during the year because the majority was recycled with just a small amount held in stock. The amount held in stock was due to a very wet winter period where our recycling partners struggled to find farms willing to take delivery and we therefore held this material on site. No legacy stocks were disposed of during the year. The amount disposed this year is considerably less than last year (170.997ttds). This is because 2018/2019 was an unusually high year where we recycled legacy stocks under an Environment Agency Local Environmental Position.

In future years we would expect to see similar produced and disposed figures with only small stocks being kept on site. This is because Yorkshire Water now produces digested cake products that are less suitable for long-term storage on site compared to cake mixed (conditioned) with green waste, which was a technique employed on some sites at the beginning of AMP6. There is a potential for some remaining legacy stocks of green waste conditioned sludge to be disposed of if suitable land restorations become available.

Table 4E Line 27: Population

The number of new (2019/2020) household properties in the Yorkshire Water wastewater area is 14,611, which when multiplied by the 2.40 occupancy rate gives a population increase of 35,060. This represents an increase of 0.67% which is very similar to that of previous years (0.65% in 2018/2019 and 0.63% in 2017/2018).

Table 4F – Cost analysis – household retail

For the 12 months ended 31 March 2020

Line description	Units	DPs	Household unmeasured				
			Water only	Wastewater only	Water and wastewater	Total	
A – Operating expenditure							
4F.1 Customer services	£m	3	0.552	0.590	11.296	12.438	
4F.2 Debt management	£m	3	0.082	0.087	1.673	1.842	
4F.3 Doubtful debts	£m	3	0.542	0.061	9.560	10.163	
4F.4 Meter reading	£m	3					
4F.5 Other operating expenditure	£m	3	0.178	0.190	3.643	4.011	
4F.6 Total operating expenditure excluding third party services	£m	3	1.354	0.928	26.172	28.454	
4F.7 Third party services operating expenditure	£m	3	0.000	0.000	0.000	0.000	
4F.8 Total operating expenditure	£m	3	1.354	0.928	26.172	28.454	
4F.9 Depreciation – tangible fixed assets (on assets existing at 31 March 2015)	£m	3	0.014	0.015	0.293	0.322	
4F.10 Depreciation – tangible fixed assets (on assets acquired since 1 April 2015)	£m	3	0.031	0.033	0.630	0.694	
4F.11 Amortisation – intangible fixed assets (on assets existing at 31 March 2015)	£m	3	0.000	0.000	0.000	0.000	
4F.12 Amortisation – intangible fixed assets (on assets acquired since 1 April 2015)	£m	3	0.000	0.000	0.000	0.000	
4F.13 Total operating costs	£m	3	1.399	0.976	27.095	29.470	
4F.14 Capital expenditure	£m	3	0.082	0.087	1.670	1.839	
B – Demand-side efficiency and customer-side leaks analysis – Household							
4F.15 Demand-side water efficiency – gross expenditure	£m	3					
4F.16 Demand-side water efficiency – expenditure funded by wholesale	£m	3					
4F.17 Demand-side water efficiency – net retail expenditure	£m	3					
4F.18 Customer-side leak repairs – gross expenditure	£m	3					
4F.19 Customer-side leak repairs – expenditure funded by wholesale	£m	3					
4F.20 Customer-side leak repairs – net retail expenditure	£m	3					

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4F – Cost analysis – household retail (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Household measured				Total	
			Water only	Wastewater only	Water and wastewater	Total		
A – Operating expenditure								
4F.1	Customer services	£m	3	0.527	0.522	13.720	14.769	27.207
4F.2	Debt management	£m	3	0.078	0.077	2.032	2.187	4.029
4F.3	Doubtful debts	£m	3	0.297	0.003	13.617	13.917	24.080
4F.4	Meter reading	£m	3	0.054	0.054	1.416	1.524	1.524
4F.5	Other operating expenditure	£m	3	0.170	0.168	4.426	4.764	8.775
4F.6	Total operating expenditure excluding third party services	£m	3	1.126	0.824	35.211	37.161	65.615
4F.7	Third party services operating expenditure	£m	3	0.000	0.000	0.000	0.000	0.000
4F.8	Total operating expenditure	£m	3	1.126	0.824	35.211	37.161	65.615
4F.9	Depreciation – tangible fixed assets (on assets existing at 31 March 2015)	£m	3	0.014	0.014	0.356	0.384	0.706
4F.10	Depreciation – tangible fixed assets (on assets acquired since 1 April 2015)	£m	3	0.029	0.029	0.766	0.824	1.518
4F.11	Amortisation – intangible fixed assets (on assets existing at 31 March 2015)	£m	3	0.000	0.000	0.000	0.000	0.000
4F.12	Amortisation – intangible fixed assets (on assets acquired since 1 April 2015)	£m	3	0.000	0.000	0.000	0.000	0.000
4F.13	Total operating costs	£m	3	1.169	0.867	36.333	38.369	67.839
4F.14	Capital expenditure	£m	3	0.078	0.078	2.029	2.185	4.024
B – Demand-side efficiency and customer-side leaks analysis – Household								
4F.15	Demand-side water efficiency – gross expenditure	£m	3					0.651
4F.16	Demand-side water efficiency – expenditure funded by wholesale	£m	3					0.651
4F.17	Demand-side water efficiency – net retail expenditure	£m	3					0.000
4F.18	Customer-side leak repairs – gross expenditure	£m	3					4.594
4F.19	Customer-side leak repairs – expenditure funded by wholesale	£m	3					4.562
4F.20	Customer-side leak repairs – net retail expenditure	£m	3					0.032

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Household retail operating costs in 2019/2020 have increased to £67.8m from £60.9m in the prior year. Key movements from prior year include the following:

- Increase in the doubtful debts charge of £2.6m from £21.5m in 2018/2019 to £24.1m, due to Covid-19 which has created more uncertainty in the ability of customers to pay their debts. The implementation of Universal Credit, which was introduced by the Government in 2018/2019 to replace the previous benefits system through the Department for Work and Pensions continues to affect the recovery of customer debt.
- Customer services has increased by £5.4m from £21.8m in 2018/2019 to £27.2m in 2019/2020. This is mainly due to the creation of a new Customer Experience Directorate targeting performance increases for customers. There has also been an increase in customer contact costs relating to the flooding events that occurred in the year.
- The ongoing implementation of the customer webchat facility, Drive to Digital, has resulted in additional costs.

Table 4G – Wholesale current cost financial performance

For the 12 months ended 31 March 2020

Line description		Units	DPs	Water	Wastewater	TTT	Total
4G.1	Revenue	£m	3	439.155	544.224	0.000	983.379
4G.2	Operating expenditure	£m	3	-247.903	-213.457	0.000	-461.360
4G.3	Capital maintenance charges	£m	3	-89.917	-181.153	0.000	-271.070
4G.4	Other operating income	£m	3	1.333	3.012	0.000	4.345
4G.5	Current cost operating profit	£m	3	102.668	152.626	0.000	255.294
4G.6	Other income	£m	3	6.475	6.429		12.904
4G.7	Interest income	£m	3	21.011	29.497		50.508
4G.8	Interest expense	£m	3	-87.309	-122.575		-209.884
4G.9	Other interest expense	£m	3	0.000	0.000		0.000
4G.10	Current cost profit before tax and fair value movements	£m	3	42.845	65.977	0.000	108.822
4G.11	Fair value gains/(losses) on financial instruments	£m	3	-14.936	-20.970		-35.906
4G.12	Current cost profit before tax	£m	3	27.909	45.007	0.000	72.916

As explained in commentary for [Table 1A](#), the net loss on fair value of financial instruments for the year ended 31 March 2020 was £35.9m (2018/2019: £245.9m loss) due to reduction in market expectation of future LIBOR as well as future RPI rate and is also impacted by the presentational change in terms of accounting for movements on derivatives in the ARFS as a result of adopting the 'single line of account' policy under IAS 1. Further details on these instruments are contained in the ARFS and in the [Table 4I](#) technical note.

The presentational change mentioned above has also impacted the presentation of interest income £50.5m (2018/2019: £50.6m) and interest expense £209.9m (2018/2019: £204.6m). Please see commentary for [Table 1A](#) for further details.

Key

Input cell Calculation cell Copy cell

Please refer to RAG 4.08 - Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4H: Financial metrics

For the 12 months ended 31 March 2020

Line description	Units	DPs	Current year	AMP to date
A - Financial indicators				
4H.1 Net debt	£m	3	5343.796	
4H.2 Regulated equity	£m	3	1606.708	
4H.3 Regulated gearing	%	2	76.88%	
4H.4 Post tax return on regulated equity	%	2	2.54%	
4H.5 RORE (return on regulated equity)	%	2	6.01%	5.16%
4H.6 Dividend yield	%	2	3.87%	
4H.7 Retail profit margin - Household	%	2	-0.22%	
4H.8 Retail profit margin - Non household	%	2	-4.34%	
4H.9 Credit rating	Text	n/a	Baa2 (negative)	
4H.10 Return on RCV	%	2	2.92%	
4H.11 Dividend cover	dec	2	-0.19	
4H.12 Funds from operations (FFO)	£m	3	387.702	
4H.13 Interest cover (cash)	dec	2	3.24	
4H.14 Adjusted interest cover (cash)	dec	2	2.01	
4H.15 FFO/Debt	dec	2	0.07	
4H.16 Effective tax rate	%	2	24.96%	
4H.17 RCF	£m	3	277.673	
4H.18 RCF/capex	dec	2	0.54	
B - Revenue and earnings				
4H.19 Revenue (actual)	£m	3	1055.043	
4H.20 EBITDA (actual)	£m	3	513.706	
C - Movement in RORE				
4H.21 Base return	%	2	5.59%	5.59%
4H.22 Totex out/(under) performance	%	2	-0.67%	-0.22%
4H.23 Retail cost out/(under) performance	%	2	-0.71%	-0.39%
4H.24 ODI out/(under) performance	%	2	1.03%	0.49%
4H.25 Financing out/(under) performance	%	2	0.77%	-0.31%
4H.26 Other factors	%	2	0.00%	0.00%
4H.27 Regulatory return for the year	%	2	6.01%	5.16%

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 - Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4H: Financial metrics (continued)

For the 12 months ended 31 March 2020

Line description	Units	DPs	Current year	AMP to date
C - Borrowings				
4H.28 Proportion of borrowings which are fixed rate	%	2	44.57%	
4H.29 Proportion of borrowings which are floating rate	%	2	23.31%	
4H.30 Proportion of borrowings which are index linked	%	2	32.12%	
4H.31 Proportion of borrowings due within 1 year or less	%	2	0.50%	
4H.32 Proportion of borrowings due in more than 1 year but no more than 2 years	%	2	3.51%	
4H.33 Proportion of borrowings due in more than 2 years but no more than 5 years	%	2	17.69%	
4H.34 Proportion of borrowings due in more than 5 years but no more than 20 years	%	2	55.61%	
4H.35 Proportion of borrowings due in more than 20 years	%	2	22.69%	

Table 4H Line 5: RORE (return on regulated equity)

The RoRe calculation is based on the cumulative position at the end of 2019/2020.

This is based on an average RCV figure of £28,019m at 2012/2013 average prices. A notional gearing of 62.5% has been used. The base return for the 5 years has been calculated using the 5.59% equity return as included within the PR14 final determination. All values have been included post tax.

Table 4H Line 6: Dividend Yield

Dividend yield of 3.87% (2018/2019: 2.03%) is higher than last year due to higher dividend payment made to the parent company. Dividend payments in 2019/2020 include £30.1m to cover Kelda head office costs and Finance interest for 2020/2021.

Table 4H Line 9: Credit rating

Yorkshire Water Services Limited (“YWS”) and its financing subsidiaries have credit ratings assigned to their issued debt by three rating agencies, Fitch Ratings (“Fitch”), Moody’s Investors Services (“Moody’s”) and S&P Global Ratings (“S&P”).

Yorkshire Water Services Limited and its financing subsidiaries have issued two types of debt: Class A and Class B – the main difference between the two is that the Class A lenders have more rights and priority than Class B lenders. Fitch, Moody’s and S&P periodically confirm and/or re-rate Class A debt and Class B debt credit ratings in the form of published notices.

In addition, Moody’s also assigns a ‘corporate family rating’ for YWS; a type of rating not issued by either Fitch or S&P. This rating is assigned to a corporate family as if it had a single class of debt and was a single consolidated legal entity. It should be noted that Moody’s corporate family rating is broader indicator of creditworthiness and does not represent Moody’s rating of a company’s issued debt. In addition, it is not relevant when considering YWS’s ratings covenants.

The latest published ratings for Yorkshire Water Services Limited and its financing subsidiaries are shown in the table below (outlook status shown in brackets):

Rating Agency	Class A debt rating	Class B debt rating	Corporate family rating	Latest publication
Fitch	A- (stable)	BBB (stable)	N/A	June 2020
Moody’s	Baa2 (negative)	Ba1 (negative)	Baa2 (negative)	March 2020
S&P	A- (negative)	BBB (negative)	N/A	February 2020

Key

 Input cell  Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

The credit rating reports for all three of the rating agencies that assign credit ratings to Yorkshire Water Services Limited and the other companies within the Yorkshire Water Financing Group can be found on our group website at: keldagroup.com/investors/creditor-considerations/ratings-reports

The Ofwat definition for [Table 4H](#), line 9 – credit rating, is as follows:

- Credit rating (corporate family where available) issued by a recognised credit rating agency. This should be the credit rating that is linked to each company’s licence where applicable. If companies are rated by more than one credit rating agency, then only the lowest rating needs to be included.
- Companies should also provide details of the “outlook/watch” status of the rating.

Therefore, in accordance with Ofwat’s reporting requirements, the input to [Table 4H](#), line 9 is Moody’s corporate family rating for Yorkshire Water Service Limited i.e. Baa2 (negative).

It should be noted that the YWS Board has accepted the proposed licence modifications from Ofwat, which will be implemented this month. This extends the ratings to be monitored by Ofwat to include the S&P Class rating as well as Moody’s corporate family rating.

Table 4H Line 11: Dividend cover

The dividend cover ratio is negative due to the loss made in the year. The ratio for this year (-0.19) is lower than 2018/2019 (-4.42) due to higher dividends paid as mentioned in [Table 4H](#) Line 6 as well as the loss for the year being lower. The dividend has been paid to cover costs relating to the entity that have been incurred elsewhere in the group. This was a legal distribution as sufficient distributable reserves were available.

Table 4H Line 13: Interest Cover (cash)

The interest cover ratios in lines 13 and 14 illustrate Yorkshire Water’s ability to pay the interest due on the company’s outstanding debt.

We have used the formula in Ofwat’s guidance to calculate the interest cover (cash) in [Table 4H](#) line 13:

$$\text{Interest cover (cash)} = \frac{\text{Funds from operations (Table 4H line 12) plus interest paid on borrowings}}{\text{Interest paid on borrowings}}$$

Interest paid on borrowings is made up of the following:

	£m
Yorkshire Water Net Interest Paid (Table 1D Line 10 of the APR)	117.3
Add back interest received on subordinated inter-company loads (see note 7 of Yorkshire Water Services Ltd annual report and financial statement for the year ended 31 March 2020) yorkshirewater.com/reports	49.6
Add load repayment from Yorkshire Water to fund interest payments on exchange bonds held by subsidiary companies to pay the interest on bonds raised by those subsidiary companies (see note 8 of Yorkshire Water Services Ltd annual report and financial statement for the year ended 31 March 2020)	6.0
Interest Paid on Borrowings	172.9

Certain bonds issued by subsidiaries of Yorkshire Water and subsequently on-lent to Yorkshire Water at their issue date had their terms changed in 2009. The changes involved exchanging the bonds with the bond holders for new bonds – resulting in changes to both their nominal value and applicable interest rates. ‘Exchange Accounting’ was applied by Yorkshire Water in relation to these bonds.

The difference in the pre and post exchange interest rates resulted in a funding gap between the interest payable on the original bonds and the actual interest payable at the new interest rates.

These differences are covered by loans between Yorkshire Water and its subsidiary – Yorkshire Water Finance Plc (YWF plc) whereby Yorkshire Water pays an amount over to YWF plc in order for the correct amount of interest to be paid to the bond holders. For the year ended 31 March 2020 this difference amounted to £6m. The associated loans will be repayable in full when the bonds mature.

The purpose of adding the £6m to the interest cost is to reflect the actual interest cost that Yorkshire Water and its subsidiaries have to pay to its external bond holders and therefore better reflects the actual interest attributable to YW.

Therefore, the calculation for line 13: Interest cover (cash) is as follows:

$$\text{Interest cover (cash)} = \frac{(\pounds 387.7\text{m} + \pounds 172.9\text{m})}{\pounds 172.9\text{m}} = 3.24 \text{ times}$$

Table 4H Line 14: Adjusted interest cover (cash)

We have used the formula in Ofwat’s guidance to calculate the adjusted interest cover (cash) in [Table 4H](#) line 14. The formula is as follows:

$$\text{Adjusted interest Cover (cash)} = \frac{\text{(Funds from operations (table 4H line 12) plus interest paid on borrowings less regulatory depreciation)}}{\text{Interest paid on borrowings}}$$

Interest paid on borrowings is as per line 13 – Interest cover (cash). Regulatory depreciation is defined within Yorkshire Water’s final determination and is adjusted to the year-end price base. The regulatory depreciation figures are published by Ofwat each year.

Therefore, the calculation for line 14: Adjusted interest cover (cash) is as follows:

$$\text{Interest cover (cash)} = \frac{(\pounds 387.7\text{m} + \pounds 172.9\text{m} - \pounds 213.9\text{m})}{\pounds 172.9\text{m}} = 2.01 \text{ times}$$

Table 4H Line 22 Totex outperformance

We have included a cumulative under performance against totex of £24m at 2012/2013 average prices.

Table 4H Line 23 Retail underperformance

We have included a cumulative underperformance against PR14 of £41m at 2012/2013 average prices. This has been calculated by comparing the actual retail costs reported in table 2C to the adjusted operating cost allowances included within the PR14 final determination.

Table 4H Line 24 ODI reward

We have included a cumulative ODI reward of £51m at 2012/2013 average prices. Please see [Section 3](#) for an explanation of how this is calculated.

Table 4H Line 25 Financing impact

We have included a cumulative financing impact of -£32m at 2012/2013 average prices.

Table 4H Lines 28 to 35: Proportion of borrowings due

Yorkshire Water has a balanced mix of funding at fixed, floating and inflation linked interest rates. The proportion of borrowings that is fixed has risen in comparison to last year’s annual performance report due to net £475m of fixed rate bonds being raised during the financial year 2019/2020. This had led to a reduction in the proportion of borrowings with interest rates that are floating and linked to inflation.

Yorkshire Water’s debt maturity profile reflects the company’s effective management of its refinancing requirements.

Yorkshire Water measures its debt percentages against the company’s regulated capital value to ensure that no more than 20 per cent of the company’s refinancing requirements fall due within any 24-month period and that no more than 40 per cent falls due within any AMP.

The proportion of borrowings due within 1 year or less is 0.50% (2018/2019: 5.83%). Other movements to the proportion of borrowings due reflects both the reducing maturity of existing debt and new debt raised during the 2019/2020 financial year.

Table 4I – Financial derivatives

For the 12 months ended 31 March 2019

Line description	Units	DPs	Nominal value by maturity (net)			Total value at 31 March 2020		Total accretion at 31 March 2020	Units	DPs	Interest rate (weighted average for 12 months to 31 March 2020)		
			1 to 2 years	2 to 5 years	Over 5 years	Nominal value (net)	Mark to Market				Payable	Receivable	
Derivative type													
A – Interest rate swap (sterling)													
4I.1	Floating to fixed rate	£m	3	0.000	0.000	45.000	45.000	-26.611	0.000	%	2	6.03%	0.00%
4I.2	Floating from fixed rate	£m	3	0.000	0.000	430.000	430.000	82.409	0.000	%	2	1.42%	0.00%
4I.3	Floating to index linked	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.4	Floating from index linked	£m	3	0.000	174.928	1114.072	1289.000	-2694.539	154.002	%	2	2.91%	3.19%
4I.5	Fixed to index-linked	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.6	Fixed from index-linked	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.7	Total	£m	3	0.000	174.928	1589.072	1764.000	-2638.741	154.002				
B – Foreign Exchange													
4I.8	Cross currency swap USD	£m	3	144.558	113.112	0.000	257.670	90.700	0.000	%	2	1.72%	0.00%
4I.9	Cross currency swap EUR	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.10	Cross currency swap YEN	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.11	Cross currency swap Other	£m	3	0.000	33.800	0.000	33.800	-6.952	0.000	%	2	1.45%	0.00%
4I.12	Total	£m	3	144.558	146.912	0.000	291.470	83.748	0.000				

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4I – Financial derivatives (continued)

For the 12 months ended 31 March 2019

Line description	Units	DPs	Nominal value by maturity (net)			Total value at 31 March 2020		Total accretion at 31 March 2020	Units	DPs	Interest rate (weighted average for 12 months to 31 March 2020)		
			1 to 2 years	2 to 5 years	Over 5 years	Nominal value (net)	Mark to Market				Payable	Receivable	
Derivative type													
C – Currency interest rate													
4I.13	Currency interest rate swaps USD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.14	Currency interest rate swaps EUR	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.15	Currency interest rate swaps YEN	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.16	Currency interest rate swaps Other	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.17	Total	£m	3	0.000	0.000	0.000	0.000	0.000	0.000				
D – Forward currency contracts													
4I.18	Forward currency contracts USD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.19	Forward currency contracts EUR	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.20	Forward currency contracts YEN	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.21	Forward currency contracts CAD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.22	Forward currency contracts AUD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.23	Forward currency contracts HKD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.24	Forward currency contracts Other	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00%	0.00%
4I.25	Total	£m	3	0.000	0.000	0.000	0.000	0.000	0.000				

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

Table 4I – Financial derivatives (continued)

For the 12 months ended 31 March 2019

Line description	Units	DPs	Nominal value by maturity (net)			Total value at 31 March 2020		Total accretion at 31 March 2020	Units	DPs	Interest rate (weighted average for 12 months to 31 March 2020)	
			1 to 2 years	2 to 5 years	Over 5 years	Nominal value (net)	Mark to Market				Payable	Receivable
E – Other financial derivatives												
4I.26 Other financial derivatives	£m	3	0.000	0.000	0.000	0.000	-3.864	0.000	%	2	0.00%	0.00%
F – Total												
4I.27 Total financial derivatives	£m	3	144.558	321.840	1589.072	2055.470	-2558.857	154.002				

Table 4I provides an analysis of Yorkshire Water's portfolio of financial derivatives.

Yorkshire Water's operations expose the company to a variety of financial risks that include inflation risk, interest rate risk and exchange rate risk.

Yorkshire Water has several financial derivatives, including cross currency swaps and interest rate swaps, to manage the interest rate and currency risk arising from the debt instruments that are used to finance the company's activities.

Until 31 March 2020, Yorkshire Water's revenues were closely linked to the underlying rate of inflation measured by the retail price index ("RPI") and fluctuated in line with changes in RPI. From 1 April 2020, a portion of Yorkshire Water's revenues will be linked to the rate of inflation measured by the consumer price index including owner-occupiers' housing costs ("CPIH") and will therefore be subject to fluctuations in line with changes in both RPI and CPIH.

Similarly, these changes will also impact the indexation of Yorkshire Water's regulatory capital value (RCV) and the allowed return that can be recovered from customers. The percentage of the company's net debt to RCV is a covenant within Yorkshire Water's financing arrangements. In the absence of any management action, negative inflation could potentially lead to a breach of gearing limits, however, this risk is mitigated by Yorkshire Water maintaining levels of inflation linked debt and being a counterparty to inflation linked swaps.

Interest received is based on the six-month London Interbank Offered Rate (LIBOR) and interest is paid at fixed amounts plus RPI. Movements in RPI are also applied to the nominal value of inflation linked debt and swaps to determine additional amounts to be paid either at maturity or during the life of some inflation linked swaps.

Therefore, the impact of RPI reductions on income and RCV is mitigated by reduced interest charges and lower value of inflation linked debt used in calculating gearing as a percentage of RCV.

The inflation profile of Yorkshire Water's debt and swap portfolio will be reviewed following the conclusion of HM Treasury's consultation on reform to RPI methodology and changes that would be expected to be made between 2025 and 2030.

Table 4I Line 1: Floating to fixed rate interest rate swaps

In relation to managing interest rate risk Yorkshire Water holds £45.0m (2019: £45.0m) notional value of floating to fixed rate swaps.

Table 4I Line 2: Floating to fixed rate interest rate swaps

Also, in relation to managing interest rate risk, Yorkshire Water holds £430.0m (2019: £430.0m) notional value of floating from fixed rate swaps.

Table 4I Line 4: Floating from index linked swaps

In relation to managing inflation risk, Yorkshire Water holds £1,289.0m (2019: £1,289.0m) notional value of floating from index linked swaps (termed inflation linked swaps). Yorkshire Water's inflation linked swaps have the following cash flows:

- Six monthly interest is received by Yorkshire Water based on the London Interbank Offered Rate (LIBOR).
- Six monthly interest is paid by Yorkshire Water based at a fixed rate plus RPI.
- An RPI linked amount is also payable on maturity of the swaps or at certain predetermined dates over the duration of the swaps.
- A proportion of the swaps also receives six monthly interest amounts based on a margin over LIBOR.

Key

Input cell Calculation cell

Please refer to RAG 4.08 – Guideline for the table definitions in the annual performance report for the reporting year 2019-2020

The maturity dates of the company’s portfolio of inflation linked swaps range from 2026 to 2063. At 31 March 2020, swaps with a notional value of £292.5m included mandatory break clauses in their terms, which reduce the associated credit charges from bank counterparties. The dates for these mandatory breaks are: 21 February 2023 (£151.5m), 21 February 2025 (£23.4m) and 21 August 2030 (£117.5m).

Table 4I Line 8: Cross currency swaps USD

In relation to managing currency risk, Yorkshire Water hedges the fair value of issued US dollar private placement notes using a series of combined interest rate and foreign currency swaps, swapping US dollar principal repayments into sterling and fixed rate US dollar interest payments into floating rate sterling interest payments.

Table 4I Line 11: Cross currency swaps other

Yorkshire Water also hedges the fair value of an Australian dollar bond using a combined interest rate and foreign currency swap, swapping Australian dollar principal repayments into sterling and fixed rate Australian dollar interest payments into floating rate sterling interest payments.

Table 4I Line 26: Other financial derivatives

Other financial derivatives relate to Yorkshire Water’s exposure to energy prices fluctuations. Yorkshire Water

aims to manage this risk by fixing energy contract prices where possible and operating within an energy purchasing policy that is designed to manage price volatility risk. The notional amounts of energy that Yorkshire Water has hedged is in megawatts per hour (ie not in £m’s) and therefore the nominal value by maturity has been left blank in line 4I.26.

Data validation

Within the statement of financial position at [Table 1C](#), in accordance with generally accepted accounting principles, financial derivatives are stated at fair value rather than the mark to market value. The fair value of a swap is essentially the mark to market value of the swap adjusted to take into account the potential impact of the risks the swap counterparties defaulting (the counterparties being Yorkshire Water and the bank or financial institution providing the swap) as well as a number of other valuation adjustments.

[Table 4I](#) requests information on swap mark to market values rather than swap fair values. There is a data validation error on [Table 4I](#), line 24, the table below reconciles the mark to market values shown in [Table 4I](#) to the fair value amounts shown within [Table 1C](#), the latter being reflected within Yorkshire Water’s published financial statements.

Table 4I to table 1C reconciliation

Derivative type	Table 4I – mark to market values	Valuation adjustment to reflect the day 1 loss/gain on exchange transaction on exchanged swaps in line with IFRS accounting	Credit risk and other adjustments required under FRS102 accounting	Table 1C
	£m	£m	£m	£m
Floating to fixed rate	(26.611)		2.019	(24.592)
Floating from fixed rate	82.409		(4.571)	77.838
Floating from index linked	(2,694.539)	53.654	541.300	(2,099.585)
Cross currency swap USD	90.700		(1.948)	88.752
Cross currency swap Other	(6.952)		0.217	(6.735)
Financial instrument on energy contracts	(3.864)		0.634	(3.230)
Total	(2,558.857)	53.654	537.651	(1,976.552)

Table 1C	£m
Non-current assets: Financial instruments	166.590
Non-Current liabilities: Financial instruments	(2,134.142)
Total	(1,976.552)

Technical notes

Nominal value

The Nominal value (referred to as “notional value” in the context of inflation linked swaps) is the face amount that is used to calculate all payments made and received under the associated swap.

Mark to market value

The mark to market value is essentially the net present value of all future expected receipts and payments under a swap. The amount is based on the current market expectations of future interest rates, future inflation rates and future exchange rates depending on the swap in question.

Cost assessment tables

Tables 4J to 4W of the APR contain information on the allocation of expenditure to different investment categories. They also contain information on the drivers of expenditure, such as population served or asset capacities. This information and comparable information published by other water companies can be used by Ofwat, or others, to support the development of cost models. These tables are known as the cost assessment tables. The information in this section comprises the following tables.

- [Table 4J](#): Atypical expenditure on wholesale water
- [Table 4K](#): Atypical expenditure on wholesale wastewater
- [Table 4L](#): Enhancement capital expenditure on wholesale water
- [Table 4M](#): Enhancement capital expenditure on wholesale wastewater
- [Table 4N](#): Sewage treatment – functional expenditure
- [Table 4O](#): Wholesale wastewater service – large sewage treatment works
- [Table 4P](#): Non-financial data for WR, WT and WD – wholesale water
- [Table 4Q](#): Non-financial data – properties, population and other – wholesale water
- [Table 4R](#): Non-financial data – wastewater network and sludge – wholesale wastewater
- [Table 4S](#): Non-financial data – sewage treatment – wholesale wastewater
- [Table 4T](#): Non-financial data – sludge treatment – wholesale wastewater
- [Table 4U](#): Non-financial data – properties, population and other
- [Table 4V](#): Operating costs analysis – water resources
- [Table 4W](#): Operating cost analysis – sludge treatment

Where further explanation of specific information is required, technical notes are included as appropriate.

Following feedback from our customers, this year we have published cost assessment tables as spreadsheets on our website (yorkshirewater.com/reports) rather than embedded within the APR document. Links to individual cost assessment tables can be found alongside their respective commentaries below.

Table 4J – Atypical expenditure by business unit – wholesale water

For the 12 months ended 31 March 2020

[Link to table 4J](#)

Table 4J is similar to [Table 4D](#), with the only difference being that the atypical expenditure has been separately split out from operating costs to allow a review of ongoing operating costs. For more information on this table please see the commentary for [Table 4D](#).

Table 4J Lines 1-11: Operating expenditure (excl. atypicals)

Gross operating expenditure excludes atypical expenditure associated with wholesale water activities. The £1.9m exclusion relates to costs incurred due to the extreme change in weather we experienced through the year, and changes experienced in the business:

- The exceptional rainfall in November 2019 and February 2020 did not have a significant impact on the clean water business, but there were costs of £0.2m from the escalation.
- A reorganisational cost of £1.6m to prepare the business for the efficiency challenges in AMP7.
- Transitional expenditure in readiness for the new AMP period has resulted in less than £0.1m of expenditure which is not expected to be part of future operating expenditure.

The total of Table 4J aligns to the operating costs section in [Table 4D](#).

Table 4J Lines 12-21: Capital expenditure (excl. atypicals)

Gross regulated capital expenditure associated with the wholesale water programme excluding atypical expenditure in the current reporting year was £203.2m. With the associated income totalling £16.2m the net expenditure in the current reporting year excluding atypical expenditure was £187.0m.

Table 4J Lines 22-24: Cash expenditure (excl. atypicals)

Table 4J Lines 25-35: Atypical expenditure

Atypical capital expenditure totalling £0.001m in the report year is related to the flooding recovery programme.

Table 4J Line 36: Total expenditure

This line is calculated automatically.

Comparison to PR19 forecast

In our most recent PR19 submission we forecast outturn numbers for the final year of AMP6. In 2019/2020 we have invested £187.0m of capital expenditure within wholesale water. Compared to the forecast submitted for PR19 (in Table WS1) this is £17.2m (8%) less, as during the year we reprioritised investment to support wholesale wastewater. The mix of investment within wholesale water has also changed since our PR19 submission. This will be covered further below though it is driven by a combination of reduced capital expenditure within year and higher income received through grants and contributions.

Gross capital expenditure in 2019/2020 was £203.2m which is £10.3m less than our PR19 forecast.

Base infrastructure expenditure (£36.8m) is £5.1m less than our PR19 forecast and is driven largely within treated water distribution (£5.0m). Our Upper Quartile (UQ) programme has continued to mature since our PR19 forecast and as a result there was an additional £2.5m of infrastructure investment related to improving leakage performance in 2019/2020. This has been offset by numerous other reductions across base expenditure including £3.0m at Headingley water pumping station (WPS) to reduce interruptions to supply which has moved in to AMP7. A further £2.0m of investment addressing interruptions to supply, which was not programmed at PR19, has not taken place in 2019/2020. There have been cost reductions of approximately £1.0m across several structural mains scheme. Planned investment of £0.7m to address low pressure at Lowbray Lodge and Hoyle House did not take place in 2019/2020 and a further £1.0m was returned to the programme on several schemes addressing our distribution operations and maintenance strategy (DOMs) performance.

Base non-infrastructure expenditure in 2019/2020 was £75.1m which is £4.5m less than our PR19 forecast. Within raw water distribution we invested an additional £1.7m though we have spent £3.8m less on water treatment and £2.2m less on treated water distribution.

Our management and general (M&G) programme of expenditure is split across all accounting separation categories according to FTE allocation. In 2019/2020 an additional £2.4m has been invested versus our PR19 forecast.

Within raw water distribution (£1.7m) the variance to our PR19 forecast is driven mainly by increased expenditure on three raw water pumping schemes at Watersheddes, Chelker and Lobwood (£1.8m) offset by the reduced M&G allocation of £0.2m.

Within water treatment we have invested £3.8m less than our PR19 forecast. Increased investment of £1.9m supporting our health and safety programme was offset by £5.0m of expenditure that has since been reprioritised to support other higher priority solutions and a reduced M&G allocation of £0.7m.

Within treated water distribution we have invested £2.2m less than our PR19 forecast. There was £1.6m less investment at our service reservoirs offset by £1.0m increased costs on various other base non-infrastructure schemes. Finally, the M&G allocation has reduced by £1.5m versus our PR19 forecast.

Within other capital expenditure – infrastructure we invested £41.2m in 2019/2020 which is £12.8m less than our PR19 forecast and is mainly within treated water distribution (£12.6m). This is mainly the result of the lower level of network breakout we have experienced this year as we plan for an average year when managing the programme. This infrastructure investment was subsequently re-allocated to non-infrastructure areas of the Upper Quartile (UQ) programme to drive water quality improvements.

Within other capital expenditure – non-infrastructure we invested £45.7m in 2019/2020 which is £10.0m greater than our PR19 forecast. This is driven mainly by water treatment (£2.0m) and treated water distribution (£8.4m). Within water treatment (£2.0m) the additional investment relates primarily to £0.9m on the annual MEICA budget (4L.27) and £0.6m at Irton WTW where we are addressing raw water deterioration (4L.13). Within treated water distribution (£8.4m) the additional investment is driven by £0.8m relating to increased investment on our domestic meter optant programme (4L.20). Within leakage reduction UQ (4L.25) investment was increased by approximately £7m including telemetry (£2.2m), facilities for leakage technicians (£2.4m), improved pressure management (£1.0m) in addition to various other schemes (£1.7m) not included within our PR19 forecast. Finally, within reduction in interruptions to supply – UQ (4L.26) £1.0m of planned investment in our PR19 forecast did not progress and was subsequently reprioritised to support other higher priority solutions in 2019/2020.

Infrastructure network reinforcement investment in 2019/2020 was £4.4m within treated water distribution and is £2.1m greater than our PR19 forecast. This is driven by capital projects in Harrogate where we have invested a further £1.7m and Boston Park & Sneaton Castle (£0.3m).

Income received in 2019/2020 by way of grants and contributions (£16.2m) was £6.9m greater than our PR19 forecast. This is mainly within treated water distribution (£6.6m) and is driven by a £1.7m reduction in forecast income on (section 45) connection charges. Income relating to infrastructure charge receipts is £2.3m greater than originally forecast and income relating to requisitioned mains is £4.9m greater than forecast at PR19. Finally, diversion income has increased £1.2m versus our PR19 forecast. There are a number of new schemes in 2019/2020 not included in our PR19 forecast which have contributed £0.9m whilst the remainder is additional investment on existing schemes.

Table 4K – Atypical expenditure by business unit – wholesale wastewater

For the 12 months ended 31 March 2020

[Link to table 4K](#)

This table is similar to [Table 4E](#), with the only difference being that the typical Expenditure has been split out, for more information on this table please refer to the commentary for [Table 4E](#).

Table 4K Lines 1-11: Operating expenditure (excl. atypicals)

Gross operating expenditure excludes atypical expenditure in section A of the wholesale wastewater table. The £9.5m exclusion mostly relates to costs incurred due to the extreme change in weather we experienced through the year, at a time when the business was still recovering from the December 2015 floods. The atypical operating expenditure is captured in section E, with the total of these aligning to the operating costs section in table 4E:

- The exceptional rainfall in November 2019 and February 2020, had a significant impact on the wastewater business, resulting in the business being in escalation for several months. This was at a time when the assets had not been fully replaced from the previous major floods in December 2015. Total costs of £7.8m include emergency response and mitigation costs for sites impacted by the flooding incidents.
- A reorganisational cost of £1.6m to prepare the business for the efficiency challenges in AMP7.
- Transitional expenditure in readiness for the new AMP period has resulted in £0.1m of expenditure which is not expected to be part of future operating expenditure.

Table 4K Lines 12-21: Capital expenditure (excl. atypicals)

Gross regulated capital expenditure associated with the wholesale wastewater programme in the current reporting year excluding atypical expenditure was in total £304.5m. With the associated income totalling £10.6m the net outturn excluding atypical expenditure in the current reporting year was £293.9m.

Table 4K Lines 25-35: Atypical expenditure

The first atypical capital expenditure reported in the current year, as in previous years, relates to the flooding recovery programme from 2015 totalling £0.6m in year. Expenditure within the year comprises many individual projects as efforts to recover from the Boxing Day floods of 2015 draw to a conclusion.

Within Network Plus Sewage Collection £0.277m has been spent at Rodley transfer SPS where work has continued replacing pumps, associated pipework and valves. There has also been work done to replace electrical assets and cabling that was damaged.

We have also added further atypical lines following further floods that took place in November 2019 and then January 2020 where there has been expenditure in the report year of £1.0m, which reflects emergency works at SPSs and STWs to recover damaged assets. We anticipate more material costs being incurred over the following 12 months into AMP7. These have been included as a separate line to identify the different events.

Table 4K Line 36: Total expenditure

This line calculates automatically.

Comparison to PR19 forecast

In our most recent PR19 submission we forecast outturn numbers for the final year of AMP6. In 2019/2020 we have invested £293.9m (excluding atypical expenditure) of capital expenditure within wholesale wastewater. Compared to the forecast submitted for PR19 (in Table WWS1) this is £24.9m (9%) greater as during the year we reprioritised investment from wholesale water. The mix of investment within wholesale wastewater has also changed since our PR19 submission as non-infrastructure expenditure (base and enhancement) was reprioritised within the year.

Gross capital expenditure in 2019/2020 was £304.5m which is £24.3m greater than our PR19 forecast.

Base infrastructure expenditure (£34.2m) is £2.0m less than our PR19 forecast. We invested a further £3.7m in sewage treatment within the year though this was offset by £5.7m reduced capital expenditure in sewage collection.

Within sewage treatment (£3.7m) the additional investment versus our PR19 forecast relates to the work we're undertaking in Withernsea to replace the LSO.

Within sewage collection (£5.7m) the material movements are for increased reactive sewer investment by £2.4m for an emergency scheme at Fernwood Close (Northallerton) (£1.1m) and our annual capital maintenance block scheme (£1.3m). We also increased investment on our annual ironworks block scheme (£1.0m). These increases were offset by £0.5m reduced investment in area flooding and re-prioritisation of £7.5m of planned expenditure relating to proactive sewer investment to balance the programme with regards to affordability. A scheme at Colton SPS reduced expenditure by a further £1.8m and £1.1m of our annual pollution block scheme was re-allocated elsewhere within the programme.

Base non-infrastructure expenditure in 2019/2020 was £161.0m which is £19.9m greater than our PR19 forecast. We invested an additional £6.9m within sewage collection and £14.3m was also invested within sludge treatment. These were offset by small reductions within sewage treatment (£0.6m) and sludge transport (£0.6m) which was driven by a reduction in the allocation of our Management and General (M&G) programme of work.

Our M&G programme of expenditure is split across all accounting separation categories according to a fulltime equivalent allocation. Within the wastewater programme in 2019/2020 the sewage collection allocation of investment has increased versus prior years and our PR19 forecast as a result of organisational changes increasing resources to the upstream service. In 2019/2020 an additional £6.9m has been invested versus our PR19 forecast.

Within sewage collection (£6.9m) most of the movement from our PR19 forecast relates to our M&G programme allocation (£6.5m). Investment increased £1.3m for training facilities not considered in our PR19 forecast. Investment reduced £1.3m at Scalby Mills where work has been ongoing to comply with the DSEAR regulations 2002.

Within sludge treatment (£14.3m) additional investment of £14.6m is offset by £0.3m reduction in the allocation of our M&G programme. Compared to our PR19 forecast there have been increases in expenditure in 2019/2020 on schemes at Knostrop (£3.2m) and Hull (£2.4m) and £2.5m on minor upgrades at STFs within the region which was not in our PR19 forecast. There is £1.9m of investment at Blackburn Meadows that in our PR19 forecast had been allocated as supporting enhancement infrastructure assets for intermittent discharges. Sludge treatment maintenance investment increased £1.8m. This was across numerous schemes though the majority (£1.2m) was on the purchase of new centrifuges at South Elmsall, Goole and Keighley Marley.

Within other capital expenditure – infrastructure we invested £44.4m within sewage collection in 2019/2020 which is £7.2m less than our PR19 forecast. There is £1.9m of investment at Blackburn Meadows that in our PR19 forecast had been allocated to supporting assets for intermittent discharges. This expenditure has subsequently been re-allocated to sludge treatment base non-infrastructure. Within Pollution – UQ there was £7.9m of infrastructure investment which was still to be programmed, when submitting our PR19 forecast, which was subsequently re-allocated to other areas of the UQ programme. Within Internal Flooding – UQ investment in our infrastructure assets in 2019/2020 was £2.0m greater than our PR19 forecast across several schemes.

Within other capital expenditure – non-infrastructure we invested £62.2m in 2019/2020 which is £12.8m greater than our PR19 forecast. This is driven mainly by sewage collection (£10.2m), sewage treatment (£2.0m) and sludge treatment (£0.6m).

Within sewage collection (£10.2m) we increased Pollution – UQ expenditure on our MEICA budget (£2.0m) and increased telemetry investment (£3.0m) to improve pollution performance. We also increased Internal Flooding – UQ expenditure a further £4.9m versus our PR19 forecast. This was to support the transformation of our customer field services teams and includes the purchase of vehicles and supporting equipment (£2.7m) and expenditure associated with upgrading facilities, health and safety equipment and tools (£2.2m).

Within sewage treatment (£2.0m) our PR19 forecast included £3.7m of savings on phosphorus removal schemes of which £1.7m was realised in 2019/2020.

Within sludge treatment (£0.6m) an additional £0.5m has been invested at Dronfield where we are delivering NEP enhancements.

Infrastructure network reinforcement investment in 2019/2020 was £2.8m which is £0.8 greater than our PR19 forecast as a result of increased costs at our Waverley (South Yorkshire) scheme where we are constructing two rising mains and a gravity sewer.

Table 4L – Enhancement capital expenditure by purpose – wholesale water

For the 12 months ended 31 March 2020

[Link to table 4L](#)

This table identifies the expenditure associated with the delivery of our enhancement programmes both in the current report year and then a cumulative expenditure viewpoint on projects/schemes that have been delivered in the current report year. Expenditure claimed in the report year may therefore be against outputs that have been previously beneficially completed or on outputs that are forecast to be completed in future years.

Below we have summarised the areas of expenditure on any line with more than £0.5m of expenditure in either the current report year or cumulative totals.

Table 4L Line 1: NEP – Making ecological improvements at abstractions (Habitats Directive, SSSI, NERC, BAPs)

Investment within the year of £2.9m is across several areas of activity required to meet our NEP obligations.

There have been several schemes ongoing to ensure legal compliance with the Water Framework Directive. These include fish pass schemes at Lobwood (£0.6m), Tophill Low (£0.3m) and Eastwood (£0.6m). These schemes also concluded in the report year with cumulative expenditure of £1.2m, £1.4m and £0.6m respectively.

We've also had an ongoing programme of work with Fountains Forestry to restore and enhance areas of ancient woodland which this year has spent £0.4m. The scheme concluded this year with cumulative expenditure of £1.1m.

Schemes to conclude this year are Heavily Modified Water Bodies (HMWB) Flow Trials which spent a cumulative amount of £1.2m and AMP6 sites of scientific specific interest which had cumulative spend of £1.0m.

The AMP6 biodiversity scheme which spent a cumulative figure of £0.4m has finished this year.

Table 4L Line 2: Eels Regulations (measures at intakes)

Within the report year work has commenced at Loftsome Bridge WTW (£0.7m) to install an Environment Agency approved Hydrolox, travelling fine mesh screens for fish and eels on the existing river intake. There was also similar work carried out at Ruswarp water treatment works in which £0.2m was spent in year.

Both schemes were completed this year with the Loftsome Bridge WTW scheme spending a cumulative amount of £2.0m and the Ruswarp WTW scheme spending the full scheme value of £0.2m in year.

Table 4L Line 11: New developments

This year has seen £8.1m invested in new developments. The main body of investment has been an annual block scheme for the provision of statutory mains (£7.9m).

The cumulative expenditure of £7.9m was driven by the provision of statutory mains block which started and was completed within the year.

Table 4L Line 12: New connections element of new development (CPs, meters)

Investment in the current report year of £7.3m is to ensure we are compliant with section 45 of the Water Industry Act which describes a water undertaker's duty to provide water connections for new properties. This is an annual block allocation which spent £8.7m in 2019/2020. There is also a negative figure of £1.4m from the corresponding 2018/2019 annual block scheme. This relates to an error reported last year, where it was identified that the allocated overhead costs were too high. Due to the timing of the close down process this could not be rectified for 2018/2019 reporting and so has been corrected in 2019/2020. The 2019/2020 annual block allocation allowance concluded in the report year and so cumulative expenditure of £8.7m is in the current report year.

Table 4L Line 13: Investment to address raw water deterioration (THM, nitrates, Crypto, pesticides, others)

Expenditure of £6.2m within the year is primarily within water treatment and the majority relates to one scheme.

Within raw water abstraction the cumulative expenditure (£2.1m) is driven mainly by two schemes. In the Pennines we have invested £0.8m restoring 4000ha and in the south Pennines and Derwent Valley we have spent £1.0m in catchment restoration.

At Langsett WTW we are delivering a DWI solution to upgrade the existing plant to address total trihalomethanes, raw water colour and disinfection by-products to secure compliance with Regulation 26(1A). This scheme has completed in 2019/2020 resulting in a cumulative spend of £24.1m for the Langsett WTW scheme.

Work continued this year at Irton WTW and £0.7m has been spent providing facilities to improve the removal of Cryptosporidium, pesticides, disinfection by-products, to secure compliance with Regulation 26 (1A), and to carry out a programme of catchment management activities to improve raw water quality.

Table 4L Line 15: SEMD

Investment in the current year of £1.1m to deliver physical security works improvements to ensure we are compliant with our security obligations at relevant sites across all of our water assets. The scope of work includes all elements of security including fences, enclosures (buildings and kiosks), access covers, access points (doors and windows) and alarms. There was also £0.3m spent on site access keys across Yorkshire Water sites.

This is a rolling programme of work that continues throughout the AMP across many hundreds of sites. Some have been completed in the current year and therefore included in the cumulative expenditure at £2.2m to reflect the assets that have been completed.

Table 4L Line 20: Metering (excluding cost of providing metering to new service connections)

Investment to ensure that any customer that requests to change to a measured supply through our domestic meter optant programme has a meter fitted at no cost to them. In the current year £8.4m has delivered 33,812 meters fitted for customers.

Table 4L Line 23: Drought Management Plan

This expenditure relates to Yorkshire Water’s obligation under S.39B of the Water Industry Act 1991 to produce and publish a drought management plan every 5 years. The AMP6 scheme successfully finished this year with a cumulative expenditure of £1.2m.

Table 4L Line 25: Leakage Reduction – UQ

This is investment to support the delivery of reduced leakage below our current service level commitments and deliver industry upper quartile performance for our customers. Investment within the current year is £46.6m and reflects many new initiatives that have commenced. Activities include further work to address communication pipe failures (£4.0m), stop tap renewals (£3.0m), distribution pipework fitting (£2.9m) and structural mains (£2.9m) Our programme of installation of a network of acoustic loggers continued (£8.2m) and has spent £9.7m cumulatively over the last two years.

As part of our plans to increase the number of leakage inspectors we have spent £2.7m in relation to the purchase of further fleet vehicles and a further £0.6m relating to the required hardware (laptops, mobile phones etc.) and software licences.

Within the year several other initiatives have concluded including £1.8m spent on UQ leakage detection equipment and £1.8m spent on accommodation.

As the AMP6 UQ programme has now completed all live solutions have been completed and included within the cumulative expenditure for schemes completed in the report year.

Table 4L Line 26: Reduction in Interruptions to Supply – UQ

As part of our upper quartile programme, £3.8m has been invested on reducing supply interruptions. £0.5m was spent on the purchase of vehicles to be used for further field technicians. There was also £0.7m spent in year on a high-voltage switch replacement scheme at Riccall WTW.

Table 4L Line 27: Improving Water Quality – UQ

As part of our plan to target upper quartile Water Quality performance, £1.0m was spent overall on improving water quality. The majority of spend (£0.9m) has appeared on the annual MEICA budget.

Table 4L Line 28: Infrastructure network reinforcement

Most of the activity within the reporting year has taken place within Harrogate (£2.5m). Between Studley and Birkby Nab (£0.5m) we are installing a second main (2km) alongside the route of the existing one to provide the hydraulic capacity for future demand. A further £1.1m has been invested at Harrogate High Level (delivering 1.7km of

pipework) and £0.7m at Harrogate Low Level (delivering 2.6km of pipework). Activity in Knaresborough has continued where we have spent £0.4m within the year as part of a 4-phase project to deliver 1,600m of mains.

Comparison to PR19 forecast

In our most recent PR19 submission we forecast outturn numbers for the final year of AMP6. In 2019/2020 we have invested £91.3m of capital expenditure within wholesale water. Compared to the forecast submitted for PR19 (reported in Table WS2) this is a marginal reduction of £0.6m (1%). The mix of investment within wholesale water has changed since our PR19 submission and material movements are highlighted below.

- Material movement in Table 4L Line 1 – NEP – Making ecological improvements at abstractions (Habitats Directive, SSSI, NERC, BAPs) compared to PR19 submission:
 - Expenditure in 2019/2020 was £2.9m which is £0.9m less than our PR19 forecast. Whilst our Eastwood fish pass scheme (£0.6m) wasn’t forecast within our PR19 submission for the year this has been offset by savings on several other fish pass schemes including Lobwood and Tophill Low.
- Material movements in Table 4L Line 11 – New developments compared to PR19 submission:
 - Expenditure in 2019/2020 was £8.1m within treated water distribution which is £6.9m greater than our PR19 forecast. There have been marginal reductions to the capital expenditure of some schemes (since our PR19 forecast) however the reporting variance is as a result of the annual block scheme for the provision of stat mains (£7.9m) being included within 4L.12 within our PR19 forecast.
- Material movements in Table 4L Line 12 – New connections element of new development (CPs, meters) compared to PR19 submission:
 - Expenditure in 2019/2020 was £7.3m within treated water distribution which is £7.9m less than our PR19 forecast. This is as a result of the annual block scheme for the provision of stat mains (£7.9m) being included in this line within our PR19 forecast. This has been delivered and is correctly reported under line 4L.11.
- Material movements in Table 4L Line 13 – Investment to address raw water deterioration (THM, nitrates, Crypto, pesticides, others) compared to PR19 submission:
 - Expenditure in 2019/2020 was £6.3m primarily within water treatment which is £1.0m greater than our PR19 forecast and driven mainly (£0.6m) at Irton WTW.
- Material movements in Table 4L Line 20 – Metering (excluding cost of providing metering to new service connections) – meters requested by optants compared to PR19 submission:
 - Expenditure in 2019/2020 was £8.4m within treated water distribution and is £0.8m greater than our PR19 forecast and relates to our annual block scheme for customer requests.

- Material movements in Table 4L Line 25 – Leakage Reduction – UQ compared to PR19 submission:
 - Expenditure in 2019/2020 was £46.6m within treated water distribution and is £4.1m less than our PR19 forecast. As our Upper Quartile (UQ) programme continued to develop since our PR19 forecast was submitted there are reporting variances across several UQ areas. Within leakage there was £13.0m of infrastructure investment planned, which was still to be programmed when submitting our PR19 forecast, this investment was subsequently reprioritised to other areas of the UQ programme. Leakage reduction investment on our non-infrastructure assets was increased by approximately £7m including telemetry (£2.2m), facilities for leakage technicians (£2.4m), improved pressure management (£1.0m) in addition to various other schemes (£1.7m) not included within our PR19 forecast.
- Material movements in Table 4L Line 26 – Reduction in Interruptions to Supply – UQ compared to PR19 submission:
 - Expenditure in 2019/2020 was £3.8m within treated water distribution and is £0.5m less than our PR19 forecast. There was £1.0m of planned non-infrastructure investment which did not materialise which helped offset the £0.5m of increased infrastructure investment across various schemes.
- Material movements in Table 4L Line 27 – Improving Water Quality – UQ compared to PR19 submission:
 - Expenditure in 2019/2020 was £1.0m versus no planned investment in this area in our PR19 forecast. The majority of spend (£0.9m) has appeared on the annual MEICA budget.
- Material movements in Table 4L Line 28 – Infrastructure Network Reinforcement compared to PR19 submission:
 - Expenditure in 2019/2020 was £4.4m within treated water distribution and is £2.1m greater than our PR19 forecast. This is driven by capital projects in Harrogate where we have invested a further £1.7m and Boston Park & Sneaton Castle (£0.3m).

Table 4M – Enhancement capital expenditure by purpose – wholesale wastewater

For the 12 months ended 31 March 2020

[Link to table 4M](#)

This table identifies the expenditure associated with the delivery of our enhancement programmes both in the current report year and then a cumulative expenditure viewpoint on projects/schemes that have been delivered in the current report year. Expenditure claimed in the report year may therefore be against outputs that have been previously beneficially completed or on outputs that are forecast to be completed in future years.

Below we have summarised the areas of expenditure on any line with more than £0.5m of expenditure in either the current report year or cumulative totals.

Table 4M Line 1: First time sewerage (s101a)

Minimal expenditure in the current year within Network Plus Sewage Collection price control is associated with the financial completion of a Section 101a third party request for first time sewerage for a property in Quaker Lane, Liversidge. This scheme was completed in a previous year so not included in the cumulative expenditure on schemes completed in the report year.

Table 4M Line 2: Sludge enhancement (quality)

Expenditure in the current year within Network Plus Sewage Treatment price control is associated with the financial completion of schemes at Neiley and Harrogate North STW. Both schemes were completed in previous years so not included in the cumulative expenditure on schemes completed in the report year.

Table 4M Line 6: NEP – Event duration monitoring at intermittent discharges

Expenditure in the current year (£1.6m) relates to schemes at multiple sites where we continue to deliver the agreed EDM2 regulatory outputs. The EDM2 driver has a compliance date of 31 March 2020 and provides coverage for most non-priority overflows, addressing sites classified as having high, medium or low amenity value but where the risk is of environmental or aesthetic nature or the frequency of discharge breaches a public acceptability threshold. There remains in total 36 of the 601 sites still to claim beyond their respective regulatory compliance dates but the activity required has been completed we are just awaiting agreed sign-off. 23 of these are due to delays directly attributable to Covid-19 and the remaining 13 sites being missed due to a combination of flood damage after the most recent flooding and health and safety restrictions. The Environment Agency have been informed and we are working with them to agree a way forward.

Table 4M Line 7: NEP – Flow monitoring at sewage treatment works

Expenditure this year (£0.3m) is associated with the installation of flow monitoring at various sites for which beneficial completion was claimed last year. There does remain one MCERTs site to be claimed at Carperby where, although the civils element of work has been completed, there remains a small amount of work to add telemetry at the site before the scheme can be completed. This element was due to be completed 25 March 2020 however the contractor has suspended all site visits as a result of Covid-19.

Table 4M Line 11: NEP – Storage schemes to reduce spill frequency at CSOs, storm tanks, etc

Expenditure in year (£3.2m) and cumulative (£4.1m) for this line relates to the completion of the River Don scheme at Blackburn Meadows STW to improve the 6x overflow.

Table 4M Line 12: NEP – chemicals monitoring/ investigations/options appraisals

Cumulative expenditure in the report year (£0.9m) covers a single chemical investigation study conducted over the past two years across numerous wastewater sites.

Table 4M Line 15: NEP – Investigations

Expenditure this year (£0.3m) within Network Plus Sewage Collection and Network Plus Sewage Treatment & Disposal is associated with expenditure for the delivery of Drainage Area Plans (DAPs) at Little Don, Dearne (Bentley to Cawthorne), Went, Adwick Le Street, Hemsworth, South Elmsall, Dearne (Lundwood to River Dove), Holmebrook, Costa Beck, Spen Beck and Wyke Beck (£0.2m) which completed in previous report years and is therefore not included in the cumulative tables. Work is also ongoing on two Water Framework studies at Ripponden Wood and the Humber Estuary (£0.04m).

Table 4M Line 17: NEP – Nutrients (P removal at activated sludge STWs)

Within sewage treatment and disposal, £2.7m of expenditure in the report year relates to three NEP phosphorus removal schemes at Otley (£1.4m), Earby (£0.9m) and Wetherby (£0.5m).

These schemes have all completed in year in line with their regulatory compliance dates so are also included in the cumulative expenditure totalling £12.9m split between Otley (£4.0m), Earby (£4.4m) and Wetherby (£4.4m).

Table 4M Line 18: NEP – Nutrients (P removal at filter bed STWs)

Expenditure within the year (£15.4m) relates to NEP phosphorus removal schemes at: Easingwold (£0.3m), Skipton (£0.6m), Crayke (£0.4m), Leeming Bar (£0.5m), Borrowby (£0.6m), Bedale (£0.7m), Thirsk (£1.5m), Gargrave & Middleton Tyas (£3.1m), Bagby (£0.9m), Thorp Arch (£1.6m), Wilberfoss (£1.9m), and Foulridge (£1.8m).

All phosphorus schemes have now been completed with the exception of Leeming Bar. Following our investment on site the EA has not accepted the output as being achieved at this time. We continue to work with the EA and will agree a later date when a second phase of dosing has been permanently installed. The site currently remains compliant based on temporary dosing.

The £40.9m included in the cumulative expenditure is on schemes completed in year at Easingwold (£3.2m), Skipton (£2.9m), Crayke (£2.3m), Borrowby (£3.0m), Bedale (£2.7m), Thirsk (£4.7m), Gargrave & Middleton Tyas (£6.4m), Bagby (£2.5m), Tollerton & Thornton le Dale (£3.6m) and the remaining £9.5m is associated with the solutions at Thorp Arch, Wilberfoss and Foulridge.

Table 4M Line 19: NEP – Reduction of sanitary parameters

Expenditure related to Network Plus Sewage Treatment & Disposal totalling £9.6m is associated with the delivery of nine NEP schemes at: Bolton on Dearne (£1.5m), Stocksbridge (£0.5m), Tankersley (£0.1m), Dronfield (£3.7m), Lundwood (£2.3m), Leven (£0.6m), Cherry Burton (£0.3m), West Bretton (£0.4m) and Hillam (£0.7m).

Expenditure related to sludge treatment (£2.1m) relates to NEP enhancements at our Dronfield site.

All schemes have been completed by their agreed compliance dates of 31 March 2020. The cumulative expenditure totalling £73.0m is on schemes completed in year at Bolton on Dearne (£12.0m), Stocksbridge (£10.9m), Lundwood (£17.6m) and Hillam (£4.3m), with the remaining £5.7m on the solutions at Leven, Cherry Burton and West Bretton all within the sewage treatment and disposal price control.

Dronfield is the only site allocated to both the sewage treatment and sludge treatment price controls. The scheme also concluded within the year costing £22.3m (£15.1m & £7.2m).

Table 4M Line 24: New development and growth

Expenditure in the year of £3.3m across Network Plus Sewage Collection is to ensure we are compliant under Section 98 of the Water Industry Act 1991 to provide a public sewer to be used for the drainage (for domestic purposes) of premises in a particular locality in the area subject to certain conditions. Investment is across many schemes ongoing throughout the year.

Cumulative expenditure of £1.2m relates primarily to three schemes at Cobblers Lane, Pontefract (£1.0m), Harland Way, Cottingham (£0.2m) and Allerton Golf Club (£0.1m) completed in the report year.

Table 4M Line 25: Growth at sewage treatment works (excluding sludge treatment)

Expenditure within Network Plus Sewage Treatment & Disposal is at numerous sites, with three sites completing in the report year at Whitby STW (£0.5m), Richmond & High Royd (<£0.1m).

Table 4M Line 27: SEMD

Investment in the current year of £1.7m to deliver physical security works improvements to ensure we are compliant with our security obligations at relevant sites across all our wastewater assets. The scope of work includes all elements of security including fences, enclosures (buildings and kiosks), access covers, access points (doors and windows) and alarms.

This is a rolling programme of work that continues throughout the AMP across many hundreds of sites. All remaining sites have been completed in the current year and therefore included in the cumulative expenditure totalling £4.9m.

Table 4M Line 28: Reduce flooding risk for properties

Expenditure across Network Plus Sewage Collection primarily comprises the resolution of internal flooding issues at various sites with the main expenditure in the report year associated with six locations at Goole Fire Station (£0.9m), Hazelwood Street CSO (£0.5m), Joseph Fletcher Drive (£0.5m), St Dunstan's Way, Bradford (£0.5m), Illsley Road, Barnsley (£0.3m), and Bell Lane, Pontefract (£0.3m) as well as £0.5m associated with the annual regional block to provide low value sewer flooding mitigation solutions to customers where the long term solution is not yet known or affordable at present.

Cumulative expenditure is driven by the completion of outputs at Goole Fire Station (£4.2m), Hazelwood Street (£1.9m), Illsley Road, Barnsley (£0.5m) and the completion of the sewer flooding mitigation block (£0.7m).

Table 4M Line 29: Transferred private sewers and pumping stations

Expenditure within sewage collection relates to the improvements required to private sewers adopted in the last AMP period to bring these assets up to our asset standard. The majority of the expenditure relates to block schemes totalling £6.1m in the current report year which are a collaboration of many different sites doing the same reactive work. As these are annual schemes they have also concluded within the year and so the £6.1m is also reported within the cumulative expenditure.

Other investment in the current year of £1.5m is associated with improvements to transferred private pumping stations to bring these assets up to a safe and service able asset standard. These schemes have also concluded within the reporting year with cumulative expenditure totalling £8.3m.

Table 4M Line 35: Pollution – UQ

As part of our plan to target upper quartile (UQ) pollution performance reported expenditure this year relates mainly to rising main investigations at high priority sites (£0.3m) as well as delivery of the rising main improvements over 10 sites including Water Lane (£0.2m) Kilnsey (£0.6m) Lebberton (£1.0m), Hutton Cranswick (£1.7m), Shipton Road (£0.8m), Foss Bank, York (£0.1m), Pollsbrook SPS (£0.4m), Sleights SPS (£0.1m), Eastington SPS (£1.5m) and Worry Goose SPS (£0.6m), and the installation of telemetry e.g. pollution loggers & 'Reach Out' controllers on SPSs as part of our wastewater asset visibility programme (£1.1m). Purchasing of additional new vehicles to support new colleagues joining the organisation (£1.0m), and the continuation of our Pollution Mitigation Investment Challenge (PMIC) programme of works totalling £0.9m to understand where our repeat pollution risks are happening and promote low cost simple solutions to address them.

As the AMP6 UQ programme has now completed all remaining live solutions have been completed and included within the cumulative expenditure for schemes completed in the report year.

Table 4M Line 36: Internal Flooding – UQ

As part of our plan to target UQ internal flooding performance expenditure this year relates to schemes aimed at tackling internal flooding other causes in discrete problem zones in Armley, Burley, Harehills, West Halifax and Beeston (£8.0m), as well as a significant increase in proactive sewer network investigation CCTV and significant repair programmes of work (£6.3m) supported by the introduction of a larger scale defects rectification programme (£8.2m) for more complex solutions that cannot be resolved using the reactive block schemes. We are also continuing the transformation of the Customer Field Services teams with internal resources being used for all non-civils work which was started last year (£8.0m) and also required the purchasing of additional vans, CCTV units and tankers to support new colleagues (£3.0m).

As the AMP6 UQ programme has now completed all remaining live solutions have been completed and included within the cumulative expenditure for schemes completed in the report year.

Table 4M Line 37: Infrastructure network reinforcement

Expenditure within the reporting year represents ongoing activity in Waverley (South Yorkshire) relating to the construction of two rising mains and a gravity sewer.

Comparison to PR19 forecast

In our most recent PR19 submission we forecast outturn numbers for the final year of AMP6. In 2019/2020 we have invested £109.4m of capital expenditure within wholesale wastewater. Compared to the forecast submitted for PR19 (reported in Table WWS2) this is a £6.4m (6%) increase in investment. The mix of investment within wholesale wastewater has changed since our PR19 submission and material movements are highlighted below.

- **Table 4M Line 11: NEP – Storage schemes to reduce spill frequency at CSOs, storm tanks, etc**
Expenditure in 2019/2020 was £3.2m mainly within Network Plus Sewage Collection and is £2.1m less than our PR19 forecast as a result of expenditure at Blackburn Meadows STF originally identified as enhancement being re-allocated to base investment.
- **Table 4M Line 19: NEP – Reduction of sanitary parameters**
Expenditure within 2019/2020 was £11.7m and is £0.9m greater than our PR19 forecast. The variance is mainly within sludge treatment (£0.6m) where an additional £0.5m has been invested at Dronfield where we are delivering NEP enhancements.
- **Table 4M Line 24: New development and growth**
Expenditure within 2019/2020 was £3.3m within sewage collection which is £0.8m less than our PR19 forecast. Reporting variances are across many individual schemes though £0.7m relates to reduced expenditure on a sewer requisition in the Thorpe Park area of east Leeds.

• **Table 4M Line 35: Pollution – UQ**

Expenditure within 2019/2020 was £26.6m within Network Plus Sewage Collection which is £2.1m less than our PR19 forecast. As our UQ programme continued to develop since our PR19 forecast was submitted there are reporting variances across several UQ areas. Within pollution there was £7.9m of infrastructure investment planned when submitting our PR19 forecast, which was subsequently re-allocated to other areas of the UQ programme to support other programme areas delivering better benefits. This was partly offset by increased non-infrastructure expenditure on our MEICA budget (£2.0m) and increased telemetry investment (£3.0m) to sustainably target and therefore improve pollution performance.

• **Table 4M Line 36: Internal Flooding – UQ**

Expenditure within 2019/2020 was £25.5m within sewage collection and is £6.9m greater than our PR19 forecast. Investment in our infrastructure assets in 2019/2020 was £2.0m greater than our PR19 forecast across several schemes.

Non-infrastructure investment was also increased with a further £4.9m of expenditure versus our PR19 forecast. This was to support the transformation of our customer field services teams and includes the purchase of vehicles and supporting equipment (£2.7m) and expenditure associated with upgrading facilities, health & safety equipment and tools (£2.2m).

• **Table 4M Line 37: Infrastructure network reinforcement**

Expenditure within 2019/2020 was £2.8m within sewage collection and is £0.8m greater than our PR19 forecast and relates to increased costs at our Waverley (South Yorkshire) scheme where we are constructing two rising mains and a gravity sewer.

Table 4N – Sewage treatment – functional expenditure

For the 12 months ended 31 March 2020

[Link to table 4N](#)

This table was introduced earlier this AMP period and analyses the costs of different size sewage treatment works. We have allocated all direct costs to site where possible, with nearly all large works separately costed. For minor works which are grouped into areas for materiality reasons, the costs were sub-divided into the following categories for optimum allocation.

- Site specific
- Area site costs
- Employee direct costs
- Maintenance
- Facilities costs
- General and Support.

The requirement for the table is to have all above costs directly/indirectly allocated in bands 1-6 which are defined in the RAGs 4.08. The information to splits the sites into bands and STW loads has been reviewed again this year from the asset inventory system, and any changes in loads and band categories have been adjusted accordingly.

Table 40 – Wholesale wastewater service – large sewage treatment works

For the 12 months ended 31 March 2020

[Link to table 40](#)

Table 40 Lines 1-10: Sewage treatment works – Explanatory variables

This table contains detailed information relating to the large wastewater treatment works with a population equivalent greater than 25,000. Each of the 35 Yorkshire Water sites is listed together with its treatment type, population equivalent, consent information for common parameters, and load and volumes received in 2019/2020.

4O.1 – There has been no change to reported sites from last year.

4O.2 – There has been one change to treatment type at Lundwood Sewage Treatment Works, which has changed from TB2 to TA2 due to it now having a full activated sludge process plus existing tertiary rapid gravity filter as a result of a quality change.

4O.3 – There have been some slight variations in the population equivalent of total load received, but these are all within a 10% variation. Load can vary due to changes in resident population & trade loads received to the works, both of which fluctuate year-on-year. These changes are within expected tolerances.

4O.4-8 – There have been three sites with consent changes for the information reported in Lines 4 to 8. These changes have occurred in line 4O.6 Ammonia consent.

4O.6 Ammonia consent mg/l	Comment
KNOSTROP/STW – 3mg/l to 2mg/l	Effective from 31/03/2020
KEIGHLEY MARLEY/STW – 15mg/l to 10mg/l	Effective from 27/09/2019
LUNDWOOD/STW – 5mg/l to 1 mg/l	Effective from 01/04/2020

At Lundwood STW there was an AMP6 regulatory output for a tightened Ammonia permit with a date of 31/03/2020, however the permit issued by the Environment Agency has a compliance date of 01/04/2020. This permit change has been included in the APR 2019/2020 return as the quality change was driven by an AMP6 scheme. We have found this issue across a number of permit changes and have dealt with it in a consistent manner.

4O.9 – The data in this line is calculated from the figure in 4O.3 (population) using the industry standard of 60g BOD/head/day.

4O.10 – The total average daily flow for the reporting period is summed for each of the large treatment works and then divided by 366 to provide an average daily treated flow.

Compared to APR 2018/2019 the overall volume of treated flow recorded at the large STWs has increased by an average of 15.84%. This compares well to the 18.20% increase in flow seen in the same period as reported in Table 4R.13. This large increase was expected due to the transition from an extremely dry summer in 2018 (reflected in the lower figure reported for APR 2018/2019) and a very wet period of weather between October 2019 and March 2020. Castleford STW shows a 2.96% reduction in flows compared to APR 2018/2019. This is because the flow meter was incorrectly scaled for most of the APR 2018/2019 reporting period causing an artificially high value. This has now been rectified.

Table 40 Lines 11-16: Sewage treatment works – Functional expenditure

Section B of the table looks at functional expenditure for the large sewage treatment works which fall within band 6 category as shown in Table 4N. The number of works in this category is has been consistent with the from last previous year. A review of functional expenditure at these sites and key movements include the following:

- Bradford Esholt – increase in costs of £1.4m (22%) due to periodic lane cleaning operation to help improve aeration process on site and improve energy efficiency.
- Bridlington – increase in costs of £0.1m (15%) to associated with tank cleans and sewage tankering to support the compliance position of the site.
- Brighthouse Upper – reduction in costs of £0.3m (14%) as the previous financial year required additional resources on site to support the compliance position with additional maintenance of screen and helical rotor pump. This additional maintenance was not required this financial year following asset performance improvements.
- Calder Vale – increase in pumping costs and site operational costs of £0.4m (20%) as the site was severely impacted by the floods from February 2020.
- Deighton – experienced an increase in costs of £0.1m (28%) to help alleviate a pollution incident and required additional maintenance and mitigation.
- Denaby – experienced increase in costs of £0.1m (25%), associated with mitigation costs including sewage tankering to support compliance.
- Hull – experienced an increase in costs of £0.8m (13%) following on from additional lamella cleans to support the waste from the peak farming season in summer.

- Keighley Marley – reduction in costs of £0.4m (39%), as one-off expenditure associated with additional fly dosing and cleaning of the filter beds in 2018/2019 was not required this year.
- Malton – this site has seen a decrease in functional expenditure of £0.5m (37%) as in 2018/2019 the site required mitigation of compliance due to additional loads to the site. Close working with local traders has meant the load was reduced, saving costs in this financial year.
- Old Whittington – the reduction in costs of £0.8m (55%) from 2018/2019 at this site are mainly associated with maintenance of the primary tank scrapers and inlet screens, which were one-off costs and not required in 2019/2020.
- Scarborough – has seen an increase in costs of £0.5m (50%), as the site required long term hire of pumps whilst major improvements were made to the site including additional maintenance.
- Staveley – the decrease in functional expenditure of £0.4m (29%) is as a result of the significant investment in the aeration blowers in 2018/2019 which was not required this year. Although this site was severely impacted by the 2019/2020 floods, the majority of the mitigation costs are of a bioresources nature and as a result not related to sewage treatment.
- Woodhouse Mill – increase in costs of £0.5m (43%) associated with additional water usage on site and increased power costs linked with the aeration on site. Plans are in place in conjunction with other partners to reduce these costs in future.
- York Naburn – increase in costs of £0.7m (24%) are associated with a significant lane cleaning programme to support the site compliance and improve energy consumption.

Table 4P – Non-financial data for WR, WT and WD – wholesale water

For the 12 months ended 31 March 2020

[Link to table 4P](#)

Table 4P includes non-financial information in relation to the company water resources, water treatment and distribution. The table also identifies the number and sizes of water treatment works (WTW) held by the company.

Table 4P Lines 1-8: Distribution input derived from various sources

This year’s Distribution Input (DI) is comprised from impounding reservoirs, pumped storage reservoirs, river abstractions and groundwater. We have no artificial recharge, aquifer storage and recovery, saline abstractions or water reuse schemes in use.

We have assessed the proportion of total DI this year by first assigning source types to each water treatment work (WTW) and then linking these to the reported DI data. We have reviewed each WTW and assigned each one a single source type (impounding reservoir, river abstraction etc). Where multiple sources feed a works, we have followed the guidance which states that multiple source works, where the flow is combined prior to treatment, can be categorised as the more difficult to treat water.

The total DI for each WTW has been obtained by linking to this year’s Water into Supply (Distribution Input) report. With each WTW having a single source type, this has enabled the proportion of total DI from each type of source to be estimated.

This year we have carried out a significant review of our sources and some have been recategorised according to our interpretation of the guidance, which explains the changes to the reported numbers. For example, we have recategorised some river abstraction as reservoir, and also recategorised a small number of our reservoirs to be pumped storage reservoirs.

As part of the assessment of sources, the following WTWs have had their source changed (see table below), which explains why river abstraction has reduced and impounding reservoirs has increased.

Table 4P Lines 9-17: Number of impounding reservoirs, pumped storage reservoirs, river abstractions, abstraction schemes and reuse schemes.

Ofwat guidance states that the source should be allocated according to the type of flow that delivers the larger part of the reservoir’s input. Eccup en-route storage reservoir (ESR), which supplies Headingley WTW, can be filled from either the pumped river sources (Ouse at Moor Monkton or Wharfe at Arthington) or the Washburn Valley impounding reservoirs by gravity. Last year Eccup ESR was classed as a pumped storage reservoir because the blend was 61% River and 39% Reservoir. This year Eccup ESR is an impounding reservoir, because the blend is 49% River and 51% Reservoir. This explains the change between lines 9 and 10 from last year (note: this also explains movements this year from line 2 to line 1).

There has been a greater proportion of impounding reservoir water into Eccup ESR this year because low levels in Eccup ESR were topped up with Washburn water during September, and also because the blend in the ESR was further influenced by the need to reduce levels in the Washburn Valley reservoirs, in order to accommodate ongoing civils work.

This year we have carried out a review of our remote stream intake assets through site visits, abstraction licence checks and discussions with operational colleagues. We have established that seven additional sites should be classed as river abstractions. These are passive gravity intakes from smaller streams and rivers. All have an independent abstraction licence and are used to supply raw water to Yorkshire Water assets. This explains the change in line 11 from last year. These assets consist of passive gravity intakes that abstract from small streams and rivers, have a requirement to release compensation flows back to the watercourses, and have abstraction licences.

Water treatment works name	Previous water source	New water source
Chellow Heights/WTW	Upland Ire river abstraction	Impounding reservoir
Eccup/No 1 WTW	Upland Ire river abstraction	Impounding reservoir
Elvington/No 2 WTW	River abstraction	Impounding reservoir
Headingley/No 2 WTW	Upland Ire river abstraction	Pumped storage
Ingbirchworth/2 WTW	Ground water upland Ire	Impounding reservoir
Loftsome Bridge/WTW	River abstraction	Impounding reservoir
Thornton STWD/WTW	Upland Ire river abstraction	Pumped storage
Tophill Low/No 2 WTW	River abstraction	Impounding reservoir

The sources are known as:

- Birk Gill
- River Burn
- Spruce Gill
- Stock Beck
- Carlesmoor Beck
- River Laver
- Turvin Clough.

Table 4P Lines 18-19: Total number and capacity of water reservoirs

There have been two changes since last year to the number and capacity reported:

- Elslack reservoir reduced from 223.194MI to 164.997MI due to physical measures to lower the top water level. This was carried out to address leakage and was overseen by a construction engineer.
- Ten Acre reservoir was discontinued by breaching the embankment and reducing the stored volume to a level where the Reservoir Act 1975 no longer applies. This was certified by a qualified civil engineer; the asset is no longer a reservoir.

Table 4P Lines 20-23: Total number and capacity of pumping stations

This year we have made some amendments to the number of intake/source pumping station assets. Fourteen assets had estimated capacities last year; these have since been reviewed and of the 14 sites, only one (Bellerby) is in use and this is a spring-fed well with no pump. The other assets are all either non-operational (Boston Park No.2 and Bradford Esholt BHS) or not owned by Yorkshire Water (Environment Agency observation boreholes). Therefore, these 14 assets are no longer reported for APR 2019/2020. In addition, Loftsme Bridge ASR and two sites at Rossington Bridge BHS are non operational and therefore not reported this year. However, we have brought one site (Stubbing Nook) back into use this year.

Table 4P Lines 24 & 27: Total length of raw water abstraction and transport mains

The lengths of all raw water mains are stored within our corporate GIS, but the system cannot differentiate between sub-types of raw water mains (i.e. Abstraction and Network Plus).

Last year we interpreted the guidance in RAG 4.08 Appendix 2, that river-to-reservoir transfers should be assessed as raw water abstraction mains. Four river-to-reservoir transfer mains were assessed as raw water abstraction and reported in line 4P.24:

- Kilgram Bridge River Intake to Thornton Steward Reservoir
- Kilgram Bridge River Intake to Leighton Reservoir
- Arthington River Intake to Eccup Reservoir
- Lobwood River Intake to Chelker Reservoir.

This year we have taken out Kilgram Bridge River Intake to Leighton Reservoir because it is not a dedicated main from river-to-reservoir all the time; it is a single, bidirectional main that is mostly used in the Leighton to Kilgram direction and therefore it is designated as Network Plus.

This year we have also carried out a detailed review of our remote stream intake assets and assessed that we have three additional raw water abstraction mains:

- Birk Gill River Intake to River Burn River Intake 0.71km
- River Burn River Intake to Spruce Gill River Intake 2.65km
- Spruce Gill River Intake to Leighton Reservoir 2.96km.

These mains lengths have been estimated individually using the GIS on-screen measure function.

Because our system cannot differentiate between the different types of raw water mains, for line 4P.27 we have estimated the length of networks plus mains using the total raw water mains lengths in our GIS minus the figure reported in line 4P.24.

Comparison with previous numbers reported

Line No.	2017/2018	2018/2019	2019/2020
24 Raw water mains (abstraction)	1465.70	22.50	14.76
27 Raw water mains (Network Plus)	0.00	1444.80	1452.59

Note that in 2017/2018 we mistakenly reported the total raw water mains lengths under raw water abstraction, with zero km under networks plus, and provided commentary that the separate types of raw water mains were not recorded by our IT system, which accounts for the large difference above.

Table 4P Line 28: Water Resources Capacity

This line represents the company level water resources capacity, as the sum of all company water resource zones (WRZs) across all of its licensed areas. Capacity is measured in terms of water resources yield which captures the average volume of water available from the environment and constrained by water resources control assets.

The water resources yield from the base year is assumed to reduce at the same rate as deployable output due to climate change in the Water Resources Management Plan. This year the value is 1,648.04MI/d, a decrease of 2.81MI/d from last year's value. This decrease is due to the assumed yearly reduction due to the impact of climate change.

Table 4P Lines 29-57: Water Treatment

This year Langsett WTW has moved from category W3 to W4 due to the addition of a Magnetic Ion Exchange (MIEX) treatment process plant.

North Newbald WTW and Littleworth are both GW2 category works that have not been used but are not decommissioned. These works are included because we interpret that, even though the works have not been in use, there is potential for them to come back into service and therefore they should be reported. The reasons these two sites have not been used is due to issues with water quality.

Table 4P Line 58: Treatment works requiring remedial action because of raw water deterioration

In 2019/2020, one treatment works requiring remedial action was planned and delivered. This was Langsett Water Treatment Works (WTW), where a Magnetic Ion Exchange (MIEX) plant was completed successfully on 16/12/2019.

Table 4P Line 59: Zonal population receiving water treated with Orthophosphate

Orthophosphate is dosed at the treatment works to reduce plumbosolvency. Plumbosolvency is the ability of a solvent, notably water, to dissolve lead. Plumbosolvent water can cause damage to lead pipes. We counteract this by adding phosphate at our water treatment works, which forms a protective coating to the inside of lead pipes. 100% of the zonal population receives water dosed with orthophosphate. Therefore, any year-on-year variability is due to variation in total population.

Table 4P Line 25, 26, 60 and 94: Average pumping head abstraction, transport, and treatment

Average pumping head is calculated from telemetry data that is used to calculate the lift and flow of each operational asset in conjunction with the volume of water entering each price control. This year we have improved our calculation methodology with company experts to enhance confidence in our reported figures. This includes the use of more actual measured data, combined with site visits to confirm the operational status of pumps. Our new calculation methodology has been reviewed by our external auditor and they have confirmed the approach is reasonable, has been applied consistently to pump data, and is a significant improvement on the previous calculation methodology.

Line 25 Raw water abstraction

This is lower than last year because abstraction reduced by 3.8% this year. However due to changes in the calculation methodology, particularly for boreholes, this figure has not reduced as much as expected. The changes in methodology have improved the accuracy of this year's data, and boreholes now have an Ofwat approved methodology that we will be using in future.

Line 26 Raw water transport

This was expected to reduce due to more favourable weather conditions relative to last year. However, the reduction has been dampened to some degree this year by the improved calculation methodology and increased availability of data.

Line 60 Water treatment

In 2018/2019 we had a method change where we reviewed interstage pumping at WTWs. There has been no change to this year's method and there is minimal change to the reported figure for this year compared to last year.

Line 94 Treated water distribution

This figure is lower than last year due to two main reasons. Firstly, a change in calculation methodology has improved the accuracy of data for larger sites (Bands 4, 5 and 6). Secondly, some sites have been classed as non-reportable (e.g. due to lack of operational use) and removed for this reporting year.

Table 4P Line 61: Total length of potable mains as at 31 March

Our corporate GIS (Odyssey) records hundreds of thousands of pipes. Each pipe has a length associated with it, plus attributes such as owner name, whether it is live or abandoned, and whether it carries raw or treated water. Using a cut of this data (taken at the start of April 2020) we used an application called FME to analyse and filter this data and ultimately produce a figure for the APR.

In 2018/2019 the network grew by 97km. This year (2019/2020) it has grown by 100 km to a total length of 31,890.9km. This increase reflects the increase in team resources (i.e. the number of people skilled enough to add pipes to the Odyssey GIS) combined with our increased ability to get through more of the backlog of statutory main laying schemes.

Table 4P Line 62 : Total length of potable mains relined

In late 2018, 3M stopped producing the lining material we predominately used for our capital works. 3M at the time were the only supplier. After using our existing 3M supply of lining material, the majority of our lining programme was paused. We are currently supporting another supplier of lining material who are seeking for DWI approval for their product. Our effort to obtain an approved lining material and supplier is being offered as a service to other utility companies across the company. This lining programme is being led by our Innovation and Asset Planning teams.

Table 4P Line 63: Total length of potable mains renewed

There has been an increase of 14.5km on last year's reported figure. This is due to the limited supply of 3M relining material requiring a change of approach.

Table 4P Line 64: Total length of new potable mains

This data is made up of both requisition and self-lay mains which has been laid under the statutory main laying scheme for 2019/2020. The ratio of main laying has remained consistent throughout AMP6 at an average of 60:40 requisition to self-lay. The length of new mains laid in 2019/2020 is 112.5km. This is 27.8km less than last year which is largely due to a reduction in requisition main laying during the year.

Overall, the housing market has significantly improved throughout AMP6, supporting the industry predictions for growth. Main laying is customer-driven and, although the length of new mains laid during 2019/2020 is in line with industry predictions, it is 7% below the final determination number (109.33km). However, the total mains laid in AMP6 has outturned 12% higher than the final determination overall. Several large projects are due for completion within the first quarter of Year 1 of AMP7 and these will be reported in the APR 2020/2021 report.

Table 4P Lines 65-68: Length of potable water mains

Our corporate GIS (Odyssey) records hundreds of thousands of pipes. Each pipe has a length associated with it, plus attributes such as owner name, whether it is live or abandoned, and whether it carries raw or treated water. Using a cut of this data (taken at the start of April 2020) we used an application called FME to analyse and filter this data and ultimately produce figures for the APR.

These lines show the length Yorkshire Water's live mains carrying treated water, classified by diameter. The relatively small amount of pipework we add each year means that these number stay very similar between years. The majority of the yearly growth occurs in the <320mm diameter category.

Table 4P Lines 69 & 83: Capacities of reservoirs and water towers and water delivered

The number of pumping stations has not changed since the last reporting year. However, we have revised the capacity of two stations (Rivelin and Acomb Landing) upwards slightly due to the availability of more detailed information.

Table 4P Lines 70, 71, 84 & 85: Capacities and total numbers of service reservoirs and water towers

The number of reservoirs has stayed the same from the last reporting year, although one site has been recommissioned and one site disposed. These changes have impacted the reported capacities which have decreased accordingly by 6MI from last year.

The number of water towers has reduced by one compared to the previous reporting year and the reported capacity is also slightly lower. The change is due to the disposal of Cantley Tower and explains the capacity reduction of 1MI compared to the previous reporting year.

Table 4P Line 72: Distribution Input

Distribution input and volume from water treatment is the average amount of potable water entering the distribution system. Distribution input and volume from water treatment is lower in 2019/2020 than in the previous reporting year. This is because customer demand in 2019/2020 was lower than that observed in the prolonged warm, dry summer months of 2018/2019 and the high leakage levels in the first months of the report year following the impact of the 'Beast from the East' in March 2018.

Table 4P Line 73: Water delivered (non-potable)

This line is reported as zero. As in previous years, we do not provide any non-potable supplies to either household or non-household customers.

Table 4P Line 74: Water delivered (potable)

This line reports all potable water supplied. This includes the estimated water delivered to billed measured and unmeasured household and non-household customers, and an estimate of water taken unbilled. The reported volume of water delivered includes estimates of consumption, water lost through supply pipe leakage and meter under registration for household and non-household meters.

In the report year the total volume of potable water delivered has decreased by 24MI/d. This is primarily because we did not see a repeat of the high volumes of water delivered to household customers in the prolonged dry summer of 2018.

Table 4P Line 75: Water delivered (billed measured residential properties)

The volume of water delivered to billed measured households has increased this year by 9.9MI/d. This is due to new household properties connected in the year and unmeasured households opting for a metered supply (domestic meter optants). There is a corresponding decrease in water delivered to unmeasured households as the number of these properties decreased in the year.

Table 4P Line 76: Water delivered (billed measured businesses)

The average volume of water delivered to billed measured non-households has decreased by 14.9 MI/d (5.1%) this year.

Table 4P Line 77: Total leakage

Total leakage has decreased in the reporting year by 6.6% (19.0 MI/d) from last year. This reflects the effort and investment we have made over the last two years in this area in readiness for AMP7. Please see [Section 4](#) of this APR for further detail on leakage. Leakage is one of our performance commitments.

Table 4P Line 78: Distribution losses

Distribution losses have decreased in the reporting year by 6.4% (13.6 MI/d) from last year. Please see [Section 4](#) of this APR for further detail on leakage. Leakage is one of our performance commitments.

Table 4P Line 79: Water taken unbilled

Total water taken unbilled (legally and illegally) has increased by 1.5 MI/d (3.4%) in the report year.

Table 4P Line 80: Number of lead communication pipes

The number of lead communication pipes has remained low compared to earlier in the AMP as our lead replacement programme came to an end. The AMP6 programme peaked in 2016/2017 and has reduced since with embargoed areas being finished this year. Only ad-hoc replacement of lead communication pipes occurs now on a customer-by-customer basis.

In AMP7, a new lead replacement programme is forecast targeting hotspot DMAs, schools and nurseries. This programme of work would see a large increase in the number of lead communication pipes replaced. The DWI is expected to give further guidance on the direction of this programme and the scope of the work is currently being investigated by our delivery partners.

Table 4P Line 81: Number of galvanised iron communication pipes

There has been a small decrease (<1% change) in the reported figure compared to last year. A continued drive on active leakage reduction and targeted communication with customers could lead to the increased replacement of communication pipes (of which some could be lead or galvanised iron) throughout AMP7.

Table 4P Line 82: Number of other communication pipes

The number of other communication pipes is made up of alkathene, copper, medium density polyethylene (MDPE) and cast iron. This reported figure has increased as expected because all new and replacement communication pipes are replaced with MDPE. Growth from new properties connected, as well as replacement of communication pipes, is considered in this measure.

We expect this figure to continue to increase during AMP7 owing to a new lead replacement programme and an increase in new properties forecasted for the region.

Table 4P Lines 86-93: Lengths of mains laid or refurbished

Our corporate GIS (Odyssey) records hundreds of thousands of pipes. Each pipe has a length associated with it, plus attributes such as owner name, whether it is live or abandoned, and whether it carries raw or treated water. Using a cut of this data (taken at the start of April 2020) we used an application called FME to analyse and filter this data and ultimately produce figures for the APR.

These lines show that the majority of Yorkshire Water's live pipes carrying treated water were laid after 1940. The size of the existing network compared to what we add each year means that there is very little year on year change across the age categories. We expect this to continue in a similar manner in future.

Table 4P Lines 95-110: Band disclosures

Some of our water treatment works are operating close to the band boundaries. This explains the occasional shift in bands between reporting years. Changes for this year are:

- Fixby WTW has moved from Band 5 to Band 4 with an output of 15.5MI/d.
- Heck WTW has moved from Band 2 to Band 1 with an output of 1.5MI/d.
- Keldgate WTW has moved from Band 7 to Band 6 with an output of 63.8MI/d.
- Tophill Low WTW has moved from Band 6 to Band 5 with an output of 31.4MI/d.

Table 4Q – Non-financial data – properties, population and other – wholesale water

For the 12 months ended 31 March 2020

[Link to table 4Q](#)

Table 4Q provides non-financial data related to properties, population and other wholesale water services. It provides information on the number of residential and business properties supplied with water and the estimated population. It also includes the number of new connections and meters installed in 2019/2020. Energy consumption is presented for the water resources and network components of upstream water services. There is also additional operational information related to water quality and maintaining secure supplies to our customers.

Table 4Q Lines 1-2: Total households billed for measured water (external meter & internal meter)

The proportion split between external and internal meters remains unchanged at 64:36 ratio. This is in line with last year's submission.

Table 4Q Line 3: Non-household billed measured water

This is an average number of non-household premises billed for measured water across the period of 01/04/2019 to 31/03/2020 inclusive. The total number of billed properties has decreased by 106 properties since APR 2018/2019. This is primarily driven by a reduction in void properties.

Table 4Q Line 4: Residential properties billed for unmeasured water

The unmeasured billed properties have reduced from 938,908 in 2018/2019 to 904,533 in 2019/2020. This reduction is in line with prior years and corresponds with the increase in measured properties compared to previous years.

Table 4Q Line 5: Non-households billed unmeasured water

This is an average number of non-household premises billed for unmeasured water across the period of 01/04/2019 to 31/03/2020 inclusive. The total number of billed properties is in-line with APR 2018/2019, having decreased by only 18.

Table 4Q Line 6: Total non-household connected properties at year end

This is a snapshot, as of 31/03/2020, of all connected properties classified as non-household, regardless of occupancy status. The year-on-year variance since APR 2018/2019 shows a reduction in the number of connected properties of 935 which correlates with the overall incidence impact of the number of deregistrations being greater than the number of new connections. This is consistent with data correction requests which have been received from retailers during the year.

Table 4Q Line 7: Total residential connected properties at year end

This is the total number of properties connected at year end. This has increased from 2,177,689 in 2018/2019 to 2,196,866 in 2019/2020. The movement represents an overall increase of 0.9% increase, which is in line with previous years.

Table 4Q Line 8: Total connected properties at year end

Line 8 is a sum of lines 6 and 7.

Table 4Q Lines 9-10: Number of residential/business meters renewed

Yorkshire Water owns more than 1.3m revenue meters installed for measuring consumption of both domestic (90%) and commercial (10%) customers. Our asset base is increasing by approximately 40,000 meters per year through the Domestic Meter Optants Scheme and the New Fixes process. These meters have an estimated asset life of 15 years.

We have invested in each AMP to maintain our current meter stock by:

- Replacing asset life expired (circa 15+ years) where capital funding has been available.
- Replacing damaged meters when required.

Automated Meter Reading (AMR) is a term used to describe an electronic device that enables meter readings to be taken without entering the premises of the property or without lifting the lid of meters. Our current AMR position is 94.2%. At the start of 2019/2020, our allocated funding would have allowed the replacement of approximately 7,000 meters (18% proactive; 82% reactive). In October 2019, additional funding was provided to allow the proactive replacement of more non-AMR asset life expired meters with AMR enabled meters. This was driven by our aim to further reduce leakage as we consider more AMR-enabled meters will provide additional data to better understand consumption versus leakage. Consequently, the number of meters installed this year is higher than the number installed last year.

Table 4Q Lines 11-12: Numbers of meters installed at request of optants and number of selective meters installed

The number of domestic meter optants (DMO) installed during 2019/2020 has increased by 20% to 33,812. This is short of the final determination figure of 38,000 and the forecast set out at the start of the year but is a significant increase when compared with other years in the AMP.

Demand at the start of the year was unprecedented in recent years. This was a result of a busy annual billing period in 2019, generated from a redesigned bill outlining potential financial savings that could be had by having a meter installed. The large spike in demand led to a significant backlog in DMO fits which sustained higher than 'normal' activity in the first four months of 2019/2020. However, there were around 45% fewer fits in March 2020 than forecast as at least seven fitting days were lost during the busiest period of the year due to social distancing measures and concern over Covid-19.

Table 4Q Line 13: Total number of new non-household connections

This figure shows all new non-household connections to the Yorkshire Water network between 01/04/2019 and 31/03/2020. The total number of new connections is in line with APR 2018/2019 having increased by only 9 properties compared to last year's figure.

Table 4Q Line 14: Total number of new residential connections

We have reported 14,611 new residential connections in 2019/2020. This is consistent with the number of new connections that we have seen over the last three years.

Table 4Q Line 15: Total population served

The total water population for 2019/2020 has been estimated from average property numbers multiplied by occupancy rates for measured and unmeasured households and unmeasured non-households, plus the estimated communal (measured non-household) population for the year. Average billed property numbers for the report year for measured households, unmeasured households and unmeasured non-households are obtained from the billing file.

These are multiplied by estimated occupancy rates for the different property categories to give estimated populations. The occupancy rates used were determined through customer research undertaken for the Water Resources Management Plan 2014 (WRMP14).

The estimated populations are then added to the reported communal population (measured non-household population) from the 2011 Census to give the total population.

Total population has increased in the report year by approximately 13,000 people (0.25%) from last year and is expected to increase further in AMP7.

Table 4Q Line 16: Number of non-household meters (billed properties)

This is a snapshot of occupied non-household premises with meters as of 31/03/2020. The total number of occupied properties has reduced by 2,035 compared to APR 2018/2019. This is primarily due to an increase in vacant properties during March 2020 as a result of Covid-19.

Table 4Q Line 17: Number of residential meters (billed properties)

We have reported a value of 1,194,385 residential meters (billed properties), an increase of 48,816 from last year.

Table 4Q Line 18: Company area

This measure has remained unchanged at 14,294km² as reported in 2018/2019 and previous years.

Table 4Q Line 19: Number of lead communication pipes replaced for water quality

The bulk of lead jobs were completed within Years 1 and 2 of AMP6. The reduced work completed from Year 3 onwards is the result of highway embargoes that limited access and prevented work from being carried out.

Table 4Q Lines 20-23: Total supply side and demand side enhancements to the supply demand balance (dry year critical/peak conditions and dry year annual average conditions)

These lines refer to the incremental supply and demand side improvements delivered during the reporting year to the dry year annual average period, e.g. new resources (supply-side), additional leakage reduction (demand-side), in the report year.

The planned supply-side and demand-side enhancements for 2019/2020 are detailed in the Water Resources Management Plan 2014 (WRMP14). In WRMP14 a supply demand forecast was produced for a dry year annual average scenario for both the Grid Surface Water Zone (SWZ) and East SWZ. A dry year critical period scenario forecast was also produced for the East SWZ. No dry year critical period scenario was required for the Grid SWZ due to the conjunctive water use within this zone.

Lines 20-23 report total improvements for all zones for supply and demand enhancements in both the dry year annual average and critical period scenarios.

No supply demand deficit for either the dry year or critical period planning scenarios was forecast for the East SWZ. We forecast a supply demand deficit for the annual average scenario in the Grid SWZ in 2019/2020. To meet this deficit a demand side enhancement was planned in the form of a 5MI/d reduction in leakage through additional find and fix activity.

In 2018/2019 we reported regional leakage as 290.11MI/d and in this report year it is 270.75 MI/d. The total demand side enhancements reported in line 23 for the dry year annual average scenario are the leakage reduction of 19.36MI/d. We have reported the same number in line 22 as there were no planned critical period enhancements and we are therefore reporting the same value as the dry year annual average scenario.

Lines 20 and 21 are reported as zero as there were no planned supply side enhancements in WRMP14.

Table 4Q Lines 24-26: Energy consumption

Total energy consumption for Network Plus and Water Resources has decreased this year to 312,051MWh compared to 344,772MWh last year.

Due to the nature of water treatment, our energy consumption figure is heavily influenced by the weather. For example, if we experience a particularly dry year, we may need to extract water from energy-intensive sources such as rivers and boreholes.

The overall consumption of electricity for both Network Plus and Water Resources has reduced to a three-year low with the annual figure reducing from 305GWh to 269GWh.

Yorkshire Water has continued its focus on energy consumption reduction throughout the business. This includes the monitoring of multiple key parameters as well as the implementation of energy efficiency schemes. A significant proportion of the annual reduction experienced is related to weather. 2018/2019 was an exceptionally dry summer and winter resulting in low reservoir levels. With water resource levels being lower than normal there was a need for increased amount of regional network pumping to be carried out, consuming higher levels of electricity. The current year (2019/2020) has seen the levels recover significantly, in turn allowing the use of less energy intensive water stocks to be maximised.

Natural gas is used for the heating of buildings and offices. Consumption is within the Network Plus and Water Resources price controls and has remained relatively static.

Gas oil is used for the heating of buildings and onsite emergency generators. Consumption will vary between years depending upon average annual temperature and also upon requirements to run onsite generators should sites experience power issues. Water Resources have seen an increase in consumption with Network Plus seeing a decline. The overall consumption for both boundaries has remained relatively static in comparison to the previous year.

Transportation energy consumption has increased due to business needs. The drive to further reduce leakage is one example of why there has been an increase in transport use. The short-term increase from identifying and repairing leaks is expected to be offset in the long term by not having to produce as much water.

Yorkshire Water has a number of internal reduction targets, one of which is to reduce our overall electricity consumption. In AMP7 this will partially be met by the implementation of projects identified under the ESOS (Energy Savings Opportunity Scheme).

Table 4Q Line 27: Mean zonal compliance

This is a performance commitment; a detailed explanation of performance is provided in [Section 4](#) of this APR.

Table 4Q Line 28: Compliance Risk Index (CRI)

Compliance Risk Index (CRI) is a measure that has been used by the Drinking Water Inspectorate (DWI) over the past three years. Water quality is independently measured by the DWI to provide reassurance that water supplies are safe and drinking water quality is acceptable to consumers.

The provisional CRI score for 2019 from the DWI is 4.7 compared with 1.9 for 2018. CRI scores are published by the DWI in the Chief Inspector’s Report, which will be published in July 2020. DWI calculated values are used whenever available in APR documentation.

In line with 2018 there were no detections for metaldehyde, and again there was a much smaller contribution from WSZ coliform detections than in 2017.

However, there were two individual coliform detections at Chellow Heights WTW and one combined coliform/*E. coli* detection at Elvington WTW. In addition, although the relative contribution from iron failures decreased, the absolute contribution increased due to the increased number of iron failures overall. This explains the increased score relative to last year.

Table 4Q Line 29: Event Risk Index (ERI)

The provisional ERI score for 2019 from the DWI is 1.5, compared with 57.2 for 2018. ERI scores are published by the DWI in the Chief Inspector’s Report, which will be published in July 2020. DWI calculated values are used whenever available in APR documentation.

Performance in 2019 was significantly improved in comparison to 2018. Primarily, this was due to events impacting upon smaller downstream areas. For most event types the impact was for a single property only.

Table 4Q Line 30: Volume of leakage above or below the sustainable economic level

This line presents the variance between actual leakage and the sustainable economic level of leakage.

The sustainable economic level of leakage (SELL) for 2019/2020 is detailed in the Water Resources Management Plan 2014.

The actual volume of leakage in 2019/2020 is reported in Table 4P line 77 of the APR.

Actual leakage (270.75Ml/d) was less than the estimated SELL value for the year (287.10Ml/d) and the variance from SELL is reported as a negative value (-16.35Ml/d).

Table 4R – Non-financial data – wastewater network and sludge – wholesale wastewater

For the 12 months ended 31 March 2020

[Link to table 4R](#)

Table 4R Lines 1-2: Connectable properties served by s101A schemes completed in the report year and number of s101A schemes delivered in the report year

'First Time Sewerage' Section 101a is a mechanism for the public to obtain a public sewerage system. Historically, only two or three s101A schemes are undertaken per AMP within the Yorkshire Water sewerage area. No schemes have been completed or been considered within the last 12 months.

Table 4R Line 3: Total pumping station capacity

This measure has reduced in 2019/2020 to 70,018 from 70,595 in 2018/2019, a change of 0.8%. The change can be accounted for by improved information on some of the transferred assets associated with 16 private pumping stations updated into the asset base in 2019/2020.

Table 4R Line 4: Number of network pumping stations

This measure has seen an increase in 2019/2020 to 2,534 from 2,513 in 2018/2019 a change of 0.8%.

The majority of the change can be accounted for in improved information on some of the transferred assets associated with 16 private pumping stations updated into the asset base in 2019/2020 and improved information on our existing asset base

Table 4R Line 5: Total number of sewer blockages

This measure has decreased in 2019/2020 to 32,370 from 33,470 in 2018/2019, a change of 3.3%. This is in line with previous years' performance.

Table 4R Line 6: Total number of gravity sewer collapses

Sewer collapses are defined as a complete loss of structural integrity of the sewer where more than 50% of the cross-sectional area is lost. The total number of sewer collapses on the legacy and transferred network assets has decreased by 2.25% from 355 in 2018/2019 to 345 in 2019/2020. This is in line with average performance over AMP6 (323).

Table 4R Line 7: Total number of sewer rising main bursts/collapses

The total number of sewer rising main bursts on legacy and transferred network assets has reduced by 26% from 98 in 2018/2019 to 74 in 2019/2020. This is partially because, unlike last year, there were no transferred network assets this year. This year's figure is below the average for AMP6 (83).

Table 4R Line 8: Number of combined sewer overflows

This measure has seen a 0.3% increase in 2019/2020 to 2,068 from 2,061 in 2018/2019. This change is associated with an improved data set on consented overflows.

Table 4R Line 9: Number of emergency overflows

This measure has reduced in 2019/2020 to 602 from 604 in 2018/2019, a change of 0.3%. This is in line with previous years' changes and due to improved information about the asset base.

Table 4R Line 10: Number of settled storm overflows

This measure has increased in 2019/2020 to 190 from 187 in 2018/2019, a change of 0.01%. This change is associated with an improved data set on consented overflows.

Table 4R Line 11: Sewer age profile (constructed post 2001)

This is an increase of 264km from the previous year's reported figure of 2,197km. This year 20.3km of sewer was replaced and 6.1km of new sewer was installed.

Table 4R Line 12: Volume of trade effluent

Volume of trade effluent is representative of the foul trade volume received into the sewer network at waste treatment works from consented traders across the business over a 12-month period. The volume of trade effluent for APR 2019/2020 is 18,588.47MI/yr. When compared to APR 2018/2019 there has been a 0.56% decrease in total trade volumes received.

Table 4R Line 13: Volume of wastewater receiving treatment at sewage treatment works

The reported value for APR 2019/2020 is 747,107.16MI/yr. This represents an 18.32% increase in treated volumes across all of the treatment works compared to last year. This large increase is due to the transition from an extremely dry summer in 2018 (reflected in the lower figure reported for APR 2018/2019) and a very wet period of weather between October 2019 and March 2020. In addition to this, there is an extra day volume captured across all the sewage treatment works as APR 2019/2020 is a leap year.

Table 4R Line 14: Length of gravity sewers rehabilitated

This is a reduction of 1km on the 2018/2019 reported figure of 28km. Activity across the Service Delivery Repair and Maintenance Blocks has increased on last year due to two main factors. Firstly, regulatory incentives to avoid repeat incidents have led to increased promotion of preventative work. Secondly, as a result of the insourcing of a wastewater service partner and the increase in field resources, we have seen a higher amount of follow-on work being raised to resolve issues for customers.

Table 4R Line 15: Length of rising mains replaced or structurally refurbished

This is a 1km increase on the 2018/2019 reported figure of 1km. The majority of the in-year figure is attributable to a rising main replacement scheme at Thornborough.

Table 4R Line 16: Length of foul (only) public sewers

This measure has increased in 2019/2020 to 5,357 from 5,351 in 2018/2019. This change of 0.12% is in line with previous years' changes. The changes are largely due to improved information about our existing asset base and the adoption of new assets.

Table 4R Line 17: Length of surface water (only) public sewers

This measure has increased in 2019/2020 to 7,510 from 7,499 in 2018/2019. This change of 0.15% is in line with previous years' changes. The changes are largely due to improved information about our existing asset base and the adoption of new assets.

Table 4R Line 18: Length of combined public sewers

This measure has not changed in 2019/2020 from last year's reported figure.

Table 4R Line 19: Length of rising mains

This measure has increased in 2019/2020 to 1,267 from 1,263 in 2018/2019. This change of 0.32% is in line with previous changes. The changes are largely due to improved information about our existing asset base and the adoption of new assets.

Table 4R Line 20: Length of other wastewater network pipework

This measure has increased in 2019/2020 to 355 from 353 in 2018/2019. This change of 0.36% is in line with previous years' changes. The changes are largely due to improved information about our existing asset base and the adoption of new assets.

Table 4R Line 21: Total length of 'legacy' public sewers as at 31 March

This measure has increased in 2019/2020 to 30,755 from 30,732 in 2018/2019. This change of 0.32% is largely due to improved information about our existing asset base and the adoption of new assets.

Table 4R Line 22: Length of formerly private sewers and lateral drains (s105A sewers)

This remains unchanged from the figure reported at transfer of assets in 2011 set at 21,560km. The total length of these assets confirmed and mapped has increased to 2,622km in 2019/2020 from 2,452km in 2018/2019. The total mapped transferred length is 12.16% of the total length of transferred network set in 2011.

Table 4R Line 23-25: Total sewage sludge produced

These lines break down the total sludge treated into that treated by incumbents and that treated by third parties.

Line 23 - The amount of sludge treated by incumbents has increased substantially from last year (16.7ttds). This is due to the new Knostrop anaerobic digestion (AD) sludge treatment facility coming fully online and performing well.

Line 24 - There has been a reduction in the use of third party liming facilities this year. This is also due to increased internal treatment capacity with the new Knostrop AD sludge treatment facility coming into full production.

Line 25 - There has been a small increase in total sludge production. This is in line with our expectations and the general trend over AMP6. For further details on sludge volumes, please refer to the commentary provided for Table 4E.25.

Table 4R Line 26: Total sewage sludge produced from non-appointed liquid waste treatment

This data estimates the total sludge from non-appointed liquid waste treatment. It covers all sewage sludge treatment imported into Yorkshire Water in another means rather than direct by the sewer and is made up of 3 elements:

- Tankered Trade Effluent (General - from domestic and trade imports)
- Tankered Trade Effluent (Nufarm)
- Trade via 'Private pipe' Syngenta.

Although not directly reported, sludge for Nufarm and Syngenta has been fairly consistent for the last five years. However, the volumes for tankered trade effluent have increased steadily over the last four years following the launch of Yorkshire Water's initiative to grow this area of the business.

Compared to last year, the volume of imported waste has increased. This directly relates to increased sludge production from domestic and trade imports.

Table 4R Line 27: Percentage of sludge produced and treated at a site of STW and STC co-location

This year saw a reduction of sludges treated on co-located sites. There was an increase in sludge that was moved between sites. We have included liquid movement from sites that would normally produce cake, but did not produce cake, as not co-located.

We have calculated that we produced about 415.88TDS of new liquid imported sludges that were not co-located. This was due to new phosphate removal treatment sites.

Several sites had capital schemes in delivery where digester and or dewatering facilities were closed or refurbished. Here, we tankered liquid sludge from site while the new cake facilities were built. This has been counted as not co-located for the purpose of this report, because the sludge was not produced and treated at the same location. These include Staveley (119.5TDS), Wombwell (767.5TDS), Whitby (65.7TDS), and Colburn (858.9TDS). In additional 682.80TDS was tankered out from South Elmsall due to mechanical failure and equipment being housed in a building that was unsafe to enter. A new-self containerised unit has been installed for 2020.

We expect liquid movements to be reduced in the next AMP as more dewatering capital schemes come online.

Please note, in accordance with the RAG guidelines lines 28, 29, 30, 36, 37, 38, 39 & 40 in Table 4R are calculated using a different method than in Table 4E. This is because these lines are a measure of the disposal weight after taking account of changes as a result of the treatment process and not as a pre-treatment weight.

Table 4R Line 28: Total sewage sludge disposed by incumbents

There was a reduction in the sludge disposed by incumbents compared to the previous year. This was due to no legacy stock material being recycled. The previous year had extensive legacy treated conditioned sewage sludge recycled due to the provision of a Local Enforcement Position statement (LEP).

Table 4R Line 29: Total sewage sludge disposed by third party sludge service provider

We have seen a large decrease in the use of third party disposal services this year. Only a small amount of sludge was disposed through third party liming due to the Knothrop AD facility providing increased internal digestion capacity. The move away from third party liming services is intended to continue in future. We are expecting further increases of inhouse digestion capacity to come online in 2020/2021 at our Huddersfield and Mitchel Laithes treatment sites.

Table 4R Line 30: Total sewage sludge disposed

There was a large decrease in the total sewage sludge disposed this year compared to last year. This was partly due to no legacy stock being recycled in 2019/2020, and also due to the utilisation of our Knothrop AD STF which has reduced the mass of sludge disposed through digestion losses.

Table 4R Lines 31-35: Total measure of intersiting 'work' done by various methods

Tankered work done (movement of liquid sludges) has increased this year. There were 39,252 recorded journeys in 2019/2020 compared with 35,714 in 2018/2019. Some of this additional work is associated with various capital schemes in delivery where digesters have closed, and sludge has been tankered from site while new cake facilities are built. The rest of the changes reflect the increased ability to import liquid sludges into Yorkshire Water sites, as well as a slight increase in demand for movements due to population growth and NEP scheme sludges. We expect liquid movements to be reduced and cake movements increased in AMP7 as new dewatering capital schemes come online. Overall sludge production is forecast to increase over AMP7 due to both WINEP schemes and increases in population.

Trucked work (movement of cake sludges of more than 10% dry solids (DS)) has reduced this year. The largest element of the reduction in trucked work done is due to the increased use of new Yorkshire Water assets, in particular the opening of the new digestion plant at Knothrop sludge treatment facility, which have reduced the need to transport raw cake long distances to third party customers. The Knothrop facility is now taking in both liquid and cake sludges from across the region, resulting in a shift in the whole of Yorkshire Water's sludge movements. We have also opened a new cake importing facility at Blackburn Meadows. This, coupled with the improved performance across many of the other treatment centres, resulted in a reduction of sludge going out of the business.

Table 4R Line 36: Total measure of 'work' done in sludge disposal operations by pipeline

We continue to report zero for this line.

Table 4R Line 37: Total measure of 'work' done in sludge disposal operations by tanker

Work done by tanker disposal was lower this year compared to last year. This was due to the reduced amount of sludge recycled to turf grower customers who have been experimenting with artificial soil stabilisers during summer 2019 and lowering their usage of sludge. Next year, this figure is expected to reduce to zero as recycling to the small turf outlet has ceased as it has become uneconomic to maintain a holding tank facility at Naburn STF.

Table 4R Line 38: Total measure of 'work' done in sludge disposal operations by truck

There has been a reduction in work done by truck this year. This is due to closer outlets and an increased local agriculture market for Knothrop digested cake. Previous years included greater amounts of material recycled to more remote land reclamations. The trend of the last two years towards shorter disposal distances is expected to continue as we expect tonnages to land reclamation to continue to fall.

Table 4R Line 39: Total measure of 'work' done in sludge disposal operations (all forms of transportation)

There has been a reduction in work done by all forms of transport due to closer outlets. This is due to closer outlets and an increased local agriculture market for Knothrop digested cake. Previous years included greater amounts of material recycled to more remote land reclamations. The trend of the last two years towards shorter disposal distances is expected to continue as we expect tonnages to land reclamation to continue to fall.

Table 4R Line 40: Total measure of 'work' done by tanker in sludge disposal operations (by volume transported)

There was a reduction in the sludge recycled to turf growers from the previous year. Less sludge was disposed of via this route, as per line 37 above, because the end user had less demand. This volume is expected to reduce to zero next year.

Table 4R Line 41: Chemical P sludge as % of sludge produced at STWs

This line is the total sludge generated from STWs where chemicals are used in order to remove phosphate from the final effluent. 3.17% of our sludge arises from sites that remove phosphorus. These sites are all chemically dosed to remove phosphorus.

Our calculation methodology has changed this year to record actual production using logged data rather than estimates. Applying this procedure to the previous year, Yorkshire Water has increased its Chemical P sludges by 37% this reporting year.

This is due to investment in improving our river water quality in line with the NEP. This is expected to increase further during AMP7.

Table 4S – Non-financial data – sewage treatment – wholesale wastewater

For the 12 months ended 31 March 2020

[Link to table 4S](#)

Table 4S Lines 1-7: Load received by sewage treatment works in bands 1 to 5+ and total load received

Loads have shown slight variations from last year but nothing outside of tolerable changes. Overall there has been an increase of 0.7% in the total load (kg BOD5/day) from last year.

Table 4S Line 8: Load received from trade effluent customers at treatment works

The average trade effluent load for the APR 2019/2020 return is 48,219 kg BOD5/day. When compared to APR 2018/2019 there has been a 1.1% increase in total trade load received. This is within the expected tolerances of change.

Table 4S Lines 9-15: Number of sewage treatment works at 31 March 2020

The overall number of STWs being reported in APR 2019/2020 is 608, which is two less than in APR 2018/2019. The sites that are no longer reported are Bagby (Band 2) and Hillam (Band 4); these have both transferred to existing works but no change in band has occurred at the receiving works. Stocksbridge STW (Band 5) was also relocated to become a new site called Ewden STW (Band 5).

Lines 16-25 record the population equivalent associated with a number of completed STW investment schemes including relocations, quality drivers for Phosphorus, Flow, Nitrogen, Groundwater, Sanitary Determinands, UV and growth.

Table 4S Line 16: Current population equivalent served by STWs

There has been a 1.1% increase in population from APR 2018/2019 (5960.090 thousand) to APR 2019/2020 (6027.26 thousand).

Table 4S Line 17: Current population equivalent served by discharge relocation schemes

This line is reported as zero in APR 2019/2020 (the same as last year) as there have been no discharge relocation schemes in this financial year. We have transferred crude sewage flows from, and subsequently abandoned, sites at Stocksbridge, Bagby and Hillam, and have created a new works at Ewden to replace Stocksbridge but have not reported these under this line as they were not subject to a discharge relocation quality driver.

Table 4S Line 18: Current population equivalent served by filter bed STWs with tightened/new P consents

This line has increased from zero in APR 2018/2019 to 78,937 in APR 2019/2020. This is the result of the completion of 15 filter bed STW P schemes this year.

Table 4S Line 19: Current population equivalent served by activated sludge STWs with tightened/new P consents

This line has increased from zero in APR 2018/2019 to 45,729 in APR 2019/2020. This is due to the completion of three activated sludge plant STW P schemes this year.

Table 4S Line 20: Current population equivalent served by groundwater protection schemes

This line is reported as zero as there have been no groundwater protection schemes this year. We also reported zero for this line last year.

Table 4S Line 21: Current population equivalent served by STWs with a Flow1 driver scheme

This line is reported as zero as there have been no Flow1 driver schemes this year. We also reported zero for this line last year.

Table 4S Line 22: Current population equivalent served by STWs with tightened/new N consents

This line is reported as zero as there have been no tightened/new N consents this year. We also reported zero for this line last year.

Table 4S Line 23: Current population equivalent served by STWs with tightened/new sanitary parameter consents

This line is reported as 154,880 due to the completion of nine STWs with tightened or new sanitary parameters this year.

Table 4S Line 24: Current population equivalent served by STWs with tightened/new UV consents

This line is reported as zero as there have been no tightened/new UV consents this year. We also reported zero for this line last year.

Table 4S Line 25: Population equivalent treatment capacity enhancement

This line is reported as zero as there have been no population equivalent treatment capacity enhancements this year. We also reported zero for this line last year.

Table 4T – Non-financial data – sludge treatment – wholesale wastewater

For the 12 months ended 31 March 2020

[Link to table 4T](#)

This table provides information on the sewage treatment of wholesale water, the loads received by sewage treatment works of various sizes and the population number served by those sites.

Table 4T Lines 1-9: Sludge treatment process

These lines explain what treatment processes Yorkshire Water undertakes in order to treat the sludge produced from the STWs.

At the start of AMP6, Yorkshire Water incinerated roughly 12% of its sludge. Over the last five years our strategic direction has been to decommission our incinerators to promote renewable biogas production from anaerobic digestion, thereby reducing the cost of treatment and improving environmental performance. This reporting year was the first year no incineration took place.

This year 95% of Yorkshire Water's sludge was digested (Advanced & Conventional) through its own digesters. The amount of sludge sent externally (both for untreated disposal or further treatment) has reduced by 10.0% compared to 2018/2019. This is due to the first full year effect of Knostrop AD facility being built. Knostrop is Yorkshire Water's biggest AD facility and is treating circa 50% more sludge than our second largest digester plant.

Incumbent advanced AD has shown an increase from last year due to the improved reliability of our Esholt thermal hydrolysis plant.

The percentage of sludge that we digested in company is lower than planned over the AMP due to the delay of Dewsbury capital scheme completion. This has meant that more sludge left the business for treatment elsewhere than planned. Next year we plan to have Huddersfield and Dewsbury digesters commissioned. This will reduce our reliance on more expensive third party routes.

Table 4T Lines 10-15: Sludge disposal route

These lines show by percentage of the total, the method of sludge disposal by incumbent and third party.

In 2019/2020 there has been a major reduction in the percentage of sludge exported to land reclamations due to the Knostrop AD facility coming online for the full year. This has resulted in a 25% increase in the tonnage of digested sludge recycled to farmland. There has been a reduction in the use of third party liming, again due to Knostrop AD facility digesting the sludge in-house.

In future years it is expected that use of land reclamation facilities and third party liming services will further reduce due to the increased in-house digestion capacity being developed at our Huddersfield and Dewsbury sites.

Table 4U – Non-financial data – properties, population and other – wholesale wastewater

For the 12 months ended 31 March 2020

[Link to table 4U](#)

Table 4U provides non-financial data in relation to numbers of properties connected and billed to the Yorkshire Water wholesale network for sewerage services.

Table 4U Line 1: Household properties connected during the year

The number of new household properties added for each period within the company's sewerage area during the report year. This is in line with new connections in previous years.

Table 4U Line 2: Number of non-household properties connected during the year

This is the total number of new non-household connections made to the sewerage network across the period of 01/04/2019 to 31/03/2020 inclusive. The overall number of new sewerage connections is in-line with APR 2018/2019 having decreased by only seven properties.

Table 4U Line 3: Household properties billed unmeasured sewage

Unmeasured customers are down (3.8%) compared to the previous year. This is a larger decrease than average and explained by the increase in measured properties compared to previous years.

Table 4U Line 4: Household properties billed measured sewage

Measured customers have increased this year by 4%. This is in line with the trend seen over the last five years.

Table 4U Line 5: Household properties billed for sewage

This is the sum of lines 3 and 4.

Table 4U Line 6: Non-household properties billed unmeasured sewage

This excludes any premises that are vacant. This is an average number of non-household premises billed for unmeasured sewerage across the period of 01/04/2019 to 31/03/2020 inclusive. The total number of billed properties is in-line with APR 2018/2019 having increased by 23.

Table 4U Line 7: Non-household properties billed measured sewage

The figure excludes any premises that are vacant. This is an average number of non-household premises billed for measured sewerage across the period of 01/04/2019 to 31/03/2020 inclusive. The total number of billed properties has decreased by 3,027 since APR 2018/2019. This is due to an increase in vacant properties during March 2020 as a result of Covid-19.

Table 4U Line 8: Non-household properties billed for sewage

This is a sum of lines 4U.6 and 4U.7.

Table 4U Line 9: Void properties

Void properties have increased this year by 4.8%. This increase is in line with the trend seen in previous years.

Table 4U Line 10: Total number of properties

This is a calculated cell.

Table 4U Lines 11-12: Resident and non-resident population

These lines refer to the connected population within Yorkshire Water's wastewater operational area (note: 4U Line 12 refers only to holiday population, whilst 4U Line 16 is specific to national parks, areas of natural beauty (AONB) and sites of special scientific interest (SSSIs)).

In order to provide a level of consistency across clean and wastewater population tables, an updated average occupancy rate of 2.40 was used to calculate the population arising from the newly connected properties for the year 2019/2020 and used for clean water tables.

The number of new (2019/2020) household properties in the Yorkshire Water wastewater area is 14,314 which when multiplied by the 2.40 occupancy rate gives a population increase of 34,354. This represents an increase of 0.67%, which is very similar to that of previous years (0.60% in 2016/2017, 0.63% in 2017/2018, and 0.65% in 2018/2019). The increase is consistent with regional population growth as reported by the Office of National Statistics.

The non-resident population figure is the same as last year because no known significant changes (based on monitoring of planning applications on which Yorkshire Water is consulted, such as caravan sites) have occurred in the last year.

Table 4U Line 13-15: Energy consumption

Total energy consumption for Network Plus and sludge has increased this year to 416,089.660MWh compared to 403,894.260MWh last year.

Due to the nature of water treatment our energy consumption figure is heavily influenced by the weather. For example, if we experience a particularly dry year, we may need to extract water from energy-intensive sources such as rivers and boreholes.

In 2019/2020 Yorkshire Water brought in part of the externally sourced wastewater network operation and maintenance activities. This has resulted in an increase in energy consumption registered by Yorkshire Water vehicles, which has fully offset the fuel consumption previously reported by the external operation and maintenance provider.

Electricity – The overall consumption of electricity for both Network Plus and sludge has increased from 317GWh to 333GWh.

Yorkshire Water continues to focus on energy consumption reduction throughout the business, including the continual monitoring of key parameters, as well as the implementation of energy efficiency schemes identified under our implementation of the Energy Savings and Opportunity Scheme (ESOS). These projects have resulted in significant savings on multiple sites. With 2019/2020 being a relatively wet year our overall energy consumption has increased. This increase has been mitigated by the implementation of the aforementioned efficiency projects.

Gas oil has seen a reduction in consumption. As highlighted in the previous year's submission, Knostrop Sewage Treatment Works incinerator has now closed. This has resulted in approximately 384,000L of gas oil not being required each year. The new anaerobic digestion plant is now consuming natural gas but not on the scale of the old incinerator. Thus, there has been a significant net reduction.

Natural gas has also seen a decrease in consumption. There has been a significant reduction at our anaerobic digestion plant in Hull. Several improvements have been made to the heating system at Hull, including a new heat exchanger, which has resulted in less natural gas being required under normal conditions. However, gas oil powered heating equipment has been used to maintain digester temperatures during very cold conditions. There is ongoing improvement work at Hull with a new heating system being installed. It is anticipated that further reductions will be seen in the coming years.

Despite the milder annual weather conditions compared to last year, there has been a need for additional fuel for heating to maintain digester temperatures when combined heat and power engines have been undergoing servicing or repairs.

Transportation – Both boundaries have increased slightly due to business need. This will vary annually based upon staff levels and operational issues such as sludge stock levels. Yorkshire Water has recently insourced some wastewater operations previously carried out by an external partner as mentioned above. Although all previous activities were captured, Yorkshire Water has further improved its response and customer experience via the addition of new teams and vehicles operating 24 hours a day, 365 days a year, both reactively and proactively on the sewer network.

Table 4U Line 16: population resident within National Parks, SSSIs and Areas of Outstanding Natural Beauty

National park boundaries within Yorkshire Water's operational area are complex as they are 'shared' with other water and sewage companies. The populations were extrapolated from the data collected for individual STWs together with information published by the individual National Park/AONB authorities.

There are three National Parks that fall partially within Yorkshire Water's wastewater operational area:

- North York Moors
- Peak District
- Yorkshire Dales.

In addition, there are two AONB areas within our operational area are:

- Hambleton Hills AONB; and
- Nidderdale AONB.

To identify the population in Sites of Special Scientific Interest, we used our company GIS system to identify 487 SSSIs within our wastewater operational area. Within these, 65 domestic properties were identified, and cross checked against our billing system.

Table 4U Line 17: Total sewage catchment area

This measure has remained unchanged at 1,693km² from the figure reported in 2018/2019 and previous years.

Table 4U Line 18: Designated bathing waters

The number of designated coastal bathing waters is 19. This remains the same compared to the previous year as no coastal bathing waters have been designated or de-designated during the period. It is important to note that whilst 19 beaches are 'designated' during the 2019 season, Tunstall was not sampled due to lack of safe access caused by severe coastal erosion. Therefore, only 18 of the 19 beaches in Yorkshire received a classification, and Tunstall was 'unclassified'. It is expected that if a safe method for sampling at Tunstall cannot be agreed for the 2020 season, the Local Authority would need to pursue a de-designation. However, no application for this has been made at present.

At the end of the 2019 season, an application for an inland bathing water designation for the River Wharfe at Ilkley was submitted to DEFRA. At present this has not been designated. However, Yorkshire Water is working with the Ilkley Clean Rivers Group to understand the River Wharfe water quality in the area and will contribute to a partnership improvement plan if the site is designated.

We are currently working to understand the risks and impacts associated with Covid-19 on designated bathing waters. This has already affected the activity of some of our partners. For example, the Environment Agency's formal water quality sampling regime is currently halted in England for the 2020 season.

Table 4U Line 19: Number of intermittent discharge sites with event duration monitoring

This line records the number of intermittent discharges from the sewer network that have had event duration monitoring installed between 01/04/2019 and 31/03/2020. Event duration monitoring (EDM) shows when and for how long any discharge to the environment of storm sewage or settled storm sewage is occurring.

In AMP6, we committed to delivering an ambitious programme of 100% EDM coverage. This programme was made up of two elements: the AMP6 Environment Agency National Environment Programme (NEP) obligation and a second element of non-NEP investment. The purpose of the Yorkshire Water EDM programme was to meet regulatory requirements as well as provide data on all of our intermittent overflows for our asset management and pollution prevention activities.

Through the PR14 National Environment Programme (NEP), we needed to install 603 named overflows during AMP6. However, our own AMP6 business plan set the outcome of, and included funding for, installing event duration monitoring at the vast majority of our overflows of storm sewage and settled storm sewage to the environment. This totalled well over 2,000 overflows.

In 2019/2020 there were 489 intermittent discharge sites at which event duration monitors were installed during the report year, against a target of 549. Of these, 132 were those installations required through the NEP programme, against a target of 168.

Overall, our delivery for AMP6 was 60 installations short of our ambitious target of 2,209. Of these shortfalls, 36 were due to the impact of Covid-19 on the final stages of our delivery. The remaining 24 were due to issues with health and safety, flood damage, telecommunication blackspots and access to private land. A root cause analysis is being carried out to identify the lessons learnt from this shortfall, which will be applied to any similar projects in AMP7. Installations will be completed as soon as possible after Covid-19 restrictions are lifted.

The AMP6 NEP obligation was for delivery of 603 named EDM installations. A total of 567 has been installed over the AMP. This is 36 short of the target. This shortfall occurred exclusively in 2019/2020. A total of 24 of the named NEP installations were not delivered due to Covid-19 restrictions. The remaining 12 were not delivered due to issues previously mentioned with health and safety, flood damage, telecommunication blackspots and access to private land.

Table 4U Line 20: Number of monitors for flow monitoring at STWs

Prior to the start of AMP6 regulatory outputs are agreed between the Environment Agency and Yorkshire Water. Dates for the outputs are agreed, with a maximum delivery date as the end of AMP6 (31st March 2020).

There were 34 sites in the final NEP for AMP6, and this line is to give a breakdown of the number completed within the reporting year.

In APR 2019/2020 there have been 15 sites reported, compared to 10 in APR 2018/2019.

As an end of AMP6 summary, it should be noted that 31 out of 34 of the Flow3 Driver sites have been delivered, with the three outstanding sites subject to an Environment Agency dispensation request due to the restrictions imposed by Covid-19.

Table 4U Line 21: Number of odour related complaints

The data tell us how many telephone or written complaints we have received in relation to odours coming from either our treatment works or our assets. The number of complaints is very similar to last year.

Network odour issues – A continuing theme for the cause of odour complaints is the impact on our sewer network caused by disposal of unauthorised materials from domestic and commercial businesses. Our relaunched Network Protection Team has resulted in a reduction in the time to resolve odour-related issues and the number of repeat contacts as a result. The cyclical management of issues has enabled us to reinvest the time saved from repeat investigations to focus on those issues which are more challenging, due to their complexity or required technical solution. We continue to support customers with private network issues, including pumping stations, through facilitating discussions with third parties and environmental teams at local councils. An unintended consequence of insourcing our wastewater service partner activity saw a delay in our time to respond and resolve customer issues (see commentary for [Table 3D](#) for further details). This resulted in a temporary increase in written complaints but has since been resolved and our response to odour issues has improved.

An increase of complaints related to defects on the sewer has been noted this year which has required our operational teams to put in place robust effective management plans to mitigate the impact of odour until funding can be secured for asset upgrade. This will be a continued focus for the year ahead and will be supported by our programme of proactive sewer surveying to identify any defects before they become an issue to customers.

Treatment odours – Last year we implemented a site-specific improvement plan in conjunction with the local City Council Environmental Health team in response to an increase in complaints. This proved to be successful and we have seen an absence of complaints as a result. Furthermore, our overall written complaints about odour from a treatment works have reduced by 73% from last year. These complaints are dispersed across our region and have, with the exception of one complaint, been isolated incidents.

Over the last year there has been increased focus on developing odour management plans and, in cases where our activities need to change due to operational needs, putting in place mitigation plans to reduce the impact on neighbouring customers.

Table 4U Line 22: Volume of storage provided at CSOs, storm tanks etc, to reduce spill frequency

This line records the volume of storage that has been provided in each year. Additional storage is a requirement of our NEP obligations. Yorkshire Water has two obligations in AMP6:

1. 6YW300INT – Blackburn Meadows 6 times overflow – additional 16100m³ storage. This has been completed.
2. 6YW940811 – Improvements to Park Lane CSO. We are progressing a sustainable urban drainage solution (SuDS) but implementation has been delayed into AMP7. The new regulatory date for completion is 31/03/2022. The solution will be designed to be fit for purpose for AMP7 where there are a significant number of obligations with storm storage requirements.

Table 4U Line 23: Total volume of network storage

This has increased by 9% in 2019/2020 to 4,534,062m³ from 4,475,925m³ in 2018/2019. This is primarily due to a change in the way the transferred network volume is calculated. In previous years, a default pipe diameter of 150mm was used against the estimated transferred length of 21,560km. Following recent guidance from our external APR auditor, the network volume calculated from the transferred network now takes the known diameters of the mapped transferred network and infers the total volume of the unknown as a percentage of the known.

Table 4V – Operating cost analysis – water resources

For the 12 months ended 31 March 2020

[Link to table 4V](#)

This table is a further disaggregation of water resources data contained within 4D and reconciles to line 9. The table costs do not reconcile with Table 4J as this excludes exceptional costs. To allocate these costs, all relevant assets were classified according to the tables in line with RAG 4.08.

Total operating costs for water resources price control have reduced from previous financial year as the dry weather during 2018/2019 resulted in additional costs across the water price controls.

There has been an increase in directly allocated full-time equivalents (FTE) and employment costs within water networks plus as a result of the insourcing of leakage inspectors and the escalation to meet stretching AMP7 leakage targets. These updated employment costs and FTEs have been used to apportion costs into the wholesale water upstream services, and we have used consistent manpower allocations (detailed by each FTE) for the basis for lines 9 -13.

There has been a reduction of costs (£0.9m) from traffic management and from permits this year, relating to the volume of road repairs. This was mainly due to the mild winter in 2019/2020, which was the opposite to 2018/2019 where there was severe winter impact (associated with the 'beast from the east'). The weather has a direct impact leakage detection and repairs, thereby impacting the traffic management and permit costs.

These changes are also reflected in Table 4W that reviews wastewater employment costs and FTEs.

Table 4W – Operating cost analysis – sludge transport, treatment and disposal

For the 12 months ended 31 March 2020

[Link to table 4W](#)

This was a new table introduced earlier in the AMP period and has seen refinement in the most recent two years. It is a disaggregation of [Table 4E](#) of sludge treatments costs into sludge treatment, transport and disposal, and reconciles to line 9, with further opex and service charge analysis for wholesale wastewater in Sections D and E. (Please note that this does not reconcile with Table 4K as this table excludes exceptional costs).

To allocate the sludge treatment costs, all relevant assets were classified according to the tables in line with RAG 4.08, with sludge treatment costs directly allocated by site where possible into the relevant treatment categories (Untreated Sludge, Conventional & Advanced). Of the total cost, 65% has been directly allocated as most assets already had dedicated cost centres. The remaining 35% non-site-specific costs were apportioned using the site-specific splits according to the Regulatory Accounting Guidelines and as detailed further in our Accounting Methodology. Sludge Disposal route costs have also been allocated using this method.

The costs by sludge treatment type have moved primarily between raw treatment and enhanced treatment. This is due to the fact that in 2018/2019 sludge was treated externally as the November 2015 floods damaged major sludge treatment assets. With new asset investment and commissioning completed in this financial year (2019/2020), sludge can now be treated internally. There is an expectation that in future years there will be minimal sludge treated through the raw treatment category as further assets are expected to come on-line to treat sludge internally.

To allocate employment costs and full-time equivalents (FTE's) into the wholesale wastewater upstream services, we have used consistent basis of manpower allocations (detailed by each FTE) as provided for lines 40-45. The increase in FTE, which corresponds in the financials is associated with the insource of below ground waste maintenance.

The Traffic Management Act (TMA) costs, provided by our internal permitting team, only include the direct costs of the permits and exclude the on costs associated with Local Authority Charges. The Traffic Management Act costs reported in Table 4W have reduced year-on-year as a result of some of these activities being undertaken as part of the below ground maintenance insource. The costs for Traffic Management Act on Table 4W has been reported in Network Plus sewage collection.

9. Risk and compliance statement

Risk and Compliance Statement

Purpose and scope of the risk and compliance statement

The uninterrupted supply of sufficient clean, safe drinking water and removal of wastewater is an essential service we provide for our customers. To make sure this is achieved in a way that is safe for all our customers, whilst protecting and enhancing the environment and keeping our colleagues safe and well, we need to comply with a range of regulatory and legal obligations. We recognise that openly reporting our level of compliance with these obligations, and reporting how this has been achieved, is important in building customer confidence.

This statement sets out how we have complied with all our relevant statutory obligations and our Instrument of Appointment (licence), regulatory and performance obligations, where Ofwat is our regulator. It allows us to demonstrate our accountability to our customers and demonstrates to Ofwat how we are complying with its obligations.

This statement covers the reporting year 1 April 2019 to 31 March 2020 for all obligations, except for environmental compliance and water quality parameters which cover the calendar year, 1 January 2019 to 31 December 2019.

The statement is in three sections:

- **Section 1:** The Board assurance statement confirms the extent of our compliance with our obligations. It is signed by the Yorkshire Water Services Limited Company Secretary on behalf of the Board.
- **Section 2:** Outlines the processes and assurance we have in place to achieve compliance and meet our obligations.
- **Section 3:** Independent third line assurance report.

Section 1

Board Assurance Statement

As the Board of Yorkshire Water Services, we are satisfied that we have sufficient processes, systems of internal control and assurance in place to allow us to confirm that:

- We have a full understanding of all our statutory, regulatory and licence obligations.
- Subject to the exceptions noted in [Table 1](#), we are meeting all these obligations.
- We have taken appropriate steps to understand and meet the expectations of our customers.
- We have designed our services to meet those expectations, including the value of water bills our customers are willing and able to pay.
- We have sufficient processes and internal systems of control to fully meet our obligations.
- We have appropriate systems and processes in place to allow us to identify, manage and review our risks.
- Our risk management process identifies and escalates risk to be managed to the level reported.

We confirm that we achieve Ofwat's ambitions for transparency by:

- Providing information to customers in line with Ofwat's information principles.
- Involving customers and their representatives in improving our approach to providing information.

We confirm that we have:

- Provided Ofwat with assurance that we have sufficient financial and management resources to enable us to carry out our regulated activities (licence condition I).
- Considered the financial impact of a range of severe but plausible risk scenarios materialising to enable us to provide reasonable assurance that the Company will be able to continue in operation and meet its liabilities as they fall due over the next 10 years, to 2030, as set out in our long-term viability statement which can be found in [Appendix 4](#) of our Annual Performance Report.
- Sufficient rights and assets available to enable a special administrator to run the Company if such an order was to be made (licence condition K3.1).
- Made sure that all trade with associate companies in the year has been at arm's length (licence condition I).
- Maintained the investment grade credit rating Baa2 (licence condition I).
- Explained how we link Directors' pay to standards of performance which can be found in our Annual Report and Financial Statements and [Appendix 4](#) of our Annual Performance Report (section 35A of the Water Industry Act 1991).
- Reported in [Table 1](#) of this risk and compliance statement where we have not achieved the level of performance agreed in our final determination.

The Board confirms that, over the period covered by this statement, it has complied in all material respects with its relevant statutory, licence and regulatory obligations that have not been confirmed by other processes, and that it is taking appropriate steps to manage the risks it faces.

Our independent third-line assurance provider, Internal Audit, has reviewed the approach and processes we follow in assessing compliance with our obligations. A copy of their Assurance report is provided in [Section 3](#) of this risk and compliance statement.

Principles of Corporate Governance

The Board is committed to achieving the highest standards of corporate governance in accordance with the requirements of company law, current best practice, the UK Corporate Governance Code (the Code) and Ofwat's Board Leadership, Transparency and Governance Principles.

The Board has reported in detail on our compliance with the Code and the Ofwat Principles in [Appendix 4](#) of the Annual Performance Report.

Further information on our governance is contained within [Section 7](#) of the Annual Performance Report. Additional detail is also provided within the Annual Report and Financial Statements. Both reports can be viewed on our reports webpage: yorkshirewater.com/reports

Exceptions

The following exceptions to achieving our obligations have been shared with Ofwat.

Table 1

Obligation	Yorkshire Water position	Action being taken to improve
<p>Water Industry Act: maintain maps of their sewers. Clause/section 199.</p> <p>Subject to subsections (6) to (8), it shall be the duty of every sewerage undertaker to keep records of the location and other relevant particulars.</p>	<p>The Water Industry Act places an obligation on wastewater companies to maintain maps of their sewers.</p> <p>In common with all other wastewater companies in England and Wales not all our sewers are mapped.</p>	<p>We continue to improve our maps as we perform work on our wastewater networks.</p>
<p>Performance commitments.</p> <p>For 2019/2020 we have met or exceeded 22 of our 26 Performance Commitments.</p>	<p>For 2019/2020 we have not met the target for the following four performance commitments:</p> <ol style="list-style-type: none"> 1. Drinking water quality compliance 2. Drinking water quality contacts 3. Category 1 and 2 pollution incidents 4. Quality of customer service (SIM). <p>Drinking water quality compliance In 2019/2020 we managed to achieve an overall compliance figure of 99.949%, which is slightly lower than last year’s figure of 99.962%. We did not achieve our target of 100% compliance.</p> <p>Drinking water quality contacts In 2019/2020 our customers contacted us 6,368 times about the quality of their drinking water. This was an improvement of 1,596 from 7,964 contacts in 2018/2019. However, we did not achieve our target of 6,108 contacts.</p> <p>Category 1 and 2 pollution incidents We were above target for Category 1 and 2 incidents with 7 incidents (all Cat 2) against a target of 0.</p> <p>Quality of customer service (SIM) Our overall score this year was 83.2, compared to 84.0 points last year, which means we have not achieved our performance commitment to improve year on year.</p>	<p>Detailed action plans to improve our performance are monitored by our Asset Delivery Assurance Groups.</p> <p>You can read more about our performance and any actions we are taking in Section 4 of our Annual Performance Report. yorkshirewater.com/reports</p>

In addition to these known exceptions to achieving our obligations, our annual Control and Risk Self-Assessment process shows an 89% level of compliance. All senior leaders across the Company confirm their team's awareness and level of compliance with our highest risk statutory and regulatory obligations, developing action plans to address any areas of non-compliance in their team. Our process has identified 89% awareness and compliance across all relevant obligations. This is a slight reduction on 2018/2019, due largely to the structural changes in the business requiring colleagues and leaders to become familiar with new processes and new obligations. We have clear company-wide training and induction plans in place to improve awareness of our processes to ensure compliance with the obligations showing the highest risk of non-compliance: Working Time Regulations.

In addition to the company-wide programmes leaders have agreed 196 actions to improve awareness and compliance. Progress in delivering these is monitored by the Risk and Resilience Committee.

Board Signatures

Signed by the Yorkshire Water Services Limited Company Secretary on behalf of the Board of Directors



Kathy Smith

Company Secretary

This statement was approved at a meeting of the Yorkshire Water Board on 8 July 2020 and signed off on its behalf by Kathy Smith, Company Secretary.

Section 2

Assurance to confirm compliance

We have a full understanding of all our obligations

Our activities are governed by a range of legislation as well as the requirements of our licence, regulations set by various stakeholders and the performance commitments we make to our customers. It is important that we understand the detail of all these obligations and respond to any changes. To make sure we achieve this, we employ relevant subject matter experts called Legislation Champions to identify new or amended obligations and to translate the requirements into compliant policies and procedures for colleagues to follow. The subject matter experts include, but are not limited to, Legal Services, the Regulation team, Company Secretariat, Financial Services, Health and Safety, Asset and Process Engineers, Environmental Services and Human Resources. If needed, these teams draw on deeper external expertise to ensure that any changes to our obligations are appropriately applied.

We understand the extent to which we meet those obligations

Compliance with the approved policies and procedures to make sure we achieve our obligations is monitored through our three lines of assurance. This assurance is mapped to make sure we have effective coverage and dynamic escalation of risks and issues. Corrective actions are raised and monitored where weak controls or non-compliance is identified.

To support and test this approach, all senior leaders are required to provide personal assurance over their team's awareness and compliance with relevant obligations by completing an annual Control and Risk Self-Assessment (CRSA). The Legislation Champions set out the obligations each team needs to be aware of and comply with. Where senior leaders identify weaknesses, they are required to detail the actions they are taking to improve awareness and achieve compliance, including a reasonable timescale. The achievement of these actions is monitored by business unit leadership teams, the Risk and Resilience Committee, the Yorkshire Water Leadership Team and the Board. The results of the CRSA exercise is triangulated with other sources of assurance: independent technical advisors (Jacobs) test our performance reporting and Internal Audit tests individual judgements on the level of compliance to supporting evidence.

The CRSA outturn for 2019/2020 indicates a high level of compliance within Yorkshire Water at 89%. The obligations with the highest levels of compliance and awareness are environment (95%) and human resources (93%). Work to improve company-wide awareness of and compliance with the Working Time Regulations continues to be a key focus during 2020/2021, as well as maintaining our momentum on General Data Protection Regulation compliance and improving our induction processes.

We have taken appropriate steps to understand and meet the expectations of our customers and stakeholders and we have designed our services to meet those expectations

The 5.4 million people who live in Yorkshire and the millions of people who visit Yorkshire each year, rely on our services for their basic health needs and lifestyles. There are more than 140,000 businesses who use our water to provide goods and services that support the economy, not just in Yorkshire, but the whole of the UK.

Over the course of 2019/2020, we continued to adapt the nature of our conversations with our customers and stakeholders. Rather than the traditional approach of talking to customers about what we do as a company, our focus has been on understanding individual lifestyles and how they shape what customers want, need and expect from us. With the help, support and challenge from the Yorkshire Forum for Water Customers, we have been able to develop a much richer understanding of the diversity of Yorkshire's people, their individual needs and how best we meet these now and into the future.

Our Corporate Affairs Team undertakes continuous customer, stakeholder and colleague engagement to inform and shape our day-to-day service delivery and this participation has been crucial to the development of our business and operational planning. The team employs a range of research and wider engagement techniques to ensure customers and stakeholders provide us with the insight to inform and support our ongoing activity. These include:

- An online customer community of more than 1000 customers, representative of the Yorkshire region who take part in regular surveys and discussions on a range of issues.
- An ongoing program of qualitative and quantitative customer research to inform our plans and to test key initiatives, for example during 2019/2020 customers have been central to the development of our customer campaigns and customer experience strategy.
- Continued to work with the Yorkshire Forum for Water Customers who ensure our customers have a fair say in the development of our plans.
- An independent survey of our key stakeholders on their views on Yorkshire Water, how we work with partners and our priorities, to be repeated every two years.
- A stakeholder account management program, with stakeholders assigned an account manager from Yorkshire Water to lead on developing opportunities to work together.
- Political monitoring and sentiment analysis to understand the expectations and priorities of politicians.
- The continuous measurement and reporting of customer and stakeholder reputation management.

In 2019/2020, this engagement with customers and stakeholders has resulted in:

- Yorkshire Water joining the Leeds Anchor Network, a group of organisations including the Local Authority, NHS, universities and colleges who have committed to working together to target procurement, recruitment and service delivery activities to help boost local employment, business growth, skills, incomes, health and wellbeing.
- The instigation of a Yorkshire wide Land Anchor Network, bringing together Yorkshire's biggest landowners to discuss how they can address some of the region's biggest challenges by managing land differently.
- Continued high levels of brand perception & trust and customer satisfaction with the delivery of water and wastewater services.
- The development of a proposal for a 'social contract' based on customer, colleague and stakeholder research which builds on deep local partnerships based on the anchor institutions model.
- An award-winning approach to communicating with customers about water resources and their personal water use, based on in depth customer research.

We have sufficient processes and systems of internal control to meet our obligations

The Audit Committee monitors the effectiveness and operation of Yorkshire Water's system of internal control on behalf of the Board. Our controls are designed to achieve compliance with obligations and manage the risk of failing to achieve the business objectives we have agreed with our customers and our regulators. The operational policies and procedures which set out these controls are housed in the Integrated Management System or similar repositories and achieve international quality standards for Environmental Management, Quality Management, Occupational Health and Safety and Asset Management.

Three lines of assurance work together to provide confidence to senior leaders and other stakeholders over the adequacy of the design and operation of the controls. The findings from the audit of our 2019/2020 CRSA process are shown in [Section 3](#) of this risk and compliance statement. This confirms that apart from the exceptions noted above, we have a good understanding of the Company's relevant obligations and appropriate systems and processes in place to run the business and identify and manage risks in a way that meets its relevant obligations. The audit made five recommendations, four medium priority and one low priority. All the recommendations have been accepted, and are being worked on. We will include the action we have taken to address these in next year's report. Last year this audit was conducted by our external auditors, Jacobs. We have taken action to improve our assessment by addressing the four recommendations as summarised in [Table 2](#). Last year Jacobs made four recommendations which we have worked hard to implement during the year.

Table 2

Audit recommendation	The action we have taken	Position
2018/2019 Jacobs audit		
1 Handover processes between Legislation Champions need to be improved.	We have created role statements which outline the responsibilities expected of Legislation Champions to improve continuity and improve the handovers between Legislation Champions.	Complete
2 In certain specialist areas it may be necessary to widen the source of expertise beyond Legal Services and the Legislation Champion, to ensure there is a comprehensive understanding of the obligations.	In addition to using external technical advice, Legislation Champions now use peer support and in-house advisory services such as the Internal Audit, Company Secretariat and Asset Standards. Champions also seek clarification and support through the Regulatory Issues Group.	Continuous Improvement
3 Additional checks and controls should be put in place to monitor progress in achieving actions to introduce controls.	<p>We have an integrated assurance map, which records all the second and third line assurance carried out across Yorkshire Water. From this assurance map we can see that assurance is provided across all obligations.</p> <p>The Risk and Resilience committee provide high level oversight, monitoring the implementation of actions at each meeting.</p> <p>Actions to improve control are agreed with Legislation Champions.</p>	Complete
4 The assessment of the range of teams needing to be aware of, and comply with, each obligation should be strengthened to ensure it is comprehensive.	<p>All Legislation Champions were reminded of their role to identify all teams needing to comply.</p> <p>The format and language of the CRSA process has been made clearer to make it easier for Legislation Champions to identify all teams needing to comply.</p>	Continuous improvement

Table 2 continued

Audit recommendation	The action we have taken	Position
2019/2020 internal audit		
1 An additional review should be conducted by Legal Services to confirm that the list of legislation and risk assessments are reasonable. Any changes can then be captured in the CRSA process.	Legal Services will provide assurance over the reasonableness of the obligations and risk assessments.	September 2020
2 A learning review should be conducted at the end of the 2019/2020 CRSA process to ensure there is clarity around the roles and expectations of key stakeholders within the annual CRSA cycle.	A learning review is conducted annually and the agreed improvements are fed into the process for the following year. This is being done in July 2020 through a survey of key stakeholders and interviews.	Continuous improvement
3 To reduce the risk of a single point of failure, a centralised mailbox should be created and communicated to all stakeholders.	A request for a centralised CRSA mailbox has been submitted. This will be completed ahead of the 2020/2021 CRSA process.	September 2020
4 Procedure notes should be held by each Risk Champion.	Updated procedure notes are being shared with each Risk Champion to retain locally as well as being available on the central database.	On-going
5 A suite of communications should be developed, including senior leader sponsorship, to raise awareness of CRSA with key stakeholders and the wider business.	A review of the communication is being undertaken. This will be shared with the new Chief Finance Officer once completed.	On-going

We seek to continually improve the approach to assessing our compliance. In addition to the assurance processes noted above we have an annual “lessons learned” cycle. This involves all Legislation Champions, senior leaders and the teams providing assurance.

We have appropriate systems and processes in the place to allow us to identify, manage and review our risks. Our risk management process identifies and escalates risk to be managed to the level reported.

Effective risk management is central to achieving our objectives. It improves our ability to prepare for challenges and protects the value of the Company. Risk management is embedded in our normal business process and culture and is overseen by the Risk Committee. It provides a standard approach to make sure that risks, including potential non-compliance with our obligations, are identified and escalated in a timely way to be managed to an appetite at the right level of the business. Our risk management framework and the principal risks to achieving our objectives are detailed in our Annual Report and Financial Statements.

Regulatory obligations at risk

Based on 2019/2020 performance, and using our performance commitments as indicators of compliance, the Board has identified the following material risks to achieving specific performance commitments in future years:

- Drinking water quality compliance
- Drinking water quality contacts
- Pollution serious incidents (Category 1-2)
- Measure of customer service (SIM).

Drinking water quality compliance

Customers in Yorkshire expect that the drinking water we supply is of the highest possible quality. There was a deterioration in performance this year compared to last year (99.949% in 2019 cf. 99.962% in 2018). In AMP7, there is a risk that we will not achieve our target of a Compliance Risk Index score of 0.0 (CRI is the new measure for drinking water quality compliance in AMP7).

Drinking water quality contact

In 2019/2020 our customers contacted us 6,368 times about the quality of their drinking water. This was a significant improvement from 7,964 contacts in 2018/2019, however, we did not meet our 2019/2020 performance commitment target of 6,108. The reduction was due primarily to fewer discolouration and taste and odour contacts. We have continued our programme of flushing water mains to remove sediments that may have built up over time. This programme as well as other initiatives has contributed to a further reduction in the number of times customers contact us about the quality their drinking water, and serves us well moving into AMP7.

Pollution Serious Incidents (Category 1-2)

We were above target for Category 1 and 2 incidents with 7 incidents (all Cat. 2) against a target of 0. This was an improvement from 11 incidents recorded in 2018/2019, however, there remains a risk that we will not achieve our AMP7 Pollution Incidents target. To mitigate this risk, this year we published our Pollution Incident Reduction Plan that explains how we will reduce pollutions incidents across our asset base. The plan has a particular emphasis on our sewage network because it accounts for most of our pollution incidents.

yorkshirewater.com/media/2362/yorkshire-water-pollution-incident-reduction-plan-2020-2025-march-2020.pdf

Quality of customer service (SIM)

Our overall score this year was 83.2, compared to 84.0 points last year, which means we have not achieved our performance commitment to improve year on year. SIM has been replaced by C-MeX for AMP7.

Assuring our performance

We always want to provide our customers and stakeholders with information that they can trust and have confidence in. We understand that when we don't get this right we risk losing their trust and confidence. Our annual reporting processes are accredited to the British Standard ISO 9001:2015 Quality Management System. Compliance with the ISO 9001:2015 is externally verified.

To achieve confidence over the accuracy of the information we publish we apply 'three levels of assurance'. This best practice approach means that we gain more assurance in those areas with a higher risk of error associated with the information or with the publication. In addition to the routine assurance over our operational processes and systems of internal control, we have two assurance processes to confirm the accuracy, consistency and transparency of our annual reporting:

- A data assurance process is in place to make sure that the data supporting the information we publish is accurate.
- A wider assurance process ensures that the overall publication meets any guidance and that the publication is accessible and easy to understand.

Our assurance processes are detailed further within our Final Assurance Plan, which can be found here:

yorkshirewater.com/reports

We can confirm that we have followed these processes for the Annual Performance Report.

Each year we consult on, and publish our Risks, Strengths and Weaknesses Statement (yorkshirewater.com/reports). This provides information about the quality of the performance information that we publish from our customers and stakeholders and any risks they have identified. It also sets out any reporting risks we have identified from our own processes and controls or through our own internal and external audits.

We then commit to actions to mitigate these risks and give confidence to our customers and stakeholders that we are responding to their concerns and they can trust the information we report.

In 2019/2020 we identified the following areas as high risk for reporting and we made sure these had additional focus through targeted assurance. You can read more about our targeted areas of assurance in [Section 5](#) of our Annual Performance Report. Our targeted areas are listed below.

- Performance commitments where the target was missed in the previous year
- Performance commitments where we are forecasting a financial incentive reward
- Price control cost allocation
- Customer understanding and awareness of the information we provide
- Effect of our internal SAP programme on our reported information
- Meeting regulatory guidance
- Accuracy of information

Protecting and enhancing our resilience

Resilience is a priority for us and our customers for many reasons, including:

- The reliability of our essential services is critical to communities, economic growth, environmental protection, and ultimately to human life and livelihoods.
- Our customers highlight resilience as a priority; they tell us how important it is that we provide reliable, safe and affordable water, wastewater and environmental services.
- Our ability to deliver on the commitments we have made to our customers is dependent on our business being resilient.
- Our resilience erodes over time if we do not act together to maintain and enhance it. Climate change, the deteriorating natural environment and ageing infrastructure are some examples of growing pressures we need to respond to.
- We have a range of relevant legal and regulatory duties and commitments which we need and want to comply with.

“Resilience is the ability to cope with, and recover from, disruption and to anticipate trends and variability to maintain services for our customers and the environment, now and in the future”.

Resilience task and finish group, summary report 2015, adopted by Ofwat

To help us manage and further enhance our approach, we have developed a whole-business resilience framework that builds on, and adds to, our existing risk management activities. We developed our approach with the support of international resilience experts at Arup and it brings together a range of international best practice tools and processes. Our approach uses latest ‘systems thinking’ which means that we recognise (and have mapped) the complex relationships within the different functions of Yorkshire Water and with external communities and activities. Our approach enables us to quantify our resilience so we can measure and openly report our position over time.

To make sure that we are following a best practice approach to resilience across all parts of the business and the essential services we provide, we have aligned our approach to the British Standard for Organisational Resilience (65000:2014).

We recently established a Risk and Resilience Committee to ensure a clear, consistent and senior focus on these matters. The Committee is now meeting regularly with a defined forward programme exploring a range of business priorities relating to resilience. The Committee is currently focused on applying our resilience framework to develop and embed the detailed and rigorous processes required to monitor and shape all aspects of Yorkshire Water's resilience.

Managing resilience is a continual and evolving process that touches on every part of our business and the services we provide. We provide details of how we're managing specific elements of resilience throughout this report and also in our Annual Report and Financial Statements (ARFS) which can be found at: yorkshirewater.com/reports

Just some examples of our latest progress in protecting and maturing our resilience include:

- Responding to the Covid-19 pandemic by maintaining our services through the initial disruption without the need to furlough staff or ask for financial support from the government. We are now developing our plans to fully recover our activities and we are working to support Yorkshire's long term economic recovery in alignment with other regional priorities such as improved flood resilience, carbon reduction and environmental management. We discuss this in more detail in the Chief Executive's Statement of the ARFS found at the link above.
- Introducing a new Organisational Resilience policy to support our approach. This has recently been formally approved and we are now focused on communicating this to our colleagues and supply partners. The policy will be soon available on the Yorkshire Water website.
- Piloting a globally cutting-edge approach to quantify and economically value the risks we face from climate change, applying our Six Capitals methodology and tools. We discuss this in more detail in the 'Disclosing our climate change risks and strategy' section of the ARFS at the link above.

Section 3

Independent third line assurance report



**Internal Audit
Compliance Assurance**

Internal Audit contacts

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CRSA

Audit ref: CS-LGL1/1045

Date: 26 March 2020

Overall assurance rating
Significant assurance

Data classification: Restricted

- Select individuals and groups given access on a need to know basis only.
- Store securely and control who has access.
- Encrypt and password protect or use Secure File Transfer when transferring externally.
- Obtain a signed non-disclosure agreement before sharing with third parties.

CRSA

Executive Summary

Overall report rating

This audit provides an overall assessment of **"Significant Assurance"**.

The overall assessment of 'Significant Assurance' is based on the completeness, accuracy and relevance of the evidence provided to demonstrate compliance with the requirements of the Control Risk Self-Assessment (CRSA).

Background

This audit forms part of the 2019/20 audit plan. The CRSA process is conducted annually to ensure that policies, procedures and legislation put in place are met. It also enables Yorkshire Water Services (YWS) and Kelda to have an awareness of where it is compliant and what needs to be done to ensure continued compliance. The CRSA process helps determine risks and the effectiveness of controls put in place to mitigate those risks. While conducting the CRSA is no-longer an obligation the process has been maintained to ensure best practice Risk Management.

Objectives and scope

This audit has considered the completeness, accuracy and relevance of the evidence provided to demonstrate compliance with the requirements of the CRSA.

This audit has considered whether:

- CRSA processes are effective in capturing new and amended legislative and regulatory requirements
- Management, Risk Champions and Legislation Champions are effectively briefed, and issued with appropriate guidance to ensure consistency of approach
- the self-assessments are signed off by an appropriate person
- there is an effective CRSA action planning and tracking process in place across the company
- appropriate second line checks are undertaken by the Risk & Compliance team to ensure there is effective and accurate reporting of compliance or non-compliance and to enable possible trends and issues to be highlighted and reported on in a timely manner.

Findings

Overall, the evidence provided to demonstrate compliance with the requirements of the CRSA has demonstrated significant compliance. The self-assessment process, monitoring of actions and appropriate reporting of CRSA outcomes by the Risk & Assurance Analyst are good; they are well documented and well controlled. However, the CRSA process is reliant on the accuracy of the legislation review at the start of the annual CRSA cycle. The CRSA process relies on a number of assumptions, in particular: Legislation Champions are actively keeping up to date with all relevant legislation as part of their day-to-day roles; Legislation Champions and management understand the relevant legislation and are correctly interpreting how it applies to their business area; and the relevant Tier 2 Managers and Directors have the correct information and understanding to give an accurate assessment of their business area's compliance with the legislation.

Whilst the CRSA process is largely well designed and implemented by the Risk & Compliance Team, it is reliant on Tier 2 Managers completing their self-assessments within the relevant timescales. By the due date for the 2019/20 self-assessment submission, only 64% of returns had been received

CRSA

(2018/19 cycle: 84%). Of those assessments returned only 52% were fully completed. However, in the week following the deadline, all but one return had been received which has enabled the Risk & Assurance Analyst to commence the analysis stage of the process. We acknowledge the pressures that the business is under currently, but CRSA is a key annual assurance process for the company as a whole. As such, and in the spirit of the company behaviours 'we own it' and 'we are better together', there is an onus on the T2s to promote its importance.

Currently, CRSA queries are directed to the Risk & Assurance Analyst. This creates a single point of failure should queries be missed or the Risk and Assurance Analyst not be available. In addition, Business Units rely heavily on their Risk Champion conducting the CRSA process. This creates a second single point of failure should the Risk Champion have an unplanned absence or move roles.

Conclusion

We have assigned an overall assurance rating of 'significant assurance' to this report. The self-assessment and reporting phases of the CRSA cycle are considered to be well controlled. Four medium priority actions and one low priority action have been agreed relating to the apparent lack of urgency by the business around returning the CRSA submissions and the need to strengthen the legislation review at the start of the CRSA cycle to ensure a more robust foundation to the rest of the process.

Appendix 1.

Financial auditor's opinion



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www.deloitte.co.uk

Independent Auditor's report to the Water Services Regulation Authority (the WSRA) and the Directors of Yorkshire Water Services Ltd

Report on the audit of the Regulatory Accounting Statements

Opinion

We have audited certain sections of Yorkshire Water Services Ltd's ("the Company") Annual Performance Report for the year ended 31 March 2020 ("the Regulatory Accounting Statements") which comprise:

- the regulatory financial reporting tables comprising the income statement (table 1A), the statement of comprehensive income (table 1B), the statement of financial position (table 1C), the statement of cash flows (table 1D), the net debt analysis (table 1E), Lines 1F.1 to 1F.9, Line 1F.13, Line 1F.19, Line 1F.21 to Line 1F.23 of the statement of financial flows (table 1F) and the related notes; and
- the regulatory price review and other segmental reporting tables comprising the segmental income statement (table 2A), the totex analysis for wholesale water and wastewater (table 2B), the operating cost analysis for retail (table 2C), the historical cost analysis of fixed assets for wholesale and retail (table 2D), the analysis of grants and contributions and land sales for wholesale (table 2E), the household water revenues by customer type (table 2F), the non-household water revenues by customer type (table 2G), the non-household wastewater revenues by customer type (table 2H), the revenue analysis & wholesale control reconciliation (table 2I), the infrastructure network reinforcement costs (table 2J), the infrastructure charges reconciliation (table 2K) and the related notes.

We have not audited Lines 1F.10 to 1F.12, 1F.14 to 1F.18, and 1F.20 of Table 1F, the Outcome performance table (tables 3A to 3S) and the additional regulatory information in tables 4A to 4W.

In our opinion, Yorkshire Water Services Ltd's Regulatory Accounting Statements within the Annual Performance Report have been prepared, in all material aspects, in accordance with Condition F, the Regulatory Accounting Guidelines issued by the WSRA (RAG 1.08, RAG 2.07, RAG 3.11, RAG 4.08 and RAG 5.07) and the accounting policies (including the Company's published accounting methodology statement(s), as defined in RAG 3.11, appendix 2), set out on page [74-75].

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)"), including ISA (UK) 800, and applicable law and having regard to the guidance contained in ICAEW Technical Release Tech 02/16 AAF 'Reporting to Regulators on Regulatory Accounts' issued by the Institute of Chartered Accountants in England & Wales.

Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the Regulatory Accounting Statements within the Annual Performance Report section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit, including the Financial Reporting Council's (FRC's) Ethical Standard as applied to public interest entities, and we have fulfilled our ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter – special purpose basis of preparation

We draw attention to the fact that the Regulatory Accounting Statements have been prepared in accordance with a special purpose framework, Condition F, the Regulatory Accounting Guidelines, the accounting policies (including the Company's published accounting methodology statement(s), as defined in RAG 3.11, appendix 2) set out in the statement of accounting policies and under the historical cost convention. The nature, form and content of the Regulatory Accounting Statements are determined by the WSRA. It is not appropriate for us to assess whether the nature of the information being reported upon is suitable or appropriate for the WSRA's purposes. Accordingly we make no such assessment. In addition, we are not required to assess whether the



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methods of cost allocation set out in the accounting methodology statement are appropriate to the circumstances of the Company or whether they meet the requirements of the WSRAs.

The Regulatory Accounting Statements are separate from the statutory financial statements of the Company and has not been prepared under the basis of International Financial Reporting Standards as adopted by the European Union (“IFRSs”). Financial information other than that prepared on the basis of IFRSs does not necessarily represent a true and fair view of the financial performance or financial position of a Company as shown in statutory financial statements prepared in accordance with the Companies Act 2006.

The Regulatory Accounting Statements on pages [60] to [84] have been drawn up in accordance with Regulatory Accounting Guidelines with a number of departures from IFRS. A summary of the effect of these departures from Generally Accepted Accounting Practice in the Company’s statutory financial statements is included in the tables within section 1.

The Regulatory Accounting Statements are prepared in accordance with a special purpose framework for the specific purpose as described in the Responsibilities for the audit of the Regulatory Accounting Statements section below. As a result, the Regulatory Accounting Statements may not be suitable for another purpose.

Our opinion is not modified in respect of this matter.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which ISAs (UK) require us to report to you where:

- the directors’ use of the going concern basis of accounting in the preparation of the Regulatory Accounting Statements is not appropriate; or
- the directors have not disclosed in the Regulatory Accounting Statements any identified material uncertainties that may cast significant doubt about the Company’s ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the Regulatory Accounting Statements are authorised for issue.

Other information

The other information comprises all of the information in the Annual Performance Report other than the Regulatory Accounting Statements and our auditors’ report thereon. The directors are responsible for the other information. Our opinion on the Regulatory Accounting Statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the Regulatory Accounting Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Regulatory Accounting Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the Regulatory Accounting Statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact.

We have nothing to report based on these responsibilities.

Responsibilities of the Directors for the Annual Performance Report

As explained more fully in the Statement of Directors’ Responsibilities set out on page [29], the directors are responsible for the preparation of the Annual Performance Report in accordance with Condition F, the Regulatory Accounting Guidelines issued by the WSRAs and the Company’s accounting policies (including the Company’s published accounting methodology statement(s), as defined in RAG 3.11, appendix 2).



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The directors are also responsible for such internal control as they determine is necessary to enable the preparation of the Annual Performance Report that is free from material misstatement, whether due to fraud or error.

In preparing the Annual Performance Report, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the Audit of the Regulatory Accounting Statements within the Annual Performance Report

Our objectives are to obtain reasonable assurance about whether the Regulatory Accounting Statements are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Regulatory Accounting Statements.

A further description of our responsibilities for the audit of the Regulatory Accounting Statements is located on the Financial Reporting Council's website at

<https://www.frc.org.uk/auditors/audit-assurance/auditor-s-responsibilities-for-the-audit-of-the-fi/description-of-the-auditor%E2%80%99s-responsibilities-for>. This description forms part of our auditors' report.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on other legal and regulatory requirements

Opinion on other matters prescribed by Condition F

Under the terms of our contract we have assumed responsibility to provide those additional opinions required by Condition F in relation to the accounting records. In our opinion:

- proper accounting records have been kept by the appointee as required by Condition F; and
- the Regulatory Accounting Statements are in agreement with the accounting records and returns retained for the purpose of preparing the Annual Performance Report.

Use of this report

This report is made, on terms that have been agreed, solely to the Company and the WSRA in order to meet the requirements of Condition F of the Instrument of Appointment granted by the Secretary of State for the Environment to the Company as a water and sewage undertaker under the Water Industry Act 1991 ("Condition F"). Our audit work has been undertaken so that we might state to the Company and the WSRA those matters that we have agreed to state to them in our report, in order (a) to assist the Company to meet its obligation under Condition F to procure such a report and (b) to facilitate the carrying out by the WSRA of its regulatory functions, and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the WSRA, for our audit work, for this report or for the opinions we have formed.

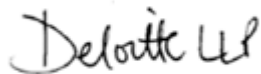
Our opinion on the Regulatory Accounting Statements is separate from our opinion on the statutory financial statements of the Company for the year ended 31 March 2020 on which we reported on 15 July 2020, which are prepared for a different purpose. Our audit report in relation to the statutory financial statements of the Company (our "Statutory audit") was made solely to the Company's members, as a body, in accordance with

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Chapter 3 of Part 16 of the Companies Act 2006. Our Statutory audit work was undertaken so that we might state to the Company's members those matters we are required to state to them in a statutory audit report and for no other purpose. In these circumstances, to the fullest extent permitted by law, we do not accept or assume responsibility for any other purpose or to any other person to whom our Statutory audit report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.



Deloitte LLP
Leeds, United Kingdom
4 July 2020

Appendix 2.

Technical assurance statement



**YORKSHIRE WATER SERVICES
ANNUAL PERFORMANCE REPORT 2020
TECHNICAL ASSURANCE REPORT**





APR20 Assurance Report and Statement

Yorkshire Water Services
Annual Performance Report 2020

Technical Assurance Report

Document Control

Title: YWS APR20 Assurance Report and Statement

Project: 672454CH/APR20

Version	Issued to	Date	Prepared by	Checked by	Approved by
1.0	YWS – Draft for inclusion in Board Audit Committee papers	09 June 2020	C Morley	C Roxburgh	C Roxburgh
2.0	YWS – Final version for APR submission	25 June 2020	C Morley	C Roxburgh	C Roxburgh

Halcrow Management Sciences Limited is part of Jacobs.

Halcrow Management Sciences Limited has prepared this report in accordance with the instructions of Yorkshire Water Services for their sole and specific use. In these circumstances and to the fullest extent permitted by law, we do not accept or assume responsibility for others who use, for whatever purpose, any information contained herein.

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APR20 Assurance Report and Statement



Yorkshire Water Services
Annual Performance Report 2020

Technical Assurance Report

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1. Introduction

Halcrow Management Sciences (HMS) was appointed in January 2016 by Yorkshire Water (YWS) to provide external technical assurance of their regulatory and public domain performance reports.

This Statement covers our work in providing independent technical assurance on aspects of YWS' Annual Performance Report 2020.

HMS is a Jacobs Company, but it operates independently to ensure confidentiality and to avoid perceived or potential conflicts of interest. Neither HMS nor Jacobs has other material interests or contracts with YWS or the Kelda Group which would impede an impartial opinion.

All water companies are required by Ofwat to submit an Annual Performance Report to demonstrate compliance with their separate price controls. This includes specific information on progress on delivery of customer outcomes, service levels, transparent cost information and financial performance.

The reports are required to be accessible to all stakeholders so that they show how the sector is delivering for its customers, environment and wider society and in this regard, Ofwat has provided a series of standard templates and accompanying guidance for the performance commitments and incentive mechanisms, for data on operational and capital activities and for other metrics relevant to their comparative analyses.

Each company's Board is accountable for the quality and transparency of the information they provide and for implementing the assurance procedures required to meet all their legal and regulatory obligations.

2. Role and Scope

HMS has been appointed to provide an independent review of YWS' compliance and governance processes covering the key technical information presented in or supporting their regulatory performance and public domain information reports.

The scope of our APR20 work has been determined by YWS and has included:

- Performance metrics on Tables: 3A, 3B, 3D and 3S.
- Non-financial metrics on Tables: 4A, 4D&4E (unit cost information), 4P, 4Q, 4R, 4S, 4T, 4U
- Bioresources Table
- Capex components of Tables: 2K, 4D, 4E, 4J, 4K, 4L, 4M
- Opex on Table 4O
- Household and Non-Household Revenue Tables: 2F, 2G, 2H

Generally, our scope covers:

- General information
- Customer service information
- Operational activities and performance in AMP6 against PR14 and business targets
- Networks and treatment data
- Capital expenditure allocations to revenue controls and business units, to investment categories and to measures of success
- Other miscellaneous metrics

The guidance for completing this information is predominantly produced by Ofwat. The following hierarchy is deemed to apply:

- Relevant Regulatory Accounting Guidelines: version 4.08
- APR20 table templates and guidance (e.g. Ofwat Information Notice IN20/03 April 2020)
- Performance commitments and definitions agreed with Ofwat for the AMP6 period, or as subsequently superseded
- Ofwat's most recent 'June Return' guidance (2012)
- YWS procedures, definitions and assumptions which should where relevant, be compliant with the guidance hierarchy above
- Reasonable and appropriate judgement

APR20 Assurance Report and Statement

3. Approach

3.1 Process

Our approach is summarised in the following steps:

1. Agree Scope
2. Produce and agree Assurance Plan
3. Review preliminary topic information
4. Issue Audit Notification Forms – (Agenda for Audit)
5. Undertake Audits via MS Teams – a specific requirement for APR20 due to COVID-19 travel restrictions and HM Government social distancing guidelines
6. Provide Initial Feedback
7. Summarise Audit Findings
8. Close out material issues – through iteration between auditor and YWS specialists, escalating through both organisations where appropriate to agree, as appropriate: adjustment to reported information; future action plans; or additional statements which provide adequate transparency of the issue.
9. Presentations and preparation of Reports and Assurance Statements.

3.2 Assessment

Figure 1 - RAG Criteria used in HMS Assessments for reporting compliance against the guidelines

Key to Audit RAG status	
R	Material concerns over the validity of the reported information
A	Potential material concerns over reported information
B	Content with reported information but supporting data needs completion/ noting/or future improvements required
G	No material exceptions and compliant with the requirements

Figure 2 - Example of Tests applied to APR Data and Performance Commitment information

Criteria	RAG	Assessment
Independent Review of Performance and Reporting	Green	Performance good. Reporting process well managed
Methodology	Green	Methodology consistent with current process, control points identified and understood
Assumptions	Green	Assumptions reasonable and appropriately applied
Source Data	Green	Source data is clearly identified, complete beyond material concern, well managed through to accurate systems input
Clarity of Audit Trails	Green	Detailed and comprehensive audit trail to all numbers available
Confidence Grades	Green	Confidence grade appropriate and rationale clearly documented
Governance	Green	Responsibilities for integrity of data and commentary clearly defined. Good evidence of engagement and of final sign-off.

PC Criteria	RAG	Assessment
PC Performance Data	Green	Performance figures are accurately carried forward to the Performance Commitment and correctly calculated in accordance with Ofwat's final PR14 methodology.

4. Findings

Below we highlight the key findings and exceptions:

- The reported data is materially compliant with Ofwat's Reporting Requirements (Regulatory Accounting Guidelines, APR20 table guidance, 2014 Final Determination or superseding definitions, or June Return definitions, as appropriate)
- The tables, commentaries and statements provide a fair and balanced overview of the Company's 2019/20 circumstances and performance
- Procedures and assumptions are generally reasonable and well embedded, well documented and appropriately implemented
- YWS staff were well prepared for the audits, knowledgeable, helpful and receptive
- There is better evidence of senior management engagement and of improved governance being applied. Continued improvements in these regards would benefit the assurance process

Summary of Issues remaining at audit closure		RAG Status		
Issue Group	Issue category	R	A	B
1	Minor concerns over data accuracy or forecasts	-	-	3
2	Methodologies – complex and/or improvements recommended	-	-	14
3	Confidence Grades – improvements recommended	-	-	3
4	Poor evidence of QA checks, document control, sign-off	-	-	5
5	Data not confirmed as final	-	-	1
6	Enhancements to APR commentary recommended	-	-	2
7	Assumptions – amendments/improvements suggested	-	-	1
8	Ambiguity/change in guidance	-	-	2
9	Poor source data quality and/or handling improvements required	-	-	5
10	Acknowledging performance issues	-	-	8
Totals		0	0	44

RED issues

There are no RED status issues remaining.

AMBER issues

There are no AMBER status issues remaining.

BLUE issues

Whilst a substantial number of issues found during the audit process have been identified and satisfactorily resolved, there remain several additional areas where further improvements have been recommended to YWS. This particularly includes: improvements to the quality and handling of some source data, general improvements to YWS quality assurance and governance processes, and improvements to the methodologies employed. However, these are not deemed to be sufficiently material to be escalated into this report.

Independent Technical Assurance Statement

Halcrow Management Sciences has been appointed by Yorkshire Water Services to provide independent technical assurance of their regulatory submissions. Our work for the Annual Performance Report 2020 has included:

- Performance metrics on Tables: 3A, 3B, 3D and 3S.
- Non-financial metrics on Tables: 4A, 4D&4E (unit cost information), 4P, 4Q, 4R, 4S, 4T, 4U
- Bioresources Table
- Capex components of Tables: 2K, 4D, 4E, 4J, 4K, 4L, 4M
- Opex on Table 4O
- Household and Non-Household Revenue Tables: 2F, 2G, 2H

Through a series of meetings and information exchanges, we have reviewed and tested the methodologies, processes and supporting evidence on which the data and statements in the Annual Performance Report 2020 are based, and we have considered the material accuracy of these statements, the performance data presented and the conclusions drawn by Yorkshire Water Services.

Based upon our assessment of Yorkshire Water Services' performance and the supporting information we have reviewed, with only minor and non-financially material exception, we conclude that:

- *the statements of non-financial numeric measures are consistent with our assurance of the supporting information, which is appropriately robust;*
- *the Company's explanations of their activities and performance are reasonably based.*

Overall, the information provided in the Annual Performance Report 2020 provides a fair, balanced and understandable summary of the Company's 2019/20 circumstances and performance.

C Roxburgh

Lead Auditor
Halcrow Management Sciences Limited

July 2020

Appendix 3. Accounting Separation Methodology Statement

Introduction

The economic regulator of England and Wales (Ofwat) requires water companies to publish an Annual Performance Report (APR). The objective of the APR is to provide clear information regarding delivery of customer outcomes, performance commitments and financial performance. This statement provides an overview of the processes, systems and assurance that Yorkshire Water uses to ensure the data used to complete the financial tables in the APR is robust and meets all of Ofwat's requirements. This document includes the enhancements made to processes this year and details the methods of the allocation of totex costs between price controls, as well as the allocations for the upstream services described in [Section 8](#) of the APR. The contents of this document are intended to help stakeholders understand the robustness and method of producing our accounting statements, with particular focus in Price Control Units (Annual Performance Report [Section 8](#)) and Wholestream upstream services (Annual Performance Report [Section 8](#)).

In accordance with RAG 3.11, the document is separated into the following three sections:

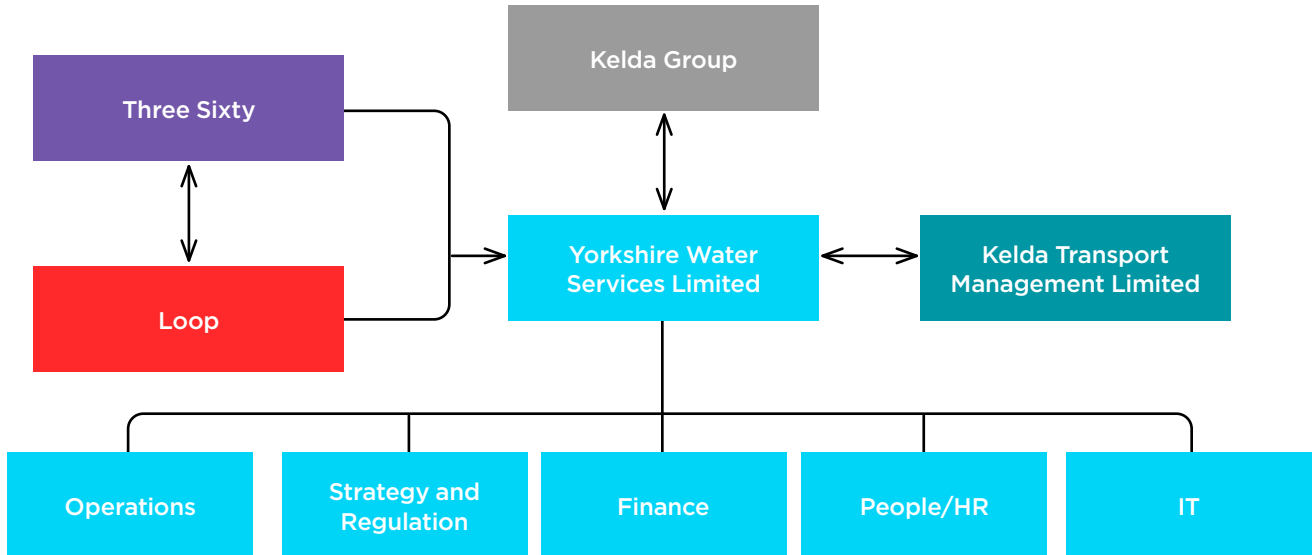
- High Level Overview
- Price Controls Units
- Wholestream Upstream Services.

High Level Overview

To explain the process for producing the disaggregated financial cost and asset data, the company structure, financial systems, and accounting standards, need to be understood. This methodology statement includes information on:

- Business structure
- Outsourced functions
- Regulatory requirements
- Governance
- Systems and processes.

Business Structure



Yorkshire Water Service Limited is the legal entity that includes all appointed regulated costs within the business. The company is managed by five senior executives managing the largest business areas, which are supported by two operational sister companies.

These are our three sister companies

- Loop Customer Management Limited (Loop) is a sister company to Yorkshire Water that manages most retail elements of customer service (excluding meter reading) and some wholesale customer service activities. Loop provides services to Yorkshire Water for domestic Retail services and wholesale customer service and to Three Sixty for non-household (NHH) customers.
- Kelda Transport Management Limited (KTML) is a sister company to Yorkshire Water which manages the heavy goods vehicles for the wholesale business, which is mainly the liquid sludge transport vehicles. KTML provides this service to Yorkshire Water at cost in the form of a management fee charged throughout the year.
- Three Sixty Water Limited – offered water and wastewater retail and added value services to non-household customers across the UK up to 1 October 2019. The non-household retail business was sold to Business Stream on this date. Three Sixty continues to provide services to Business Stream under a transition services agreement.

These are our five major Business areas

- Operations includes the Water, Waste and Customer Experience areas of the business. A Chief Operations Officer (COO) leads a team which includes: Director of Water Service Delivery, Director of Wastewater Service Delivery, Director of Customer Experience, and the Heads of Asset Management and Programme Delivery.
- Strategy and Regulation incorporates the regulatory team that undertakes price submissions, tariff setting and both asset and company strategy teams.
- Finance includes procurement, with other areas of finance such as tax and treasury within Kelda Group, and recharged across.
- People/HR includes facilities as well as Human Resources.
- IT includes enterprise change, data science, and IT.

Outsourced functions

A significant proportion of Retail activities have been performed by Loop and Three Sixty, which are both UK based companies. All the costs associated with these contracts are charged to Yorkshire Water via an annual contract fee. Yorkshire Water, Loop and Three Sixty companies are wholly owned subsidiaries of Kelda Group Limited. The non-household retail business was sold to Business Stream 1 October 2019, with the company continuing to support some of the operational functions to Business Stream.

For some customers, billing and cash collection is performed by other water companies, typically on the boundary of the Yorkshire Water region where one company provides water services and another provides sewage services. Yorkshire Water also has arrangements with a number of local authorities for them to collect water charges on behalf of Yorkshire Water.

The table below shows the major activities that were outsourced to third parties by Yorkshire Water and Loop for the year ended 31 March 2020. Yorkshire Water insourced the non-civils element of below ground sewer network repair during the year, and continues to outsource civils work.

Outsourcing company	Function outsourced	Outsourced to
Loop	Cross water boundary billing, payment handling and debt management	Other water companies
Loop	Some billing, payment handling, and debt management	UK based local authorities and housing associations
Yorkshire Water	Customer service, billing, payment handling and debt management – domestic customers only	Loop
Yorkshire Water	Customer service, billing, payment handling and debt management	Three Sixty
Yorkshire Water	Capital delivery	UK based contract partners
Yorkshire Water	Below ground network repair	UK based contract partners
Yorkshire Water	Operator License and the servicing costs for the Heavy Goods Vehicles (HGV) and plant	Kelda Transport
Yorkshire Water	Finance – statutory and management accounts, tax and treasury, Internal audit	Kelda

Yorkshire Water receives services from associates within the Kelda Group. These charges are for corporate functions including areas such as Group Finance and Internal Audit. Yorkshire Water also charges Kelda Group/associates for any support service activity. The cost and revenues associated with this are allocated to non-appointed activities and follow RAG 5 guidelines. All transactions that have occurred in the year between the appointed business (Yorkshire Water) and associated companies are disclosed in the [Appendix 4: Disclosures](#).

Regulatory Requirements

The data collated and represented in the tables within the APR follow Ofwat's Regulatory Accounting Guidelines (RAG's). The tables show the costs, revenues, assets and liabilities in a variety of formats and levels of granularity, for the different activities to deliver the appointed services provided by Yorkshire Water. There are four binding price controls; water wholesale, wastewater wholesale, retail household and retail non-household. Detailed below is Yorkshire Water's approach to applying these guidelines.

The information presented in this document is limited to Yorkshire Water and when appropriate the ultimate parent company Kelda Holdings Limited.

This report has been prepared in accordance with the following documents published by Ofwat:

- Information Notice (IN) 19/03 'Regulatory Accounting Guidelines 2018/2019' and IN 19/06 'Expectations for monopoly company annual performance reporting 2018/2019'
- RAG changes following the January 2019 consultation
- 2019 Annual Performance Report tables
- RAG 1.08 – Principles and guidelines for regulatory reporting under the new 'UK GAAP' regime
- RAG 2.07 – Guideline for the classification of costs across the price controls
- RAG 3.11 – Guideline for the format and disclosures for the annual performance report
- RAG 4.08 – Guideline for the table definitions for the annual performance report (inclusive of appendices)
- RAG 5.07 – Guideline for transfer pricing.

Within RAG 2.07, Ofwat has set out cost allocation principles that should underpin the attribution and allocation of costs within the APR. Detailed below are the principles applied, together with Yorkshire Water's response on the approach that has been taken and applied. The Ofwat principles are shown in italics on the following pages.

Ofwat principle

Transparency: *The cost attribution and allocation methods applied to allocate costs within the Annual Performance Report need to be transparent. This means that the costs and revenues apportioned to each service or segment should be clearly identifiable. The cost and revenue drivers used within the system should also be clearly explained to enable robust assurance against this guidance.*

Yorkshire Water response

- Costs are allocated in a clearly transparent way via cost centres which map to the regulatory definitions within the APR. The cost centres are clearly identified within the company's accounting system (SAP) allocating them directly to the activity of work carried out.
- We seek to minimise manual adjustments to information in SAP. Where overhead costs cannot be attributed to regulatory specific cost centres at source, the allocations are made using Ofwat guidance and reviewed in detail and agreed by the relevant finance and operational experts. However, throughout the several assurance processes, once the regulatory accounts are completed, some manual adjustments are inevitable to ensure that any changes highlighted through this process can be captured and then included in the final financials. However, these changes then go into a lesson learnt process to ensure that they can be provided for through the system in future years.
- Cost drivers used are consistent with Ofwat guidance and are set out in the Price Control and Upstream services sections.

Ofwat principle

Causality: *Cost causality requires that costs (and revenues) are attributed or allocated to those activities and services that cause the cost (or revenue) to be incurred. This requires that the attribution or allocation of costs and revenues to activities and services should be performed at as granular a level as possible. Allocating costs in relation to the way resources are consumed provides a means of building up service and product costs. This approach views a business as a series of activities, each of which consumes resources and, therefore, generates costs. An activity based approach should result in the majority of the total costs being attributed or allocated on a meaningful basis. All operating and capital costs must ultimately be attributed or allocated.*

Yorkshire Water response

- Cost centres are aligned to the relevant regulatory service allowing reports to be run in the required format for the tables in accordance with Ofwat's Regulatory Accounting Guidelines. Checks are made to ensure all cost centres are included and that the balances reconcile to the financial statements.
- Where possible, costs are allocated directly to service (e.g. Water Treatment). If allocation of costs is required, because the cost relates to more than one service, the allocation methods used are chosen from the suggested methods in the Ofwat guidance. Further details are provided in the Price Control and Upstream sections.
- The documented procedures and resulting reported costs attributed to price controls and upstream services are then reviewed by the appropriate finance expert and approved by the senior manager in that area.

Ofwat principle

Non-discrimination: Companies should ensure that no undue preference or discrimination is shown by water undertakers and sewerage undertakers in relation to the provision of services by themselves or other service providers (this is consistent with the new duty in Section 2 of the Water Industry Act 1991 that has been (or, in relation to Welsh water companies, will be) inserted by section 23 of the Water Act 2014). Therefore, the attribution or allocation of costs and revenues should not favour any price control unit or appointed/non-appointed business and it should be possible to demonstrate that internal transfer charges are consistent with the prices charged to external third parties.

Yorkshire Water response

- The attribution of costs and revenues are allocated consistently across all business units and price controls, in compliance with RAG 5.07 transfer pricing guidance.

Ofwat principle

No cross subsidy between price controls: Following the introduction of separate binding price controls at the 2014 price review, companies cannot transfer costs between the PR14 price control units in setting prices and preparing the APR. The revenue allowance for each price control is determined by the costs specific to that particular price control. Rules on transfer pricing are detailed in RAG 5.

Yorkshire Water response

- Costs are allocated based on the activity and services that cause that cost (or revenue) to be incurred.
- Costs are allocated consistently across all business units and price controls in compliance with RAG5 transfer pricing guidance.
- Within the internal governance of preparing these statements there is a high degree of segregation of duties.

Ofwat principle

Objectivity: The cost and revenue attribution criteria need to be objective and should not intend to benefit any price control unit or appointed/non-appointed business. Cost allocation must be fair, reasonable and consistent.

Yorkshire Water response

- To ensure no favour is given to any business unit, costs are directly allocated where possible and where this is not possible an objective measure (in line with Ofwat's principles) is used to allocate costs.
- Objective cost allocation measures used are measures which are reported internally or externally, e.g. number of customer contacts, number of FTEs and are in some cases subject to external assurance.
- The attribution of costs and revenues are allocated consistently across all business units, price controls and non-appointed in compliance with RAG 5 transfer pricing guidance.

Ofwat principle

Consistency: Costs should be allocated consistently by each company from year to year to ensure meaningful comparison of information across the sector and over time; that regulatory incentives from comparative analysis apply fairly across companies; and to enable monitoring of companies' performance against price control assumptions. Any changes to the attribution and allocation methodology from year to year should be clearly justified and documented in the Accounting Separation Methodology Statement.

Yorkshire Water response

- The tables are prepared in a consistent manner each year in order to enable meaningful comparison of information over time. The underlying company structure and SAP financial systems have remained the same for many years. However, regulatory guidance is refined annually and opportunities for improvements arise. Where these changes are necessary to improve accuracy and compliance, changes are made and detailed within this statement in the changes to methodology section.
- Any changes as detailed in Information Notices or company specific letters issued by Ofwat are implemented.

Ofwat principle

Principal use: Where possible, capital expenditures and associated depreciation should be directly attributed to one of the price control units. Where this is not possible as the asset is used by more than one service, it should be reported in the service of principal use with recharges made to the other services that use the asset reflecting the proportion of the asset used by the other services.

Yorkshire Water response

- Assets, where possible, are allocated to the service in which they are required for use and any associated operating costs and depreciation will be charged to that service.
- Assets which are used by more than one service area are allocated to a single business unit of principal use and then recharged to the relevant business unit. Included in this category are a number of general and support assets that do not have a single principal use service, for example the financial system and the IT infrastructure. These assets have been allocated to wastewater Network Plus and then recharged to other business units using an appropriate cost driver. The recharges are included in APR [Table 2A](#) and are detailed on the next page in the capital recharge table:

Asset category	Recharge basis	Total recharge (£'m)	Water resources (£'m)	Water Network Plus (£'m)	Wastewater Network Plus (£'m)	Bioresources (£'m)	Retail household (£'m)	Retail Non-household (£'m)
Information technology	FTE	18.255	0.351	7.354	7.945	1.161	1.444	0.000
General offices	FTE	1.693	0.033	0.695	0.752	0.110	0.103	0.000
Operational assets not directly allocated	FTE	2.251	0.047	0.981	1.061	0.155	0.008	0.000
Research and Development	FTE	0.460	0.010	0.201	0.217	0.032	0.001	0.000
Regulation	FTE	3.106	0.059	1.242	1.342	0.196	0.266	0.000
Scientific services	FTE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Stores/Depots	FTE	0.106	0.002	0.046	0.050	0.007	0.000	0.000
Telemetry	FTE	0.929	0.020	0.406	0.440	0.064	0.000	0.000
Vehicles	FTE	2.650	0.050	1.057	1.142	0.167	0.233	0.000

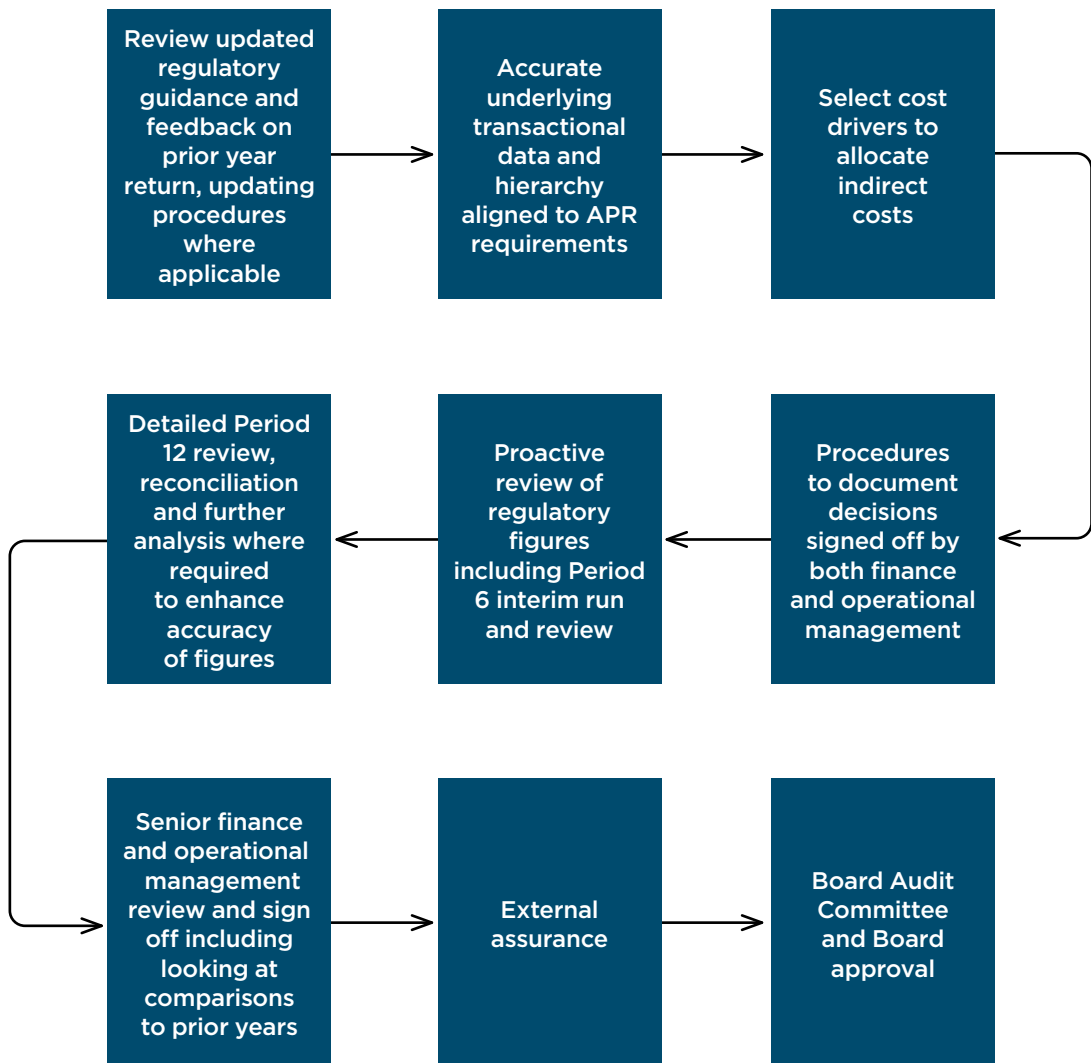
- Whilst the assets follow principle use, with depreciation recharged to other price controls, our Management and General support capital programme expenditure programme continues to be proportionately allocated to the Water and Wastewater programmes in line with the price control units section on page 317. This seems practical as the alternative would be to capitalise each asset separately and hence we apportion expenditure using the same approach to ensure consistency.

Governance

The APR involves experts from across the business to pull together the required financial and regulatory information. The key teams involved are as follows:

- Finance and Regulation
- Operational management at both senior and local level
- Board Audit Committee
- Yorkshire Water Board.

An overview of the process is set out below.



Roles and responsibilities

Regulation

- Understand Ofwat guidance.
- Agree levels of assurance and process.
- Set assurance timetable in line with Board dates.
- Co-ordinate the collation of the APR document and supplementary documents.
- Publish and submit all regulatory documents.

Finance

- Understand Ofwat guidance and ensure procedures align with the requirements and that those procedures are approved by operational experts.
- Review of interim position of elements or regulatory accounts to assist operational teams to make decisions for investment and/or efficiency.
- Management of underlying financial transactions, cost centres and cost drivers ensuring all values reconcile and all costs are included within the regulatory accounts.
- A dedicated virtual finance team to form APR finance working group which meets on a weekly basis to ensure compliance with RAGs and how to generate these changes through the corporate system.
- Review and sign off cost drivers with Operational Managers as part of the annual business planning process but also as required if there are relevant changes.
- Attendance at the regulatory accounting working group to ensure compliance and informed on the latest regulatory accounting guidelines.
- Consolidate and report annual performance tables including methodology statement.

Senior and Operational Managers

- Review and approve procedure notes.
- Review and confirm the data has been produced in a manner consistent with the procedures.
- Review and confirm the data meets the relevant reporting requirements.
- Review and confirm the data has had a sense check by the Data Manager.
- Understand and explain any significant changes or trends in the data.

Audit & Assurance

Once completed, the Annual Performance Report with its data is subject to an external financial audit and external assurance. The outcomes of these are stated in the assurance section of this report.

Board review

Board Audit Committee and Yorkshire Water Board review and sign-off the audited report before publication.

Systems and processes

Yorkshire Water uses SAP as the corporate financial system, and is the only system used for producing the regulatory accounts. A new version of SAP has been introduced during the year and a consistent approach for cost assessments and allocations have been used. Cost centres have been setup for all sites and network locations, and where possible, costs are coded directly to sites as purchase orders are raised. Instead of using an external reporting tool to disaggregate the data, the indirect cost assessment facilities in SAP are used to allocate costs that cannot be directly coded to an upstream service or price control.

An example of indirect costs would be the opex costs of our IT infrastructure which need to be apportioned across our cost base. By using the cost assessment process on SAP directly to site and regulatory cost centres, it gives the advantage of providing operational and financial users differing views of the same data set. The management, statutory and regulatory accounts are extracted from the same source data giving 'one version of the truth'.

The APR financial tables have been produced within SAP from cost capture information that has been set to include price control data wherever possible. The current operating structure and management accounting hierarchy within Yorkshire Water have been deliberately structured in similar lines to the price controls. This minimises further data processing and disaggregation into Ofwat's price controls, with operational managers managing direct costs and budgets that are close to Ofwat's Price Controls.

Price Control Units

The principles and guidance set out in RAG 4.08 have been applied in the preparation and completion of the regulatory accounting tables.

There are four price controls specified by Ofwat (water wholesale, wastewater wholesale, retail household, retail non-household) over which all costs in Yorkshire Water appointed business must be allocated and presented for the purposes of Ofwat regulatory reporting.

The methodology for allocation of total operating expenditure (totex) across price controls is summarised below.

Capital expenditure

Capital expenditure data is managed and maintained on the corporate financial system (SAP). Separate projects are raised for each discrete work instruction, and each project is allocated investment categories which are attributes that describe the regulatory reason and the price control and wholesale upstream service.

Where a project is given more than one regulatory driver for the investment, two or more investment categories with appropriate percentages are used to calculate the allocation to each price control and upstream service. All project investment category allocations are reviewed by the regulatory programme assurance team (within the Regulation department), and system controls prevent any project going live until these positions have been assured.

Monthly, this expenditure is reported to Board Investment Committee (BIC), which holds delegated authority from the Yorkshire Water Board to actively manage the capital programme and the associated regulatory and customer performance commitments. This includes individual approvals of projects greater than £1m.

The investment categorisation used for price reviews, cost assessments and annual reporting has been in place for many years, and is reviewed for alignment with the latest regulatory guidance. An analysis and explanation of capital expenditure by price control and variance from the previous year are detailed in Section 7, [Table 4D](#) and [Table 4E](#).

Operating expenditure

Operating expenditure data is managed and maintained on the corporate financial system (SAP). On a monthly basis appointed operating costs are reported to the Yorkshire Water Board.

For annual reporting purposes, all information is prepared in SAP in accordance with FRS 102. Once these values have been reviewed and approved by senior managers, the cost assessment functionality within SAP is used to allocate overheads into the site and regulatory price control cost centre hierarchy, including any adjustments required by RAG 1.08. Further details of the methodology for the allocation of costs over price controls is detailed in Tables 1 to 6 in this methodology statement.

An analysis and explanation of operating expenditure by price control and variance from the previous year are detailed in Section 8, [Table 2B](#).

The RAG 4.08 principles and guidance have been reviewed and applied when completing the tables within the APR.

Yorkshire Water do not have any sites that cover more than one price control. However, power costs are disaggregated by upstream service.

Any other power costs that are not electricity or associated costs such as carbon reduction commitment charge are allocated directly to the correct service cost centre in SAP, in accordance to RAG 3.11.

Methods and cost drivers used to calculate allocations between price control units

The following tables provide details on how the costs are allocated across price controls:

Table 1 – Wholesale/retail allocations

Activity	Company	2019/2020	2019/2020	2018/2019
Wholesale/ Retail		Cost Driver	Why considered appropriate	Cost Driver
Customer Services – Billing	Loop	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Customer Services – Payment handling	Loop	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Customer Services – Charitable trust donations	YWSL	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Customer Services – Vulnerable customer schemes	Loop	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Customer Services Non-network customer enquiries and complaints	Loop/YW	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Customer Services – Network customer enquiries and complaints	YW	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Customer Services – Investigatory visits/ first visit to customer	YW	Where the cause of investigation is not a network issue it is charged to retail. Where the cause of the investigation is a network issue it is charged to wholesale	Per Ofwat RAG 2.07	Where the cause of investigation is not a network issue it is charged to retail. Where the cause of the investigation is a network issue it is charged to wholesale.
Customer Services Other customer services	YW	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Debt management	Loop	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Doubtful debts	YW	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail
Meter reading	YW	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail

Table 1 – Wholesale/retail allocations (continued)

Activity	Company	2019/2020	2019/2020	2018/2019
Wholesale/ Retail		Cost Driver	Why considered appropriate	Cost Driver
Services to developers	YW	Providing developer information and administration for new connections in retail, all other services within wholesale	Per Ofwat RAG 2.07	Providing information and administration for new connections in retail, all other services within wholesale
Disconnections and reconnections	YW	Administration and decision retail, physical activity is within wholesale	Per Ofwat RAG 2.07	Administration and decision retail, physical activity is within wholesale
Demand side water initiatives	YW	All expenditure is retail except where expenditure is to meet wholesale outcomes	Per Ofwat RAG 2.07	All expenditure is retail except where expenditure is to meet wholesale outcomes
Customer side leaks	YW	All expenditure and income is retail except where expenditure is to meet wholesale outcomes	Per Ofwat RAG 2.07	All expenditure and income is retail except where expenditure is to meet wholesale outcomes
Other operating expenditure (OOE)	YW	Other direct costs which are retail in nature are allocated direct to retail (i.e. those not covered under the other headings)	Per Ofwat RAG 2.07	Other direct costs which are retail in nature are allocated direct to retail (i.e. those not covered under the other headings)
OOE – General and Support – IT costs	YW	Split based on headcount – proxy to number of computers	Per Ofwat RAG 2.07 allows the choice of an appropriate cost driver	Split based on headcount – proxy to number of computers
OOE – General and Support – Finance, HR, payroll, general management	YW	HR on headcount, everything else FTEs	HR on headcount, everything else FTEs. Timesheets are not available so Ofwat's second preference has been used	HR on headcount, everything else FTEs
OOE – Executive Directors remuneration	YW	FTEs	Timesheets are not available so Ofwat's second preference has been used	FTEs

Table 1 – Wholesale/retail allocations (continued)

Activity	Company	2019/2020	2019/2020	2018/2019
Wholesale/ Retail		Cost Driver	Why considered appropriate	Cost Driver
OOE – Non-Executive Director's remuneration	YW	FTEs	Timesheets are not available so Ofwat's second preference has been used	FTEs
OOE – General and support – Facilities, building/grounds maintenance	YW	FTE (Inc. office based contractors) and grounds maintenance is directly allocated to the associated site	Per Ofwat RAG 2.07	FTE (Inc. office based contractors) and grounds maintenance is directly allocated to the associated site
OOE – General and support – insurance	YW	FTEs for staff related insurance, GMA values for asset insurance	Per Ofwat RAG 2.07	FTEs for staff related insurance, GMA values for asset insurance
OOE – Other general and support costs	YW	FTEs	Timesheets are not available so Ofwat's second preference has been used	FTEs
OOE – Regulation Licence costs	YW	One ninth of Regulation staff and license costs are allocated to Retail and the remainder to Wholesale. The direct costs are used to proportion amongst upstream services	Per Ofwat RAG 2.07	One ninth of Regulation staff and license costs are allocated to Retail and the remainder to Wholesale
OOE – Local Authority Rates	YW	Rateable Asset Value	Per Ofwat RAG 2.07	Rateable Asset Value
Third party services, e.g. rechargeable works	YW	All Wholesale	Per Ofwat RAG 2.07	All Wholesale
Depreciation	YW	Assets allocated per principle use, partly in retail	Per Ofwat RAG 2.07	Assets allocated per principle use, partly in retail

Table 2 – Retail household/non-household allocations

Activity	Company	2019/2020	2019/2020	2018/2019
Retail household/ non-household		Cost Driver	Why considered appropriate	Cost Driver
Customer Services – Billing	Loop	Number of bills	Per Ofwat RAG 2.07	Number of bills
Customer Services – Payment handling	Loop	Number of payments	Per Ofwat RAG 2.07	Number of payments
Customer Services – Charitable trust donations	YWSL	N/A	N/A	N/A
Customer Services – Vulnerable customer schemes	Loop	100% household	Per Ofwat RAG 2.07	100% household
Customer Services – Non-network customer enquiries and complaints	YW/Loop	Volume of contacts	Timesheets are not available so Ofwat's second preference has been used	Volume of contacts
Customer Services – Network customer enquiries and complaints	YW/Loop	Volume of contacts	Timesheets are not available so Ofwat's second preference has been used	Volume of contacts
Customer Services – Investigatory visits/ first visit to customer	YW	Volume of visits	Timesheets are not available so Ofwat's second preference has been used	Volume of visits
Customer Services Other customer services	YW/Loop	Customer numbers	Timesheets are not available so Ofwat's second preference has been used	Customer numbers
Debt management	YW/Loop	Debt outstanding for more than 30 days	Per Ofwat RAG 2.07	Debt outstanding for more than 30 days
Doubtful debts	YW	Direct allocation	Per Ofwat RAG 2.07	Direct allocation
Meter reading	YW	Number of meter reads	Timesheets are not available so Ofwat's second preference has been used	Number of meter reads

Table 2 – Retail household/non-household allocations (continued)

Activity	Company	2019/2020	2019/2020	2018/2019
Retail household/ non-household		Cost Driver	Why considered appropriate	Cost Driver
Services to developers	YW	100% non-household	Per Ofwat RAG 2.07	100% non-household
OOE – Disconnections and reconnections	YW/Loop	100% non-household	Per Ofwat RAG 2.07	100% non-household
OOE – Demand side water efficiency initiatives	YW	Direct allocation	Per Ofwat RAG 2.07	Direct allocation
OOE – Customer side leaks	YW	Direct allocation	Per Ofwat RAG 2.07	Direct allocation
OOE – Other direct costs	YW/Loop	Appropriate cost driver (based on nature of cost)	Per Ofwat RAG 2.07	Appropriate cost driver (based on nature of cost)
OOE – General and Support – IT	YW	Headcount used to allocate to retail activity then activity cost driver used	Ofwat RAG 2.05 allows the choice of an appropriate cost driver	Headcount used to allocate to retail activity then activity cost driver used
OOE – General and Support – IT	Loop	Customer numbers	Per Ofwat RAG 2.07	Customer numbers
OOE – General and Support – motor vehicles	YW/Loop	N/A	N/A	N/A
General and Support, Finance, HR etc.	YW	FTEs used to allocate to retail activity then activity cost driver used	Timesheets are not available so Ofwat’s second preference has been used	FTEs used to allocate to retail activity then activity cost driver used
General and Support, Finance, HR etc.	Loop	Customer numbers	Timesheets are not available so Ofwat’s second preference has been used	Customer numbers
General and Support – Executive Director’s remuneration	YW	FTEs used to allocate to within retail activity	Timesheets are not available so Ofwat’s second preference has been used	FTEs used to allocate to within retail activity

Table 2 – Retail household/non-household allocations (continued)

Activity	Company	2019/2020	2019/2020	2018/2019
Retail household/non-household		Cost Driver	Why considered appropriate	Cost Driver
General and Support – Non-Executive Director’s remuneration	YW	FTEs used to allocate to retail activity then activity cost driver used	Timesheets are not available so management judgement has been applied	FTEs used to allocate to retail activity then activity cost driver used
General and Support – Facilities	YW	FTEs used to allocate to retail activity then activity cost driver used	Timesheets are not available so Ofwat’s second preference has been used	FTEs used to allocate to retail activity then activity cost driver used
General and Support – Facilities	Loop	Customer numbers	Timesheets are not available so Ofwat’s second preference has been used	Customer numbers
General and Support – Insurance	YW/Loop	FTEs used to allocate to retail activity then activity customer number cost driver used	Per Ofwat RAG 2.07	FTEs used to allocate to retail activity then activity customer number cost driver used
General and Support – Other	YW	FTEs used to allocate to retail activity then activity cost driver used	Timesheets are not available so management judgement has been applied	FTEs used to allocate to retail activity then activity cost driver used
General and Support – Other	Loop	Customer numbers	Per Ofwat RAG 2.07	Customer numbers
Regulation and licence fee	YW	Customer numbers	Per Ofwat RAG 2.07	Customer numbers
Local Authority Rates	YW/Loop	FTEs used to allocate to retail activity then customer numbers activity cost driver used	Ofwat’s second preference has been used	FTEs used to allocate to retail activity then customer numbers activity cost driver used
Third party services	YW	Direct allocation	Per Ofwat RAG 2.07	Direct allocation
Depreciation	YW	Assets allocated per principle use, partly in retail	Per Ofwat RAG 2.07	Assets allocated per principle use, partly in retail.

Table 3 – Wholesale Water cost allocations

Expenditure line	Method of allocation	Why considered appropriate	How satisfied
Power	The Energy system (Optima) collects costs at meter level and this costed directly to the activity where possible. Where site meters supply more than one service the account is split based upon estimated power usage of equipment on site	When metered data is available it is used, if it is not available management estimate is applied per RAG 4.08	Management estimates are reviewed by the finance team with operational colleagues
Income treated as negative expenditure	Allocated to main service, sub split to individual service using the same allocations as power above	No sub metering at large sites so the only way that this allocation is possible	Management estimates are reviewed by finance business partners with operational colleagues
Service charges – Abstraction	Directly allocated	Directly allocated	Directly allocated
Service charges – Other	Directly allocated	Directly allocated	Directly allocated
Service charges – Discharge	Directly allocated	Directly allocated	Directly allocated
Bulk Supply	Directly allocated	Directly allocated	Directly allocated – bulk supply solely related to raw water
Other operating expenditure – Employment costs based on Gross (i.e. prior to capital recharges)	These costs are allocated based on a management assessment. For overhead costs these are allocated based on number of FTEs. E.g. pension deficit	All employment costs charged to capital are recorded using timesheets. For remaining operating costs, management assessments are based, where possible, on operational data. Where this is not possible estimates have been made	Finance business partners are trained in accounting separation guidelines and meet with all operational budget managers. A peer review is also undertaken
Other operating expenditure – Hired and contracted services	These costs are allocated direct to service through our procurement system (Ariba) and work management system (WMS). For elements which cross price controls, assessment is done to allocate these costs based on an appropriate driver	Directly allocated	A review is under-taken monthly and at the end of the year to ensure all costs have been allocated correctly
Other operating expenditure – Other direct costs – Telephone	Landlines costs are directly allocated. Mobile phone costs are allocated in the same way as employment costs	Directly allocated, where possible, and the rest in line with cost of employment	In line with employment allocation process

Table 3 – Wholesale Water cost allocations (continued)

Expenditure line	Method of allocation	Why considered appropriate	How satisfied
Other operating expenditure – Other direct costs – Insurance	Insurance payments are allocated directly to service and premiums are allocated using an appropriate cost driver based on the type of insurance	Directly allocated where possible, and the balance is based on appropriate cost driver	Insurance database categorises insurance claims and the allocations for the premium are based on the type of cover
Other operating expenditure – Other direct costs – Leases/rents	Operational leases and rents are allocated directly to service	Directly allocated	Monthly costs review to ensure directly allocated costs are correct
Other operating expenditure – Other direct costs – Contract cars	Allocated in the same way as employment costs	Directly allocated, where possible and the rest in line with cost of employment	In line with employment allocation process
Other operating expenditure – Other direct costs – Professional subscriptions	Directly allocated	Directly allocated	Directly allocated
Other operating expenditure – Other direct costs – GSS and Ex gratia	Directly allocated	Directly allocated	Monthly Guarantee Standards Scheme and ex gratia reviewed to ensure directly allocated costs are correct
General and Support – HR	Allocated using headcount	Each colleague drives an HR cost even if part time	Proxy to how HR costs are driven
General and Support – IT	Headcount (Inc. office based contractors and 50% of non office as they share IT equipment)	Each colleague has a PC or hand-held device even if part time	Proxy for number of PCs and hand-held devices
General and Support – Management services and finance	FTE (Inc. Contractors)	Based on Ofwat guidelines	Complies with guidelines
General and Support – Facilities	FTE (Inc. office based contractors)	Based on Ofwat guidelines	Complies with guidelines
General and Support – Other	FTE	Based on Ofwat guidelines	Complies with guidelines
Scientific services	Allocated on costs of sampling	Costs are driven by complexity of sampling, for which cost is a proxy	Monitor sampling for DWI purposes

Table 3 – Wholesale Water cost allocations (continued)

Expenditure line	Method of allocation	Why considered appropriate	How satisfied
Other business activities (Licence fee)	One ninth of Regulation staff and license costs are allocated to Retail, with the remainder equally allocated to Wholesale services. The direct costs are used to proportion amongst upstream services	All of this cost is regulation costs. The cost allocation used is per the Ofwat guidance	Complies with RAG 2.07
Other business activities (MOSL Fee, pre-market opening)	58% Wholesale and 42% Retail (the 58% Wholesale is split 27% to Water and 31% Waste)	Based on letter from Ofwat to CEO 4 April 2014	Complies with letter specific to MOSL costs
Local authority rates – Cumulo rates (water)	Use Gross Modern Equivalent Asset values (GMEA) to allocate costs (Rateable assets only)	Based on value of assets assigned to the business unit which are reported in supplementary fixed assets tables	Complies with guidelines
Exceptional items	Directly allocated	Analysis of costs carried out	Complies with guidelines

Table 4 – Wholesale wastewater cost allocations

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
Power	The Energy system (Optima) collects costs at meter level and this costed directly to the activity where possible. Where site meters supply more than one service the account is split based upon estimated power usage of equipment on site	When metered data is available it is used, if it is not available management estimate is applied per RAG 4.08	Management estimates are reviewed by finance business partners with operational colleagues
Income treated as negative expenditure	Allocated to main service, sub split to individual service using the same allocations as power above	No sub metering at large sites so the only way that this is possible	Management estimates are reviewed by finance business partners with operational colleagues
Service charges – Abstraction	Directly allocated	Directly allocated	Directly allocated
Service charges – Other	Directly allocated	Directly allocated	Directly allocated
Service charges – Discharge	Directly allocated	Directly allocated	Directly allocated
Bulk Supply	Directly allocated	Directly allocated	Directly allocated
Other operating expenditure – Employment costs based on gross manpower costs (i.e. prior to capital recharges)	These costs are allocated based on a management assessment. For overhead costs these are allocated based on number of FTEs. E.g. pension deficit	All employment costs charged to capital are booked based on timesheets. For remaining operating costs, management assessments are based, where possible, on operational data. Where this is not possible estimates have been made	Finance business partners are trained in accounting separation guidelines and meet with all operational budget managers. A peer review is also undertaken
Other operating expenditure – Hired and contracted services	These costs are allocated direct to service through our procurement system (Ariba) and work management system (WMS). For elements which cross price controls assessment is done to allocate these costs based on an appropriate driver	Directly allocated	A review is undertaken monthly and at the end of the year to ensure all costs have been allocated correctly
Other operating expenditure – Other direct costs – Telephone	Mainly via data processing under non-operational overheads via assessment based on headcount	Directly allocated, where possible, and the rest in line with cost of employment	In line with employment allocation process

Table 4 – Wholesale wastewater cost allocations (continued)

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
Other operating expenditure – Other direct costs – Insurance	Insurance payments are allocated directly to service, and premiums are allocated using an appropriate cost driver based on the type of insurance	Directly allocated where possible, and the balance is based on appropriate cost driver	Insurance database categorises insurance claims and the allocations for the premium are based on the type of cover
Other operating expenditure – Other direct costs – Leases/rents	Operational leases and rents are allocated directly to service	Directly allocated	Monthly costs review to ensure directly allocated costs are correct
Other operating expenditure – Other direct costs – Contract cars	Allocated in the same way as employment costs	Directly allocated, where possible and the rest in line with cost of employment	In line with employment allocation process
Other operating expenditure – Other direct costs – Professional subscriptions	Directly allocated	Directly allocated	Directly allocated
Other operating expenditure – Other direct costs – GSS and ex gratia	Directly allocated	Directly allocated	Monthly Guarantee Standards Scheme and ex gratia review to ensure directly allocated costs are correct
General and Support – HR	Allocated using headcount	Each colleague drives an HR cost, even if colleague is part time	Proxy to how HR costs are driven
General and Support – IT	Headcount (Inc. office based contractors and 50% of non office as they share IT equipment)	Each colleague has a PC or hand-held device, even if part time	Proxy for number of PCs and hand-held devices
General and support – Management services and finance	FTE (Inc. Contractors)	Based on Ofwat guidelines	Complies with guidelines
General and Support – Facilities	FTE (Inc. office based contractors)	Based on Ofwat guidelines	Complies with guidelines
General and Support – Other	FTE	Based on Ofwat guidelines	Complies with guidelines

Table 4 – Wholesale wastewater cost allocations (continued)

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
Scientific services	Allocated on costs of sampling	Costs are driven by complexity of sampling, for which cost is a proxy	Monitor sampling for DWI purposes
Other business activities (Licence fee)	One ninth of Regulation staff and license costs are allocated to Retail, with the remainder equally allocated to Wholesale services. The direct costs are used to proportion amongst upstream services	All of this cost is regulation costs. The cost allocation used is per the Ofwat guidance	Complies with RAG 2.07
Other business activities (MOSL Fee, pre market opening)	58% Wholesale and 42% Retail (the 58% Wholesale is split 27% to Water and 31% Waste)	Based on letter from Ofwat to CEO 4 April 2014	Complies with letter specific to MOSL costs
Local authority rates – Cumulo rates (Wastewater)	Use Gross Modern Equivalent Asset values (GMEA) to allocate costs (Rateable assets only)	Based on value of assets assigned to the business unit which are reported in supplementary fixed assets tables	Complies with guidelines
Exceptional items	Directly allocated	Analysis of costs carried out	Complies with guidelines
Customer services – Billing	Where separately costed teams work solely on billing activity they are coded directly to billing. Where teams work for a proportion of their time on billing an appropriate cost driver is used. Where teams work solely on household or non-household they are allocated accordingly	Where costs are separately identified on SAP these are charged direct. For costs which are allocated, e.g. postage, an appropriate cost driver is used, e.g. number of bills issued as a proportion of total items of mail dispatched	Cost allocation methods are reviewed with a finance business partner and an operational colleague to ensure appropriate
Customer services – Payment handling	Payment commissions and the cost of the Payments team are held separately in SAP. Other costs allocated to payment handling are small and based on an appropriate cost driver	The majority of costs are separately identifiable	The majority of costs are separately identifiable
Customer services – Charitable trust donations	No costs	N/A	N/A
Customer services – Vulnerable customer schemes	Costs are allocated directly	Direct cost allocation	Cost allocation methods are reviewed with a finance business partner and an operational colleague to ensure appropriate

Table 4 – Wholesale wastewater cost allocations (continued)

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
Customer services – Non-network enquiries and complaints	Contact centre costs are allocated between network and non-network using the number of contacts as a cost driver. The number of contacts agrees to numbers reported for the Company Compliance Certificate and SIM. Other teams costs are allocated based on management estimate	Costs are apportioned based on the number of calls which is what drives the costs	The number of contacts used to apportion costs are assured through existing processes
Customer services – Network enquiries and complaints	Contact centre costs are allocated between network and non-network using the number of contacts as a cost driver. The number of contacts agrees to numbers reported for the Company Compliance Certificate and SIM. Other teams costs are allocated based on management estimate	Costs are apportioned based on the number of calls which is what drives the costs	The number of contacts used to apportion costs are assured through existing processes

Table 5 – Retail cost allocations

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
Customer services – First time investigatory visits – Retail	An analysis is prepared of customer visits which are not due to a network failure	This is compliant with Ofwat’s guidance that first time investigatory visits that are not due to a network failure are classed as retail activities	Cost allocation methods are reviewed with a finance business partner and an operational colleague to ensure appropriate
Customer services – Other customer services	No costs	N/A	N/A
Debt management	Most is done by separate household and non-household teams whose costs are allocated directly. Some other teams are allocated to this activity by management estimate, but the costs are smaller in value	The majority of costs are separately identifiable	The majority of costs are separately identifiable
Doubtful debts	Costs are allocated directly	Costs are allocated directly	Costs are allocated directly
Meter reading	Costs are allocated directly	Costs are allocated directly	Costs are allocated directly
Services to developers	Costs are allocated directly	Costs are allocated directly	Costs are allocated directly
General and support – IT	Loop Customer Management Limited (LCML) costs are allocated directly. For YWSL costs are allocated based on headcount	Assumed each person employed has a PC, Laptop or hand-held device	Headcount from Payroll by section
General and support – HR	LCML costs are allocated directly. For YWSL costs are allocated based on headcount	Assumed each person employed has a call upon HR services	FTE from Payroll by section
General and support – Facilities	LCML costs are allocated directly. For YWSL costs are allocated based on floor space and FTE	Floor space alone is not valid as some staff carry out both wholesale and retail activities	Done on a facilities site specific basis
General and support – Other	LCML costs are allocated directly. For YWSL costs are one ninth of regulation staff and license costs	YWSL is regulation costs. The cost allocation used is per the Ofwat guidance	Complies with guidelines

Table 6 – Non-appointed cost allocations

Expenditure line	How costs are allocated	Why considered appropriate
Revenue	Non-Water/wastewater services e.g. tankered waste third party use of appointed assets rechargeable work where the appointee is not a statutory supplier	RAG 4.08 Appendix 1 and Ofwat email following CEPA review
Operating costs	Associated operating costs with revenue stated above, fully including with depreciation when appropriate	RAG 4.08 and Ofwat email following CEPA review
UK Corporation tax	Yorkshire Water Services Limited has a corporation tax liability of £35m in the P&L for financial year 2019/2020.	Corporation tax is chargeable on a company basis. Yorkshire Water Services Limited has no corporation tax costs to allocate for the period

Table 7 – Sewage collection split by function, as recorded in Yorkshire Water mapping system

Function	Length, Kilometres	Split by function, %
Foul	12,001	39%
Surface Water	13,377	43%
Highways	5,377	18%
Total	30,755	100%

Changes to methodology, reasons and quantification

A thorough review of operating cost allocations and SAP processes is undertaken each year to ensure compliance with Regulatory Accounting Standards. Refinements are made only to achieve more accurate categorisation, but are minor and allocations have been materially consistent since (2017/2018).

One of the main changes in 2017/2018 involved a bottom up appraisal of staff and contractor time, which forms the basis on which overheads are allocated to price controls and upstream services. In previous years the allocations were based predominantly on internal employees and did not take account of the impact of outsourcing or external contractual arrangements. The implementation of outsourcing and the use of contractors differs significantly between price controls and between operational management areas. For example, some contractors are based at sites but were not allocated facilities recharges because the allocations were previously only allocated for internally employed staff. Since 2017/2018 we have set out the allocation of costs to reflect appropriate consumption by price control to reflect the nature of and consumption by specific contractual arrangements. This seems more consistent with the causality principle set out in RAG 2.07.

We continue to use our Business Intelligence (BI) tools using data recorded from SAP, which provides a detailed view of operational staff time.

Table 8 shows the percentages in management and general allocations which are materially consistent with previous year's allocations.

Table 8 – Management & General (M&G) percentage cost split allocations across the price controls as below:

FTE % allocations	Water resources	Water Network Plus	Network Plus sewage collection	Network Plus sewage treatment	Sludge	Retail HH	Retail NHH	Total
Total overhead 2018/2019	2%	42%	16%	21%	9%	8%	2%	100%
Total overhead 2019/2020	2%	41%	25%	18%	6%	7%	1%	100%
Management services and finance 2018/2019	1%	56%	19%	13%	5%	5%	1%	100%
Management services and finance 2019/2020	1%	52%	25%	13%	3%	5%	1%	100%
Data processing 2018/2019	1%	54%	18%	15%	6%	5%	1%	100%
Data processing 2019/2020	1%	50%	24%	14%	4%	6%	1%	100%
Facilities 2018/2019	2%	50%	14%	18%	8%	7%	1%	100%
Facilities 2019/2020	2%	47%	24%	16%	4%	6%	1%	100%

The above table shows how the Management and General costs have been allocated using internal FTE and contractors (where they use the overhead services).

For most management and general allocations internal Yorkshire Water FTE has been used. However, we have incorporated total contractors FTE's for management and finance as the costs in year benefit the whole contract. In terms of data processing costs which are mainly information technology costs, only the actual number of contractors using these services have been included and similarly where contractors use Yorkshire Water facilities, they have appropriate FTE allocations. These allocations were introduced in 2017/2018 and have been continually improved each year to ensure that each price control receives a fair share of their Management and General costs. The average overheads per person allocated in the operating cost tables are above 25% of their direct salary costs (as required in ERDF applications for matched funding).

Following on from the sale of some of the non-regulated businesses and ongoing key projects in the support function, general and support expenditure has increased from 2017/2018 by £12.4m. Several initiatives are planned to reduce costs in 2020/2021. The increase in cost by price control is shown on the next page in [Table 9](#).

Table 9

Variance	Water resources	Water Network Plus	Network Plus sewage collection	Network plus sewage treatment	Sludge	Retail HH	Retail NHH	Total
General and support variance	-£0.1m	£0.2m	£5.1m	-£0.3m	-£1.1m	£0.0m	-£1.3m	£2.5m

Inter-price control charges are included for the consumption of water by wastewater Network Plus and sludge, and there is also a charge for the disposal of water sludges produced through water treatment. These changes are consistent with prior-year and are listed and quantified in the table below:

Table 10

	Water Network Plus	Waste Network Plus	Retail Household	Retail Non-Household
Water usage	-£1.1m	£1.1m	£0.0m	£0.0m
Wastewater disposal	£5.4m	-£5.4m	£0.0m	£0.0m

In [Table 2E](#), all capital income is now included under 'Capitalised and amortised in accounts'. This reflects a change in the presentation of capital income in the statutory accounts in line with FRS102, whereby all capital income is now transferred to Deferred Income.

Power

Electricity allocations amongst price controls and upstream services have been a focus for this year's annual performance report, with involvement of operational managers and energy experts across the business reviewing each site by assets and electricity rating of the assets. This has further refined the process to ensure that co-located sites electricity costs are allocated more accurately. A summary in [Table 11](#) shows which costs are directly accosted and which are allocated. In summary electricity costs are allocated to services in three different ways:

- Sites that have been determined to be more than 95% related to a single service have been directly posted to a cost centre for that process, with the remaining percentages for those sites established to be immaterial and not cost beneficial to allocate further (per accordance with RAG 2).
- Sites with generation from sludge processes are complex, so are allocated to services on a monthly basis as part of the financial month end process. For these sites, all generation is deemed to be sludge related and overall site consumption, not purchased units, are allocated by percentage before the generation is deducted.
- Other sites relating to more than one service are coded to Whole Site Costs cost centres. These costs are then allocated by SAP cost assessment process.

Direct and Indirect Costs

Direct costs are costs which relate directly to that activity and are costed in SAP directly; indirect costs are costs that are allocated on an assessment basis. [Table 11](#) on the following page show the proportions which are direct and indirect for total other operating costs showing a majority of these costs directly allocated and the remainder allocated, both water and wastewater show that they are consistent.

Planned Improvements for future years

We continue to reduce the number of adjustments required to produce the regulated accounts from our SAP system, and we are now at the stage of producing periodic regulatory accounts alongside the normal management accounts which report costs for each Directorate. Our longer-term ambition is the automated production of both operational and regulatory financial reporting.

The areas for future management accounts reporting are:

- Water Distribution
- Water Production
- Wastewater customer field services
- Wastewater process and pumping
- Bioresources
- Household retail.

Table 11

	Wholesale			
	Water		Wastewater	
	Direct	Allocated	Direct	Allocated
Power	64%	36%	73%	27%
Other operating expenditure	81%	19%	62%	38%

Wholestream Upstream services

The disaggregation of operating costs into Price Controls (within [Tables 2B](#)) follows the same process as the disaggregation into upstream services (within [Tables 4D-4F](#)). The allocation methods and processes described in this Accounting Separation Methodology statement apply to both upstream services and price controls. A description of the basis of upstream costs has been included in the commentary below. Capital cost allocations are also the same for capital expenditure. All capital projects are coded directly to the relevant upstream service by using Investment categories on SAP for each project, which are then amalgamated into Price Control.

Table showing Water upstream cost methodology & assumptions

Price control	Upstream service	Yorkshire Water methodology & assumptions	Volumes/ Drivers
Water resources	Abstraction licences	Abstraction licence costs payable to the Environment Agency are held on a separate general ledger code and on specific cost centres within the accounting system SAP.	Licensed volume in MI
	Raw water abstraction	The Yorkshire Water (YW) costing structure is set up in such a way that the cost centres within the accounting system SAP reflect the definition, which includes any pumping associated between two reservoirs. It is assumed that impounding reservoirs (including compensating reservoirs) are under raw water abstraction. All YW impounding reservoirs have abstraction licences either individually, or as a group e.g. those in the Washburn Valley. YW has only one bulk supply import that is allocated to water resources.	Volume abstracted in MI
Water Network Plus	Raw water transport	The YW costing structure is set up in such a way that the cost centres within the SAP system reflect the definition of raw water transport.	Volume transported in MI
	Raw water storage	The YW costing structure is set up in such a way that the cost centres within the SAP system reflect the definition of raw water storage.	Average volume in MI
	Water treatment	Not all costs are posted to individual treatments works, for example salary costs are posted at service level. Provision of unit costing for individual works or at large/small works type is therefore not currently available.	Distribution input (potable) volume in MI.

Table showing water upstream cost methodology & assumptions (continued)

Price control	Upstream service	Yorkshire Water methodology & assumptions	Volumes/ Drivers
<p>Water Network Plus (continued)</p>	<p>Treated Water Distribution</p>	<p>The YW costing structure is set up on a catchment basis, each area contains both above and below ground assets with no split between trunk treated water transport and local treated water distribution. Some larger assets, e.g. Grid Pumps, do have their own cost centre. In order to complete the upstream services table, the above and below ground assets within each TWT were assigned to either trunk or local with the following assumptions being made.</p> <p>Above Ground Assets</p> <p>The following types of assets were split between trunk and local:</p> <p>Water Pumping Stations (WPS)</p> <p>Water Towers (WTR)</p> <p>Service Reservoirs (SRE)</p> <p>Critical Supply Reservoirs (CRE)</p> <p>The treated water storage assets (towers, services reservoirs and critical supply reservoirs) could be either trunk or local, but only a small number are deemed by operational colleagues to be local. Therefore, all treated water storage costs have been dealt with as trunk mains costs.</p> <p>Water pumping stations could be deemed to be either trunk or local so an exercise has been carried out to determine of the operational Water Pumping Stations into which category they belong. Power costs by metered supply have been assigned based on this data. Other costs such as maintenance have been split pro rata.</p> <p>There is no specific field in the asset database to identify whether treated water distribution assets relate to trunk or local mains. However, current cost depreciation is only found on above ground assets within this business unit, and the CCD value has been allocated in a consistent manner to operating costs.</p> <p>Below Ground Assets</p> <p>Below ground assets within the YW Asset Inventory System have a flag attached to them, indicating whether they are 'Main Treated' or 'Distribution Management Area'. Functional locations within SAP direct all repair and maintenance activity to the relevant network cost centre, apart from proactive leakage repairs which are settled to codes that separately identify them.</p> <p>An analysis of borehole pumping costs using the formulas within RAG 2.07 has been performed to calculate the proportion of costs that relate to the separate upstream services for water resources and water networks plus upstream services.</p>	<p>Distribution input (potable) volume in MI.</p>

Table showing water upstream cost methodology & assumptions (continued)

Price control	Upstream service	Yorkshire Water methodology & assumptions	Volumes/ Drivers
Network Plus sewage collection	Foul	YW splits its sewage collection assets into the three upstream services, foul, surface water and combined. However, from a costing perspective, sewage collection costs are held on cost centres at drainage area zone (DAZ) level for both above and below ground assets with no split between foul, surface, highways or combined. In order to do the apportionment, an analysis of sewer lengths in each of the three 'Network Plus' categories have been undertaken from our Asset Inventory (AI) system has been done and remains consistent with prior year.	Volume collected in Ml.
	Surface water drainage		Volume collected in Ml.
	Highway drainage	YW's operational (non-terminal) stations are categorised as foul, surface or combined. No pumping stations have been identified specifically under the highways drainage category. Power costs are allocated direct to appropriate service (i.e. foul, surface) with the costs attributed to combine being allocated as described.	Volume collected in Ml.
		Repair and maintenance work (cyclical or reactive) on infrastructure assets is carried out by contractors on jobs raised via SAP which is coded to the drainage area zone. Costs are collected at drainage area zone level only.	
Network Plus sewage treatment	Sewage treatment and disposal	A significant proportion of costs are coded directly (e.g. maintenance work is coded directly to assets), with some costs such as salary costs posted at service level.	Biochemical oxygen demand (BOD) in tonnes.
	Imported liquor treatment	<p>A small proportion of direct costs are allocated to this activity as most of the liquor is gravity returned to the front inlet of a sewage treatment works and therefore incurs very little cost. Salary costs are posted at service level based upon management assessment, and power costs are a split of whole site costs based on management assessment of power usage on liquor treatment.</p> <p>A change in 2018/2019 has improved allocation here for overheads in particular regulations costs which are allocated in accordance to the RAGs by splitting to ninths but instead of previous years of costs allocated equally to upstream services, they have been proportioned based on direct costs.</p>	Biochemical oxygen demand (BOD) in tonnes.

Table showing water upstream cost methodology & assumptions (continued)

Price control	Upstream service	Yorkshire Water methodology & assumptions	Volumes/ Drivers
Sludge	Sludge transport	It is assumed that liquid sludge movements are included under transport. There is a separate and centralised tankering team using dedicated staff and vehicles coded directly to sludge transport. Sludge transport assets include vehicles used in the transport of sewage sludge from one site to another, and also equipment found at treatment facilities used in loading such vehicles, for example tanker loading pumps.	Volume transported (m ³)
	Sludge treatment	The YW costing structure is set up in such a way that the cost centres within the SAP system reflect the definition of sludge treatment. Salary costs are posted at service level based upon management assessment and power costs are a split of whole site costs based on management assessment of power usage.	Dried solid mass in tonnes of dried solids (ttds)
	Sludge disposal	The YW costing structure is set up in such a way that the cost centres within the SAP system reflect the definition of sludge disposal. Salary costs are posted at service level based upon management assessment. A focused sludge disposal team means all disposal costs are allocated to one budget, and collating these costs is much easier than other upstream services.	Dried solid mass in tonnes of dried solids (ttds)

Derivation of quantities used to calculate the unit cost information

The majority of the quantities used in [Tables 4D](#) and [4E](#) are reported consistently with normal annual reporting and data contained and assured in other tables:

Water

- Water Resources – Abstractions licences: Licensed volume available from reservoirs, rivers and boreholes. Non-public water supply abstractions are subtracted from this volume to give the volume related to water resources for potable supply (Distribution Input) only.
- Water Resources – Raw water abstraction: volume abstracted from reservoirs, rivers and boreholes. Every abstraction source is metered, using electromagnetic flowmeters, and are connected to Yorkshire Water's Regional Telemetry System (RTS). Some licences have multiple flow meters. The data forms part of the licensed abstraction annual return to the Environment Agency and is assured separately.
- Network Plus – Raw water transport: volumes transported between sources. The activities allocated to this service primarily including the development and maintenance of the physical raw water transport network. This includes pipelines and aqueducts.
- Network Plus – Raw water storage: We obtain our storage measurements generally on a weekly basis and have provided an average across assets complying with the raw water storage definitions.
- Network Plus – Water Treatment and Water Distribution: Distribution Input volumes come from the corporate Water into supply databases, which are assured as part of the APR process for reporting total leakage. For this reporting table the volume is converted to an annual volume by multiplication of 365 days.
- Population is the sum of our water and wastewater customers. The information comes from our billing system and is assured annually.

Waste

- Volume collected foul – This is based upon multiple reports in the business, for example using household measured domestic reports and consumption per head, non-household consumption, trade effluent volume, and unmeasured analysis.
- Volume collected surface water and highway drainage – The drainage volumes collected are estimated from secondary sources such as the Generalised Land Use Survey (GLUD) and are therefore of low confidence. The estimates are based on the average impermeable area of households and non-households (m²/property) that are drained to sewers/drains, the number of properties physically connected and billed for drainage services, and the average rainfall (mm) across the Yorkshire region. The area drained, and the associated volume collected from highways, is based on an estimate of the proportion of the total impermeable area drained that is accounted for by this surface type.
- Biochemical Oxygen Demand (BOD) sewage. This calculates the sum of BOD from three elements; resident population, holiday population, trade effluent loads and additional loads from septic tanks and cesspools. A conversion factor of 60g/h/d BOD load is used to convert population figures to BOD and 2:1 ratio to convert COD load to BOD. Trade effluent is lower than last year, as is the reduction in revenues.
- Biological Oxygen Demand (BOD) sludge liquor.
- There are a number of assumptions that are required to calculate the figure which reduces the confidence in the figure reported. Knowing the tonnes dry solids (tds) produced at each works, the volume of liquors produced from typical percentage dry solids figures expected upstream at each process step was calculated. With the calculated volume, the total BOD load has been calculated using 'expected' BOD concentrations.
- Sludge volume transported – Transport records comprising liquid sludge movements have been utilised to calculate this line. The liquid sludge is measured at the works receiving sludge tanker loads.

Significant changes in cost, or movements in a cost type between upstream services, and significant movements in unit rates

Water

Overall operating costs for the water service decreased year-on-year by £9m, c4%. In short, the wetter conditions experienced in 2019/2020 compared to the dry 2018/2019 has resulted in a decrease to several upstream services, offset by an increase in water treatment chemicals (higher consumption for the turbidity from wetter weather and above inflation commodity pricing). A summary of movements by upstream service is shown in the below table:

Clean Water	Units	DPs	Water Resources		Network Plus				Total
			Abstraction Licence	Raw Water Abstraction	Raw Water Transport	Raw Water Storage	Water Treatment	Treated Water Distribution	
Total Operating Expenses 2019/2020	£'m	3	5.231	23.596	9.998	1.732	57.098	148.793	246.448
Total Operating Expenses 2018/2019	£'m	3	5.161	23.979	10.446	2.012	55.229	158.800	255.627
Variiances	£'m	3	0.070	-0.383	-0.448	-0.280	1.869	-10.007	-9.179
Variance	%	3	1%	-2%	-4%	-14%	3%	-6%	-4%

This reduction is primarily due to the extreme weather from summer 2019 however, this is offset by some additional pressures experienced during 2019/2020, which are explained below;

- Additional leakage investment has been made in readiness for AMP7 performance targets
- Above inflationary increase in the unit price of chemicals, and increased consumption due to higher turbidity from wetter weather.

We experienced extremely hot weather in the summer of 2018 resulting in significant drought costs in 2018/2019 which were classified as exceptional in the 2018/2019 statutory accounts. With wetter weather in 2019/2020, drought costs were not required, and as a result there have been year-on-year favourable variances.

The Water Resources price control has seen an improvement in costs as the prior year included pumping and other costs relating to the dry weather in 2018/2019, which were not repeated in 2019/2020.

Similarly, upstream services including raw water transport and raw water storage have seen reduced expenditure from the dry weather experienced in 2018/2019.

Water Treatment have seen an underlying reduction of costs from reduced demand and consumption from the prior year. However this has been more the offset by the above inflationary increase in the unit price of chemicals of circa 8%. This has been compounded by the heavy rainfall from November 2019 through to February 2020, resulting in more challenging water quality and the requirement for additional chemical dosing.

Treated water distribution costs are showing favourable variances year-on-year, which is mostly due to the previous year's dry weather resulting in network breakout and more pumping costs moving water around the region to optimise supplies. This is partially offset by an increase in proactive investment to improve the leakage programme.

Pension costs are included (as prior year) within other operating costs, as Yorkshire Water's accounting policies are in accordance with FRS102 and so these pension costs are included in the P & L.

Water Unit Costs

Unit Price annual Comparison	Units	Water Resources		Network Plus			
		Abstraction Licences	Raw Water Abstraction	Raw Water Transport	Raw Water Storage	Water Treatment	Treated Water Distribution
2019/2020	£/unit	7.065	52.908	36.308	551.632	125.201	329.455
2018/2019	£/unit	6.971	51.707	36.701	598.977	117.940	349.265
Variance		1%	2%	-1%	-8%	6%	-6%

The unit prices across the water price controls broadly align to previous years, although the total unit price has seen an improvement due to the exceptional summer of 2018 not being repeated in 2019. However, these costs have been partially offset with additional costs required to achieve enhanced performance commitment on leakage, and additional chemical costs (both price and volume) within water treatment. A summary of changes in unit price using volumetric data is explained below:

- Abstraction licence has seen a minimal change in unit prices (increase of 1%).
- Raw Water Abstraction has seen a minimal increase in unit price of 2%.
- Raw Water Transport unit price is broadly aligned to previous reporting year.
- Raw Water Storage has seen a 7% reduction in its unit price, which reflects the level of cost reduction and average volume stored.
- Water Treatment unit prices have increased by 6% as a result of an increase in chemical costs and a volume reduction due to the dry summer of 2018 which resulted in significantly increased demand. The wetter weather in 2018/2019 reduced demand. The increase in costs is associated with additional above inflation (8%) chemical unit price increases compounded with additional chemical consumption due to the wetter weather. The wet weather from September, including the floods of November 2019 through to February 2020, required additional dosing for poorer water quality as a result of the heavy rainfall.
- Treated Water distribution unit price has seen a reduction in unit price of 6% which is mostly due to costs (which have reduced by 6%). The reduction in costs are due to the previous year's dry summer which resulted in increased network repairs being required, which were not repeated in 2019/2020. This reduction of costs is partially offset by the focus on leakage targets and enhanced performance commitment has resulted in additional costs for detection (including insource of this activity within the business) and contract partner costs for repair.

The operating cost lines in the tables which are used to provide the unit rates have not been adjusted to exclude the pension deficit contribution. This is because Yorkshire Water's defined benefit scheme is accounted for under the FRS102 accounting standard which applies the same rules as a defined contribution scheme. Historical pension scheme deficit cannot be allocated between the different group entities. This results in all cash contributions being recognised as operating expenditure, including pension deficit contributions. The treatment contrasts to most other WASC's who have adopted IFRS and are required to follow defined benefit pension scheme accounting, therefore excluding cash contributions in excess of the IAS 18 defined benefit pension cost from the operating expenditure. The unit rate information on [Tables 4D](#) and [4E](#) use the operating costs line to calculate the unit price, as a result Yorkshire Water's rate appear slightly higher than the other companies who exclude these pension contributions.

Wastewater

Wastewater price controls have seen an increase of total operating costs of £10.2m (5%), from £203.3m for 2018/2019 to £213.5m in 2019/2020. A summary table showing year on year movements by upstream service is below:

Clean Water	Units	DPs	Network Plus Sewage Collection			Network Plus Sewage Treatment		Sludge			Total
			Foul	Surface Water Drainage	Highway Drainage	Sewage Treatment and Disposal	Imported Sludge Liquor Treatment	Sludge Transport	Sludge Treatment	Sludge Disposal	
Total Operating Expenses 2019/2020	£'m	3	30.348	30.199	18.772	100.859	0.827	4.837	16.719	10.897	213.458
Total Operating Expenses 2018/2019	£'m	3	27.255	25.746	13.479	99.527	1.080	6.775	17.210	12.179	203.251
Variiances	£'m	3	3.093	4.453	5.293	1.332	-0.253	-1.938	-0.491	-1.282	10.205
Variance	%	3	11%	17%	39%	1%	-23%	-29%	-3%	-11%	5%

The year-on-year variiances have been caused by a number of main reasons:

- Flooding expenditure associated with incidents in 2019/2020.
- Backlog reduction to support enhanced performance commitment measures.
- Tankering mitigation costs following flooding.

The largest increase in costs are associated within the Network Plus Sewage Collection upstream services where increased investment was delivered to improve operational performance in readiness for enhanced AMP7 regulatory targets (starting April 2020). Increased investment was targeted to improve some of the common performance commitments by increasing sewer rehabilitation, reduce the chance of repeat incidents by minimising any backlog of jobs, and more focused proactive investigation and repairs to the sewer network. This also involved the insourcing of the below ground sewer maintenance team. As a result, there has been a slight increase to the overhead allocations where relevant costs are applied by headcount. Increases in sewage collection upstream services costs have also resulted from the ownership transfer of pumping stations which were previously private. Many of these pumping stations required significant levels of investment and maintenance to bring them into line with company and industry standards.

Sewage treatment and disposal has seen a small increase of £1.3m (1%) which is primarily due to increased expenditure to improve compliance. Following efficiencies including chemical dosing optimisation, the underlying sewage treatment upstream service costs have been broadly consistent with previous years, with the increase in costs due to flooding of assets for incidents which incurred from November 2019 through to the end of the financial year, and an increase in power consumption costs due to higher than average wastewater flows. The reduction of costs (£253k/-23%) within imported sludge liquor treatment is associated with one off maintenance work on assets in 2018/2019 which was not repeated in 2019/2020.

There has been a reduction in costs of £3.7m for the Bioresources (sludge) price control and this is due to a significant decrease in hired and contracted services within sludge treatment and disposal (£2m). This is due to the successful commissioning during the year of a new anaerobic digestion plant which is considerably more efficient. This has meant that the majority of Yorkshire Water sludges are now being treated internally. Further savings were seen in staff costs in readiness of the outsource of the sludge transport upstream services.

Pension costs are included (as prior year) within other operating costs, as Yorkshire Water accounting policies are in accordance with FRS102 these pension costs are included in the P & L.

Wastewater Unit Costs

Line description	Units	Network Plus Sewage Collection			Network Plus Sewage Treatment		Sludge		
		Foul	Surface Water Drainage	Highway Drainage	Sewage Treatment and Disposal	Imported Sludge Liquor Treatment	Sludge Transport	Sludge Treatment	Sludge Disposal
2019/2020	£/unit	102.273	43.092	99.207	756.152	154.356	4.001	109054.889	72243.102
2018/2019	£/unit	90.508	59.388	115.156	775.367	205.674	5.886	114082.516	71226.311
Variance	£'m	13%	-27%	-14%	-2%	-25%	-32%	-4%	1%

The changes in unit prices shows improvement in most upstream services relating to volume increases in the Wastewater Network Plus price control as a result of wetter weather and cost reductions in the Bioresources price control. Further information on this is detailed below:

- Wastewater sewerage collection unit price has improved year-on-year, which is due to additional volume collected in the wastewater network. However, due to additional work (including the in-source of the wastewater sewage collection maintenance), we have seen a significant increase in costs in these upstream services. This additional work has been to bring down the job baskets in this area with a view to ensure that the enhanced performance commitments can be delivered in AMP7.
- The unit price on sewage treatment and disposal is broadly aligned to previous years with both costs and volumes constant.
- Imported sludge liquor treatment has seen a reduction in cost, with a slight increase in weather related volume of 2%. The reduction of costs is associated with one-off maintenance work on assets in 2018/2019 which was not repeated in 2019/2020.
- Sludge transport unit prices have reduced year-on-year. An element of this reduction is that in 2018/2019 more volumes were moved due to the commissioning of new sludge assets, and a greater focus on sludge triggers resulting in higher reactive tankering costs. The planned reductions of cost within sludge transport were planned, this function has now been successfully outsourced.
- The reduction in sludge treatment unit prices are due to an increase in volume treated internally using more efficient treatment routes including the new anaerobic digestion facility fully commissioned during the financial year. We expect further improvements in unit price in the coming year as additional new assets will be commissioned later this financial year.
- Sludge disposal unit costs have seen a slight increase year-on-year (1%), whilst the underlying costs have improved year-on-year due to asset availability and new assets providing much improved disposal routes (at a much-improved unit price). The increase in unit price year-on-year is primarily associated with the reduction in volume of the dried solids mass disposed from 2018/2019 (12%). This volume is reflective as improved sludge treatment processes (mentioned above), resulting in improved dried solids for sludge disposal volumes.

The operating cost lines in the tables which are used to provide the unit rates have not been adjusted to exclude the pension deficit contribution. This is because Yorkshire Water's defined benefit scheme is accounted for under the FRS102 accounting standard which applies the same rules as a defined contribution scheme. Historical pension scheme deficit cannot be allocated between the different group entities. This results in all cash contributions being recognised as operating expenditure, including pension deficit contributions. The treatment contrasts to most other WASC's who have adopted IFRS and are required to follow defined benefit pension scheme accounting, therefore excluding cash contributions in excess of the IAS 18 defined benefit pension cost from the operating expenditure. The unit rate information on [Tables 4D](#) and [4E](#) use the operating costs line to calculate the unit price, as a result Yorkshire Water's rate appear slightly higher than the other companies who exclude these pension contributions.

Retail Household

Retail household expenditure has increased by £7m from £61m in 2018/2019 to £68m in 2019/2020. This is an increase of 11% year-on-year.

There are a number of reasons for the increase in costs as follows:

- Increase in the bad debts charge of £2.6m from £21.5m in 2018/2019 to £24.1m, due to Covid-19 which has created more uncertainty in the ability of customers to pay their debts. The implementation of Universal Credit, which was introduced by the Government in 2018/2019 to replace the previous benefits system through the Department for Work and Pensions continues to affect the recovery of customer debt.
- Customer services has increased by £5.4m from £21.8m in 2018/2019 to £27.2m in 2019/2020. This is mainly due to the creation of a new Customer Experience Directorate targeting performance increases for customers. There has also been an increase in customer contact costs relating to the flooding events that occurred in the year.
- The ongoing implementation of the customer webchat facility, Drive to Digital, has resulted in additional costs.

Retail Non-Household

The non-household part of the business has now been disposed of during the financial year.

Non-household retail operating costs increased to £18.2m in 2019/2020, an increase of £1.6m compared to £16.6m in 2018/2019. The majority of this increase relates to one-off costs associated with potential bad debts arising from the impact of Covid-19 on business customers.

Appendix 4.

Disclosures

This disclosures section provides additional information for our regulator, Ofwat. It contains anything that we must disclose within the Annual Performance Report.

Accounting disclosures:

- a note which describes the link between directors' pay and standards of performance (as required by section 35A of the Water Industry Act 1991 (inserted into that Act by section 50 of the Water Act 2003));
- a statement as to disclosure of information to auditors;
- a statement on dividend policy for the appointed business;
- an accounting policy note for price control units;
- a note on revenue recognition;
- a note on capitalisation policy;
- a note on bad debt policy;
- a statement on sufficiency of non-financial resources;
- a statement on sufficiency of financial resources and facilities;
- the tax strategy for the appointed business;
- a statement on differences between statutory and Regulatory Accounting Guidelines (RAG) definitions;
- a long term viability statement; and,
- a statement explaining out/under performance of the return on regulatory equity (RORE).

Narrative disclosures:

- Outcomes
- Totex
- Retail
- Wholesale revenue control reconciliation
- Current tax reconciliation
- Financial flows
- New connections.

Transfer pricing disclosures:

- Loans by or to the appointee
- Dividends paid to any associated company
- Guarantees or other forms of security by the appointee
- Transfer of any asset or liability by or to the appointee
- Transfer of any corporation tax group losses by or to the appointee
- Supply of any service by or to the appointee.

Other disclosures

- Information on our corporate structure – this provides additional information to the summary information provided within [Section 7](#) on our governance
- Corporate governance statement
- A statement on directors' responsibility.

Directors' Remuneration Report

Annual Statement from the chair of the Remuneration Committee

On behalf of the remuneration committee, I am very pleased to present the Directors' Remuneration Report for the year ended 31 March 2020.

I took on the role of the chair of the remuneration committee in September 2019, following a reshuffle of the membership across all of our Board committees. I would like to thank Julia Unwin for her role in chairing the committee up until September 2019 and am delighted that she remains on the committee, so we continue to benefit from her experience and insight.

As a committee we believe in the importance of transparency in relation to remuneration and we strive to ensure the reward received by our directors is set at a level which allows us to recruit and retain the right calibre of employee, is fair and reflects both the priorities and values of the business, as well as ensuring it is reflective of the pay and employment conditions across the rest of the business and in the communities we serve.

The remuneration of our executive directors is weighted towards variable pay to ensure that pay levels are closely aligned to performance; both financial and non-financial. The performance conditions for variable pay include measures relating to customer experience, stability and reliability of service, health and safety, colleague engagement and delivery of our strategic transformation programmes, as well as financial performance, to ensure that remuneration links directly to our strategic objectives and the matters that are important to our people, our customers and our shareholders.

Policy changes

During 2019/2020 we undertook a comprehensive review of the remuneration policy for our executive directors, to ensure it remains fit for purpose. We want to ensure we remunerate fairly; we are able to attract and retain the right calibre of talent. We want to ensure the reward structure drives the right behaviours, appropriately rewarding strong performance whilst not rewarding poor performance.

We have undertaken this work with PricewaterhouseCoopers LLP as independent external remuneration consultants. The committee has considered various options, taking into account the need to balance short term and long term goals, trends in executive remuneration and the reward packages at organisations of a similar size and in similar markets, including those elsewhere in the water industry.

We are conscious of the need for reward packages to be clear and transparent and for the participants in reward schemes to be able to clearly see the link between their individual performance and the reward outcomes.

Our information on directors' remuneration is structured as follows:

Annual Statement from the Chair of the Remuneration Committee, providing an overview of the key developments and remuneration decisions made during the financial year.

Remuneration Policy Report, setting out the Remuneration Policy for 2020/21 that has been recommended by the remuneration committee and approved by our shareholders.

Annual Report on Remuneration, showing how the Remuneration Policy for 2019/2020 has been applied, how we intend to apply the new policy for 2020/21 and a summary of the work of the remuneration committee in the year.

Yorkshire Water is a private limited company and our shareholders do not require us to hold an Annual General Meeting (AGM). This report is therefore not subject to approval at an AGM but is presented for information to our stakeholders, to ensure we are transparent in what we pay our directors, and in compliance with the relevant legislation.

The outcome of this review is to revise our remuneration policy in two main areas; pension contributions and variable pay.

- Under the new policy company pension contributions for new executive directors, or those promoted to new roles, will be capped at 12%. This is consistent with the policy across senior management in the rest of the business. Previously the pension contributions for executive directors were equivalent to either 30% or 24% of base salary, depending on the role. This element of the new policy has already been applied early upon the appointment of Liz Barber as our new Chief Executive in September 2019.
- Under the new policy, the two variable pay schemes that previously existed; the annual bonus and the Long Term Incentive Plan (LTIP), will be combined into one Executive Incentive Plan (EIP) with both a short term and long term element. Previously executive directors were eligible to receive up to a maximum of 100% under the annual bonus scheme and a maximum of 200% under the LTIP scheme. The total maximum variable reward remains unchanged under the new EIP; however we have extended the performance period of the long term element of the scheme from three to five years and slightly adjusted the balance between the two schemes in recognition of this.

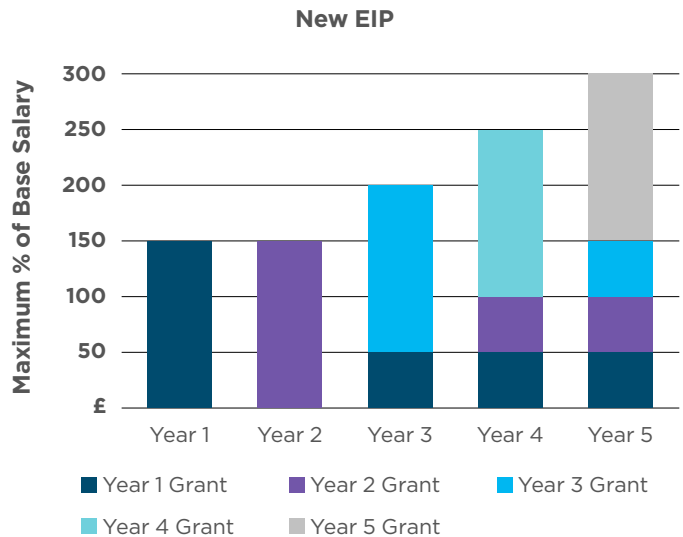
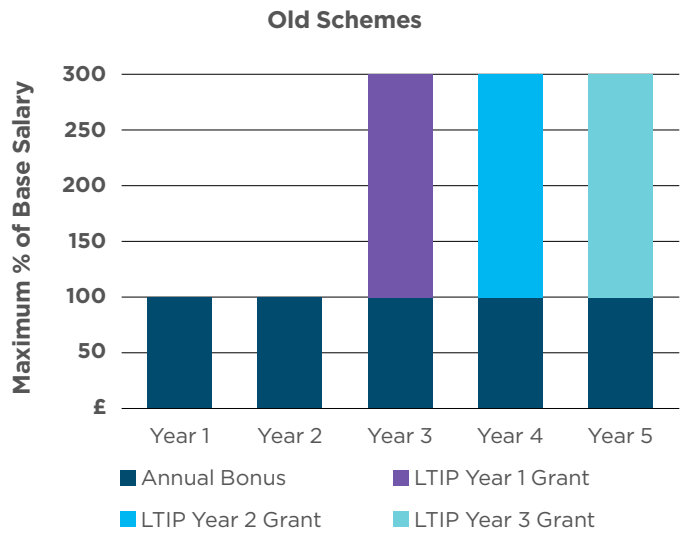
Under the new policy the short term element of the scheme will be equivalent to a maximum of 150% of base salary and will be subject to performance measures over a one-year period. Any amounts vesting will be paid in cash after the year-end, as is consistent with the current annual bonus scheme. The long term element, also equivalent to a maximum of 150% of base salary, will have its maximum vesting determined by the performance in the first year of the scheme, using the same performance measures as the short term element. The resulting maximum long term award is then split into three equal instalments and will be subject to further performance measures before any reward is paid following the completion of years three, four and five of the scheme.

For example, if the performance measures in year one of the scheme indicate a vesting of 70% of the EIP; the short term element would vest at 105% of base salary, equivalent to 70% of 150%. The long term element would then be capped at 105% and this would be split into three equal instalments of 35%, which would be subject to further longer term performance measures in years three, four and five before being paid in cash.

The committee has chosen to align the year-one performance measures of the two elements of the scheme to ensure greater transparency and simplicity for participants, rather than continuing with two entirely separate schemes with differing metrics and therefore greater complexity. The additional measures for the long term element of the new scheme enable the committee to continue to drive long term focus and the extension of the scheme to five years means that participants will now be encouraged to think even longer term than with the previous LTIP, which can only be beneficial to the business and its stakeholders. Our intention is to be open and transparent with colleagues, customers and all stakeholders about this approach.

As with the current variable pay schemes, the remuneration committee is able to exercise discretion in relation to the amounts vested so that if the performance measures indicate a payment that the committee does not believe accurately reflects the true performance of the scheme participants, they may choose to adjust the payments accordingly.

The graphs right set out how the old and new schemes vary in terms of the timing of the payments received:



The committee has also considered at length the threshold and target pay-out levels. The threshold level is the minimum amount that would vest if performance reached the threshold level. The previous threshold level under the annual bonus scheme was 20% of the maximum. It was decided to retain this level of threshold to ensure that any deferred vested amounts remained meaningful for participants and to remain aligned to market practice.

The pay-out for performance at target level was previously 85% of the maximum for the annual bonus and 70% of the maximum for the LTIP scheme. These levels were historically set higher than the market norm to reflect the considerable stretch within the performance measures and to reflect the setting of base salaries at or below the market median. The significant stretch within the performance measures is demonstrated through the target level only being reached once for the annual bonus scheme and twice for the LTIP in the five years to 2018/2019.

The committee concluded that the emphasis on variable pay should continue and would ensure greater alignment of executive director interests with those of key stakeholders, therefore it was agreed to continue setting stretching performance measures and reflecting this with a target pay-out at 80% of the maximum. This target pay-out level also takes into account that half of the vested amount each year will be subject to further criteria prior to payment at the end of years three, four or five.

The threshold, target and maximum pay-out levels will continue to be reviewed and adjusted if appropriate as new performance measures are set annually by the committee for each new grant under the scheme. Further information on the performance measures set for the grant made in April 2020 is on pages 367 and 368.

Board changes

On 12 September 2019 Richard Flint retired from the board after nearly ten years of service as Chief Executive. On the same date Liz Barber, previously our Director of Finance, Markets and Regulation, was appointed as Chief Executive. Further information on the payments made to Richard upon his departure and the remuneration package paid to Liz are included in this report. Both are in line with the remuneration policy previously set out for 2019/2020, with the exception of the early adoption of the new pension policy for Liz, as noted above.

As reported in our Remuneration Report last year, Andrew Merrick joined our Board on 1 June 2019 as an independent non-executive director. The amounts paid to Andrew during 2019/2020 are also noted in this report.

Performance

As a business we have some complex financial instruments and the accounting treatment of these can lead to significant fair value adjustments to the profit and loss account, which can materially affect the profit or loss-making position of the company on paper each year. Such movements are not taken into consideration when assessing the performance measures of our variable pay schemes as these are accounting movements which are outside the control of the scheme participants. We therefore believe that whilst it would be unfair to pay increased variable pay to scheme participants simply because of an increase in the fair value of our financial instruments, it would be equally unfair to reduce variable pay as a result of a material decrease in the fair value of the financial instruments. The committee therefore assesses the performance of the company each year prior to such fair value movements being applied.

The operational performance of the business in the year has been strong, despite the challenges faced as a result of severe weather causing significant flooding in three separate events. The company has, once again delivered for customers by achieving 22 out of the 26 Performance Commitments agreed with Ofwat in the five year business plan to 2020, with the Outcome Delivery Incentive position at the year end being favourable to business plan.

The business set itself an extremely challenging target of 0.23 in relation to the Lost Time Injury Rate in the year and was disappointed to miss this target with a year-end position of 0.36 due to some manual handling injuries in the second half of the year. Overall the business continues to deliver improvements in relation to health and safety and has seen a significant reduction in the Lost Time Injury Rate over the last five years, along with a real shift in the health and safety culture of the business.

Further information on the performance of the business can be found in our Annual Report and Financial Statements (ARFS) on pages 12 to 78. This can be found on our reports webpage: yorkshirewater.com/reports

Key decisions by the committee in the year

The committee met on eight occasions during the financial year and there have been a number of key decisions taken, which are outlined below. These are in addition to the new Remuneration Policy for 2019/2020 which has been described above.

The retirement of Richard Flint

As noted above, our chief executive, Richard Flint, retired from the board on 12 September 2019, remaining as an employee until 31 March 2020. Richard joined the business in 1992 and became Chief Executive in 2010. We are very grateful to Richard for his immense contribution to the company during his time with us.

The committee reviewed the remuneration payable to Richard in the year, taking into account his contractual entitlement and his service to the business and agreed that he should receive the amounts to which he was contractually entitled up to his departure from the business as an employee and to be treated as a good leaver in relation to the LTIP, which is consistent with the treatment of other previous board members upon their retirement and the guidelines followed by the committee in relation to good leaver status. Further information on the payments made is on page 368 of this report.

Salary review for executive directors

The committee reviewed the pay of Liz Barber and Nevil Muncaster in March 2020, taking into account the average pay increase of up to 2.0% across the rest of the organisation from 1 April 2020. In addition, given his new role as Chief Strategy and Regulation Officer with effect from September 2019, Nevil's role was benchmarked against similar roles in comparable companies. The decision was taken to align Nevil's salary with the median benchmark for his role, by increasing his pay by £26,000 (13.0%) to £226,000.

Liz Barber recommended to the committee that she should not receive a pay increase at this time, given that she had received an increase upon stepping up to the role of Chief Executive in September 2019. The committee therefore agreed to maintain her base salary at its current level until the next annual review in March 2021.

The impact of Covid-19 on variable pay

As noted elsewhere in our Strategic Report and Directors' Report, the very end of the financial year under review saw the impact of Covid-19 upon the business. Whilst this impacted upon the business in practical terms during March 2020, with many colleagues moving to work from home and operational changes being implemented to ensure appropriate social distancing, there has been minimal financial impact from Covid-19 in the year to 31 March 2020.

A significant amount of work has been performed by the business to forecast the potential financial impact of Covid-19 in 2020/2021 and beyond and this is covered further on page 93 of the ARFS. The remuneration committee took this into consideration when reviewing the performance of the business for 2019/2020 and deciding whether or not to exercise discretion to adjust the bonus or LTIP vesting in 2020. The committee also noted the impact on Covid-19 on pay across the rest of the business, noting that the Company committed in April 2020 not to use the Government's furlough scheme for any of its employees and to retain all staff during the Covid-19 pandemic. In addition, a quarterly Pay for Performance bonus was paid to all eligible colleagues as normal throughout 2019/2020. Taking all of this into account, the committee concluded that the bonus and LTIP schemes with performance periods ending on 31 March 2020 should be allowed to vest in accordance with the performance criteria without any additional adjustment for Covid-19, in order to ensure consistency across the business and to reflect the fact that the impact of Covid-19 in the performance period was minimal.

Annual bonus

The annual bonus has a series of performance measures relating to our customer experience, the financial performance of the business, health and safety and progress in our key strategic projects. The performance of the business in the year indicated a bonus of 74.8% based on the targets that were met. The committee discussed this and agreed that this reflected the performance in the year that was within the control of the participants and reflected the considerable effort that had been made throughout the year. The bonus was therefore approved and will be paid in July 2020.

LTIP awards and vesting

LTIP awards were made in April 2019 to the three executive directors who were in post at that time. These were equivalent to 200% of salary for Richard Flint and Liz Barber and an award equivalent to 150% of salary for Nevil Muncaster. These awards have a performance period of three years to 31 March 2022. The performance measures for these awards are detailed further on page 366. These awards are in-line with our remuneration policy and are consistent with prior years.

The LTIP awards that were made in April 2017 reached the end of their performance period on 31 March 2020. The performance over this three-year period indicated a vesting of 74.8%. This level of vesting was approved by the committee and will be paid to participants in July 2020.

In January 2020 the committee took the decision to align the maximum variable pay of all the executive directors so that all should receive the same maximum variable pay for all awards with effect from 1 October 2019. This decision was taken to ensure consistency and to reflect the level of responsibility undertaken by the executive directors. The awards made prior to this date will continue to vest as set out at the time the award was made and will not be increased retrospectively.

Feedback

As a private limited company, our Remuneration Report is not subject to a vote at an AGM. We are keen, however, to receive any feedback from stakeholders on our remuneration policy. We have a Colleague Engagement Forum with representation from across the business which provides direct feedback on a wide range of topics, including remuneration, to our board and the remuneration committee. In addition, we welcome any other feedback, which may be directed to me via our company secretary, Kathy Smith, who can be contacted at compsec@yorkshirewater.co.uk



Ray O'Toole
Chair of the Remuneration Committee
 15 July 2020

Remuneration Policy Report

This Policy Report sets out the Directors’ Remuneration Policy for Yorkshire Water and applies from 1 April 2020. There have been two significant changes since the previous year that are described further on pages 348 to 349.

Any existing remuneration commitments or contractual arrangements agreed prior to the implementation of this policy will be honoured in accordance with their original terms.

Remuneration payments and payments for loss of office can only be made during the policy period if they are consistent with this policy or are otherwise approved by our shareholders by an ordinary resolution.

Policy overview

The current remuneration policy for directors comprises the elements set out in the table (overleaf).

In setting the policy, the committee considers a number of factors, including:

- The need to align the remuneration policy with the strategic objectives of the business and the interests of customers;
- The need to achieve an appropriate balance between fixed and performance-related pay to incentivise strong long term performance and sustained shareholder value creation, whilst not encouraging unnecessary risk-taking or irresponsible behaviour;
- Internal levels of pay and employment conditions across the rest of Yorkshire Water;
- The need to provide a remuneration structure that is sufficiently competitive to attract, retain and motivate executive directors of a high calibre;
- The principles and recommendations set out in the UK Corporate Governance Code, the Wates Corporate Governance Principles for Large Private Companies and the Ofwat Board Leadership, Transparency and Governance Principles; and
- Periodic external comparisons of market trends and practices elsewhere in the water industry and in companies of a similar size, complexity and geographic scope.

Our remuneration packages for executive directors are structured to enable upper quartile remuneration for upper quartile performance, considering the relevant market and industry comparators, individual performance, responsibilities and experience.

Our remuneration structure is intended to be simple and transparent and to clearly link pay to performance. Our policy ensures that performance-related components form a significant proportion of the overall remuneration package, with maximum total potential rewards earned only through the achievement of stretching performance targets based on measures selected to promote the long term success of the company and an enhanced customer experience.

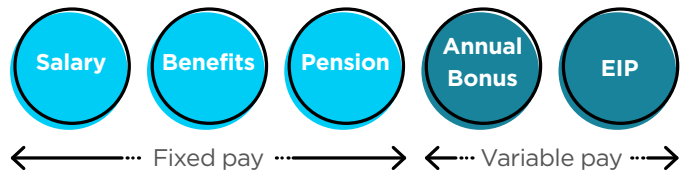
Consideration of pay and employment conditions across the business

The committee considers the pay and employment conditions of colleagues across the business when setting the Remuneration Policy for the executive directors, to ensure that these are aligned where appropriate. We regularly monitor pay trends across all levels of the business and salary increases for the directors will normally be in line with those of the wider workforce, in percentage terms.

The committee seeks views on remuneration from colleagues across the business through the Yorkshire Water Voice survey, which has been conducted twice during the year. The results from each survey are considered in detail by the committee.

During the year the business also set-up a Colleague Engagement Forum which provides regular input into the people strategy and key decisions in relation to remuneration and terms and conditions. Dame Julia Unwin attends the forum on behalf of the board and is therefore able to feedback comments directly to the remuneration committee. In addition, the minutes from each forum meeting are shared with all board members for information and the views expressed are therefore fed into decision-making by the board and its committees.

The remuneration of our executive directors is made up of five elements:



How the committee may exercise discretion

The committee may exercise discretion in two broad areas for each element of remuneration, as follows:

- To ensure fairness and align executive remuneration with underlying individual and company performance, the committee may adjust, upwards or downwards, the outcome of any annual bonus, LTIP payment or EIP payment within the limits of the relevant plan rules.
- In the case of a non-regular event occurring, the committee may apply its discretion to ensure fairness and seek alignment with business objectives. Non-regular events include, but are not limited to corporate transactions, changes in the company’s accounting policies, administrative matters, internal promotions, external recruitment, terminations, etc.

Any adjustments in light of corporate events will be made on a neutral basis; this means that the intention of any adjustment will be that the event is not to the benefit or detriment of participants. Adjustments due to underlying performance may be made in exceptional circumstances to ensure outcomes are fair both to shareholders and participants.

Any use of discretion by the committee during the financial year will be detailed in the Annual Report on Remuneration each year.

Executive directors’ policy table

Component of remuneration and how it supports the Yorkshire Water strategy	How does this operate and what is the maximum that may be paid?	What performance measures are used and why?	Are there any provisions to recover sums paid?
Fixed pay			
<p>Base salary Setting the base salary at the right level enables us to attract and retain the high calibre individuals required to deliver the strategic objectives of the business.</p>	<p>We normally review base salaries annually with changes typically effective from 1 April.</p> <p>The review considers the annual salary increases for the workforce generally as well as any other key internal and external reference points, calibre and performance of the individual. Base salaries are usually set at or below the market median for the role when benchmarked against other water companies or other utility companies, this is offset by higher threshold and target levels of variable pay to encourage a focus on performance.</p> <p>There is no prescribed maximum annual basic salary or salary increase.</p> <p>Increases will not normally exceed the general level of increase for colleagues across the business in percentage of salary terms; however, we may award higher increases in certain circumstances, for example, where there is a change in responsibility, progression in the role or a significant increase in the scale of the role or the size or complexity of the business.</p> <p>Details of the base salaries for each of the executive directors are shown in the Annual Report on Remuneration on page 363.</p>	<p>No specific performance measures are used in relation to determining base salary, but individual and business performance are considered as part of the discussion when setting the base salary levels.</p>	<p>There are no provisions to recover any sums paid.</p>
<p>Benefits Paying the right level of benefits helps us to attract and retain the right individual for the role to deliver the strategic objectives of the business.</p>	<p>The provision of benefits is set based upon general market practice, considering the benefits available to other colleagues across the business.</p> <p>The benefits available to executive directors may include a combination of:</p> <ul style="list-style-type: none"> • Private medical insurance for the executive and their spouse; • Life assurance; • A choice of company car-lease or a car allowance of up to £7,500 per annum; • Medical screening and • Optional private fuel provision. <p>Executive directors will be eligible for any other benefits which are introduced for the wider workforce on broadly similar terms.</p> <p>We also reimburse normal business-related expenses for our executive directors.</p> <p>The cost of benefits may vary from year to year and there is no maximum level set.</p>	<p>Benefits are not performance related.</p>	<p>There are no provisions to recover any sums paid.</p>

Component of remuneration and how it supports the Yorkshire Water strategy	How does this operate and what is the maximum that may be paid?	What performance measures are used and why?	Are there any provisions to recover sums paid?
<p>Retirement benefits Retirement benefits are paid as part of a market competitive package which, in turn, helps us to attract and retain high calibre individuals to deliver the strategic objectives of the business.</p>	<p>Executive directors are entitled to receive a company contribution to the defined contribution stakeholder scheme of up to 12% of basic salary. Alternatively, they can elect to receive a cash allowance of up to 12% of basic salary or a combination of a company contribution to the defined contribution stakeholder scheme and a cash allowance.</p>	<p>Retirement benefits are not performance related.</p>	<p>There are no provisions to recover any sums paid.</p>
Variable pay			
<p>EIP – short term element The short term element of the EIP is designed to ensure focus on short term priorities for the benefit of customers, shareholders and other stakeholders. The combined elements of the EIP represent a significant proportion of the overall remuneration package and incentivise outperformance against targets.</p>	<p>Performance targets are set at the beginning of the year by the committee with up to 150% of base salary vesting each year depending on the performance against the targets set, as determined by the committee. All payments are at the ultimate discretion of the committee. 20% of the maximum is payable for achieving the threshold hurdle, rising to 80% of maximum at target level and with payments of up to 100% of the maximum level for stretch performance. The high threshold and target levels are equivalent to the previous variable pay schemes in place and reflect the greater emphasis placed on variable pay by the committee. These are offset by base salaries that are usually set at or below the market median.</p>	<p>A balance of financial and non-financial measures is selected by the committee at the start of each year. All targets are clear, stretching and measurable and use a combination of the main Key Performance Indicators for the company and progress on transformational projects. The measures agreed for 2020/21 are set out in more detail on page 368. In addition to the performance measures set out by the committee, there will always be an underpin that the committee must be satisfied that the financial and non-financial performance of the business over the performance period warrants the level of vesting.</p>	<p>Payments are subject to clawback in the event of misstatement of performance, errors in the assessment of performance conditions or misconduct.</p>

Component of remuneration and how it supports the Yorkshire Water strategy	How does this operate and what is the maximum that may be paid?	What performance measures are used and why?	Are there any provisions to recover sums paid?
<p>EIP – long term element The long term element of the EIP is designed to ensure focus on long term business goals and sustainability for the benefit of customers, shareholders and other stakeholders.</p> <p>The combined elements of the EIP represent a significant proportion of the overall remuneration package and incentivise outperformance against targets.</p>	<p>The long term element of the EIP is subject to the same performance measures as the short term element in year one. The maximum award for the long term element is 150% of base salary but this is then capped by the performance level in year one, with the capped amount being deferred in equal instalments to years three, four and five of the scheme.</p> <p>The instalments in years three, four and five are then subject to further longer term performance measures which may reduce the vested amount further.</p> <p>All payments are at the ultimate discretion of the committee.</p>	<p>The performance measures in year one are described on the previous page.</p> <p>The longer term performance measures are designed to ensure that performance does not deteriorate after the in year payment is made and to ensure that in year performance is not being enhanced to the detriment of the longer term.</p> <p>The measures agreed for 2020/21 are set out in more detail on page 368.</p> <p>In addition to the performance measures set out by the committee, there will always be an underpin that the committee must be satisfied that the financial and non-financial performance of the business over the performance period warrants the level of vesting.</p>	<p>Payments are subject to clawback in the event of misstatement of performance, errors in the assessment of performance conditions or misconduct.</p>

Non-executive directors’ policy table

Component of remuneration and how it supports the Yorkshire Water strategy	How does this operate and what is the maximum that may be paid?	What performance measures are used and why?	Are there any provisions to recover sums paid?
<p>Fees Fees are set to provide competitive pay to enable us to attract and retain the right calibre of individual and the right balance of skills on the board.</p>	<p>Fees are reviewed annually. Any increase will be guided by changes in market rates, time commitments and responsibility levels as well as by increases for the broader colleague population.</p> <p>The chair is paid an all-encompassing fee to take account of all board responsibilities. The other independent non-executive directors receive a base fee with additional fees paid for additional responsibility, such as the chairing of a committee or performing the role of the senior independent director.</p> <p>In exceptional circumstances, if there is a temporary yet material increase in the time commitments for non-executive directors, the company may pay extra fees to recognise the additional workload.</p> <p>We reimburse all of our non-executive directors for any normal business-related expenses.</p>	<p>Fees are not performance related; however, performance is addressed through regular one-to-one meetings between the chair and each independent non-executive director.</p> <p>The performance of the chair is reviewed at one-to-one meetings between the chair and the senior independent director.</p>	<p>There are no provisions to recover any sums paid.</p>

How does the remuneration policy for executive directors differ from that of other colleagues?

Overall the remuneration policy set for the executive directors is more heavily weighted towards performance-related variable pay than for other colleagues. As such, a greater proportion of their remuneration is dependent upon the successful delivery of the business strategy.

The key differences are noted in the table below:

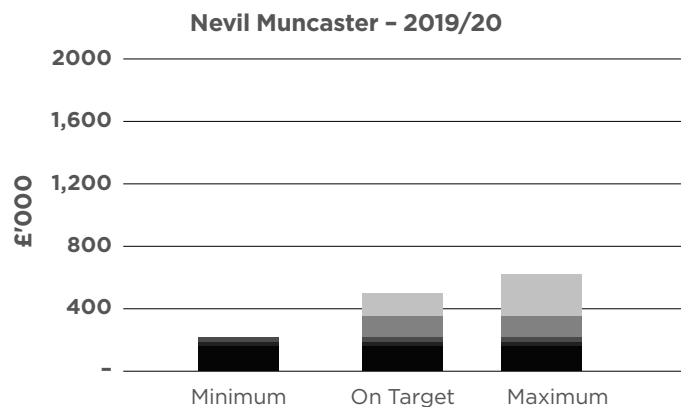
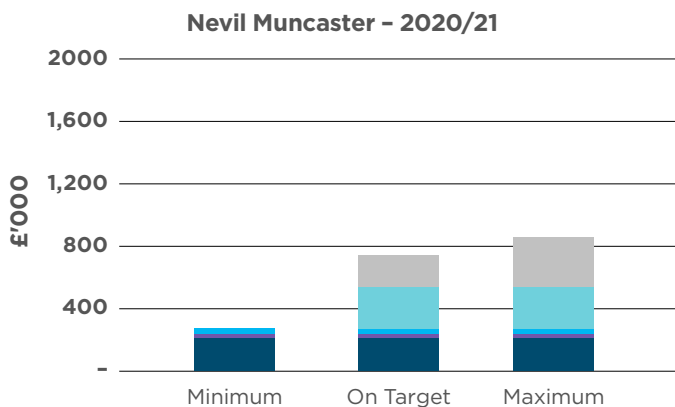
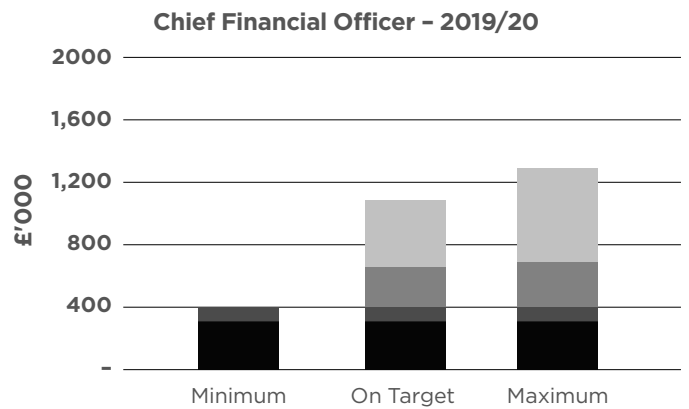
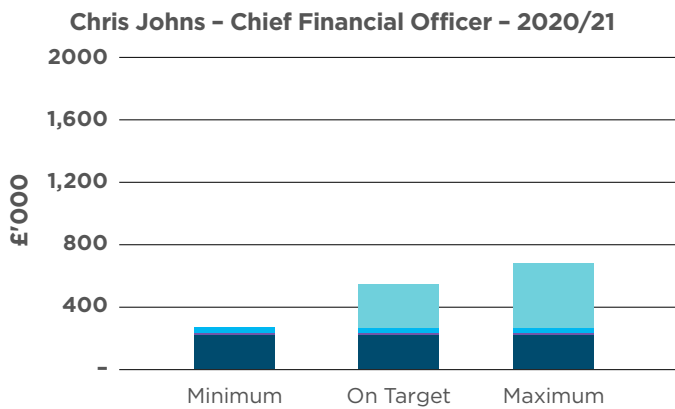
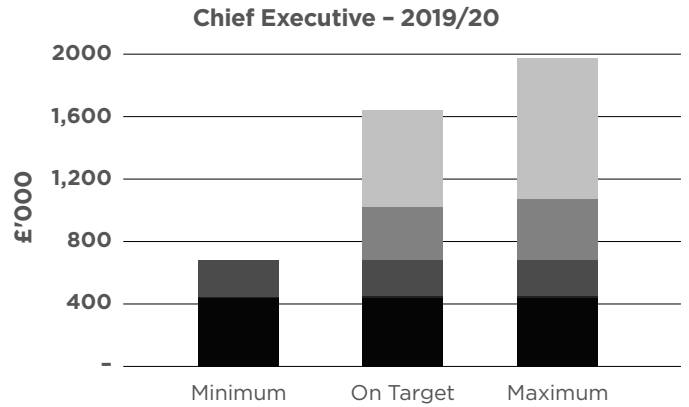
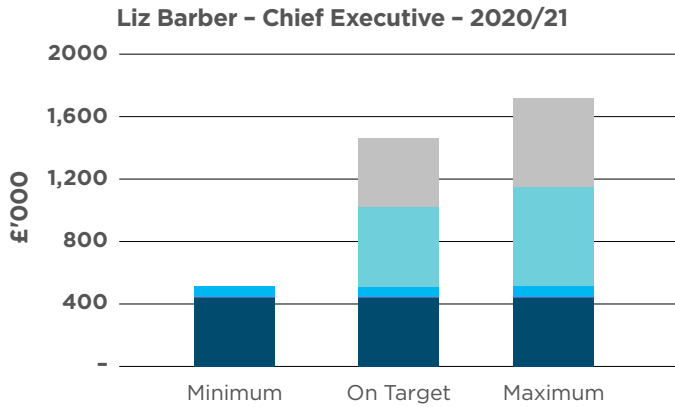
Remuneration component	Difference
Base salary	<p>Base salaries are reviewed in the same way for executive directors as for other senior colleagues, taking into account market rate information, internal reference points, individual performance, the scope of the role, the financial performance of the business and the average increases across the rest of the business.</p> <p>Most colleagues are covered by collective agreements which are negotiated based on our principles of affordability, fairness and transparency. The outcome of these negotiations is also taken into account when considering pay increases for other colleagues.</p> <p>We pay all colleagues, contract partners and service providers salaries at least equivalent to the voluntary real living wage.</p>
Benefits	<p>An increasing level of benefits is offered to colleagues as their job level increases. Those offered to the executive directors are consistent with those offered to other senior colleagues.</p>
Retirement benefits	<p>All colleagues are entitled to pension contributions from Yorkshire Water. The amount contributed increases as the colleague contribution increases. The policy for executive directors is now consistent with senior colleagues in the business with a maximum company contribution for new starters and newly promoted colleagues of 12% of base salary.</p> <p>It is not currently proposed to reduce existing contribution rates for existing colleagues who are not changing roles, although this will continue to be reviewed. Contributions across the business currently range from 6% to 24%.</p>
EIP	<p>Long term incentive awards are made only to those individuals who are most able to directly influence the business strategy. Along with the executive directors, senior managers are also invited to participate in the EIP. The performance measures and performance period are the same for all participants in the scheme. The level of award increases with seniority.</p> <p>Colleagues in Band 3 participate in an annual bonus scheme with payments of up to ten or 15% of salary, dependent on role. All other colleagues participate in a bonus scheme, which in 2020/21 awarded a fixed amount of £800 to all participants, which was paid in June 2020.</p>

What might executive directors be paid under the Remuneration Policy for 2020/21?

The charts on page 358 indicate how much each of the executive directors might receive under the Remuneration Policy for 2020/21 on a fixed, on-target and maximum basis.

It should be noted that the previous LTIP scheme has awards from 2018 and 2019 which may vest in 2020/21 and 2021/22 respectively. The potential vesting of the award made in 2018 has therefore been included in the graphs on the next page. This represents a transitional period which will be in place for two years, beyond which the only variable pay receivable will be from the new EIP.

To enable a comparison of the new policy with the old, we have also included the graphs that were reported in the Remuneration Report last year showing the remuneration potentially payable in 2019/2020:



■ Base Salary
 ■ Taxable Benefits
 ■ Pension
■ EIP
 ■ Old LTIP

■ Base Salary
 ■ Taxable Benefits
 ■ Pension
■ EIP
 ■ Old LTIP

Chart assumptions

The different scenarios shown in the graphs are:

- **Minimum** – where performance is below threshold and executive directors receive fixed pay only with no vesting under the new EIP or old LTIP scheme. Fixed pay comprises base salary, benefits and retirement benefits;
- **On-target** – where executive directors receive their fixed pay plus an EIP on-target pay-out of 80% of the maximum opportunity and vesting of 70% of the maximum under the old LTIP scheme awarded in 2018;
- **Maximum** – where performance meets or exceeds the maximum and the executive directors receive their fixed pay plus the maximum in-year vesting of the EIP and the maximum vesting of the old LTIP scheme awarded in 2018.

It should be noted that the charts show what could be earned by the executive directors based on the 2020/21 Remuneration Policy described on pages 367 to 368 and the numbers will therefore differ from those included in the table on page 367 which details what was actually earned by the executive directors in the year to 31 March 2020.

It should also be noted that Chris Johns joined the business on 1 June 2020 and therefore the amounts shown for the year 2020/21 are pro-rated to reflect the fact that he will only have completed ten months by the end of the financial year.

Recruitment policy

The remuneration package for a new executive director would be set in accordance with the terms of the prevailing Remuneration Policy at the time of appointment, considering the skills and experience of the individual, the market rate for a candidate of that experience and the importance of securing the relevant individual.

The table below sets out our policy on the recruitment of new permanent executive directors for each element of the remuneration package:

Remuneration component	Policy on recruitment
Base salary	<p>The salary would be provided at such a level as required to attract the most appropriate candidate. The aim would be to pay at or below the market median when benchmarked against other water companies or other utilities, in line with the current policy for existing executive directors.</p> <p>Where it is appropriate to set a lower salary initially, a series of increases above the level awarded to the wider workforce may be given over the following few years until the desired position is achieved, subject to individual performance. This may apply to those promoted internally in the business as well as to those recruited from outside.</p>
Benefits	<p>The benefits package we will offer will be set in line with the policy for existing executive directors.</p> <p>In addition to the benefits currently available to existing executive directors, we may also offer an allowance to cover relocation, travel and/or incidental expenses as appropriate.</p>
Retirement benefits	<p>The maximum pension contribution will be set in line with the policy for new executive directors at up to 12% of base salary.</p>
Executive incentive plan	<p>EIP awards will be made in line with the policy for other executive directors. In the year of recruitment an award may be made at a date outside of the usual annual awards, at the discretion of the committee.</p> <p>Different performance measures may be set initially, at the discretion of the committee, depending on the point in the financial year at which the individual joins. The award made will be pro-rated to the period of employment, with both the in year and deferred vesting amounts pro-rated accordingly.</p>
Buy-outs	<p>In addition to the above, we may also offer additional cash when we consider this to be in the best interests of shareholders and the business. Any such payments would be based solely on remuneration relinquished when leaving the former employer and would reflect, as far as possible, the nature and time horizons attaching to that remuneration and the impact of any performance conditions.</p> <p>Our policy on 'buying-out' of existing incentives granted by the executive's previous employer will depend on the circumstances of recruitment and will be negotiated on a case-by-case basis. There will not be a presumption in favour of buy-out, but it will be considered if necessary to attract the right candidate.</p>

In total the maximum variable pay level in the year of appointment – excluding the value of any buy-out awards – will be 150% of base salary through the EIP award.

For an internal executive appointment, any variable pay element awarded in respect of the prior role would be allowed to pay out according to its terms, adjusted as appropriate to take into account the appointment. In addition, any other ongoing remuneration obligations existing prior to appointment would be allowed to continue.

Non-executive director recruitment

The fee structure for non-executive director appointments will be based on the non-executive director fee policy as set out in the policy table.

Service contracts

Our policy is to set notice periods for executive directors at six months' notice from either party. Historically executive directors were recruited with 12 months' notice required from the company and six months from the director. These notice periods have not been changed retrospectively, therefore both Liz Barber and Nevil Muncaster are entitled to receive 12 months' notice from the company.

The current service agreement dates are set out in the table below:

Director	Date of Appointment	Date of current service agreement
Liz Barber	24 November 2010 ¹	15 July 2019
Chris Johns	1 June 2020	27 September 2019
Nevil Muncaster	29 May 2013 ²	13 March 2013

1. Liz Barber joined the board as Director of Finance, Regulation and Markets on 24 November 2010. She then became Chief Executive on 12 September 2019.
2. Nevil Muncaster joined the board as Director of Asset Management on 29 May 2013. He then became Chief Strategy & Regulation Officer on 1 October 2019.

Letters of appointment

Independent non-executive directors are appointed by letters of appointment for a period of two years. Appointments may be renewed by mutual agreement for further periods of up to two years subject to a total period of nine years' service with the company. The letters of appointment allow for termination by either party without a requirement for notice.

The appointment of the chairman is for a period of three years and may be renewed by mutual agreement for further periods of up to three years, subject to a total period of nine years' services with the company. The notice period is set at three months for either party.

The dates of the current letters of appointment are noted in the table [below]:

Director	Date of Appointment	Date of current letter of appointment
Anthony Rabin	August 2013	9 September 2019
Andrew Merrick	June 2019	30 May 2019
Ray O'Toole	June 2014	13 November 2018
Julia Unwin	January 2017	13 November 2018
Andrew Wyllie	September 2017	9 July 2019

The following non-executive director appointments were made in accordance with Clause 4 of the Shareholders Agreement dated 2010. This permits investors to appoint representatives to the company in accordance with their holdings.

Non-executive director	Appointment
Scott Auty	September 2017
Andrew Dench	September 2017
Mike Osborne	September 2017

Payments to executive directors who leave the business

The table below sets out our policy on payments in relation to executive directors who leave Yorkshire Water.

The committee is clear that contractual entitlements will be honoured, there will be a consistent approach to exit payments and no reward for poor performance. We will not pay anything if an executive director is dismissed for serious breach of contract, serious misconduct or under-performance or for acts that bring the executive director or Yorkshire Water into serious disrepute.

Remuneration component	Treatment on exit
Base salary	Salary will be paid for the contractual notice period. Where appropriate, we will seek to mitigate any payments due, however the committee has discretion to make a lump sum payment on termination in lieu of notice.
Benefits and retirement benefits	Benefits and retirement benefits will normally continue to be provided over the notice period. Where appropriate, we will seek to mitigate any payments due, however the committee has discretion to make a lump sum payment on termination equal to the value of the benefits payable during the notice period.
Variable Pay Schemes	<p>Normally awards will lapse on cessation of employment, unless the committee determines that the executive is a good leaver. Good leaver principles have been agreed by the committee and status is usually conferred for one of the following reasons: death, ill health, injury or disability, a change of control, redundancy or other circumstances at the discretion of the committee. Good leavers will be treated in accordance with the rules of the specific scheme. Colleagues leaving on the grounds of retirement will be considered on a case-by-case basis.</p> <p>Under the new EIP, any outstanding payments for good leavers will continue to be paid in line with the planned schedule, subject to the applicable performance measures. For any other leaving reason any outstanding payments will lapse in full. The committee retains discretion to alter the outstanding payments or to alter the date on which performance is calculated if it feels such decisions are appropriate in particular circumstances.</p>

In relation to a termination of employment, the committee may make payments in relation to any statutory entitlement or payments to settle compromise claims as necessary. The committee also retains the discretion to reimburse reasonable legal expenses incurred in relation to a termination of employment and to meet any transitional costs if deemed necessary. Payment may also be made in respect of accrued benefits, including untaken holiday entitlement.

Payments on a change of control, where a director’s employment is adversely changed, will be as on termination. There will be no enhanced provisions on a change of control.

The non-executive directors’ letters of appointment do not include any compensation for loss of office.

Policy on outside appointments

We believe that where executive directors hold directorships in other companies, Yorkshire Water can benefit from their experience. As a result, and subject to the board’s prior approval, executive directors may take on one substantial external non-executive directorship and retain the fees earned.

Departure of Richard Flint

Our Chief Executive, Richard Flint, retired from the board on 12 September 2019 and remained an employee of the company until 31 March 2020. All payments to Richard during the year have been made in accordance with our policy as stated (above). Further details on these payments can be found on pages 363 to 368.

Annual Report on Remuneration

This part of the Directors' Remuneration Report sets out the amounts we have paid to directors for the year ended 31 March 2020 and describes how the policy will be implemented in 2020/21. The financial information contained in this part of the report has been audited where indicated.

Single total figure table (audited)

	Current directors				Previous directors				Total	
	Liz Barber		Nevil Muncaster		Richard Flint ¹		Pamela Doherty ²			
	FY2020 £'000	FY2019 £'000	FY2020 £'000	FY2019 £'000	FY2020 £'000	FY2019 £'000	FY2020 £'000	FY2019 £'000	FY2020 £'000	FY2019 £'000
Fixed pay										
Base salary	378	300	198	169	195	422	-	141	771	1,032
Taxable benefits	9	9	27	27	3	9	-	8	39	53
Retirement benefits ³	63	75	39	34	93	216	-	29	195	354
Sub-total	450	384	264	230	291	647	-	178	1,005	1,439
Annual bonus ⁴	283	194	126	76	146	273	-	76	555	619
LTIP ⁵	430	284	185	122	496	408	-	114	1,111	928
Sub-total	713	478	311	198	642	681	-	190	1,666	1,547
Total	1,163	862	575	428	933	1,328	-	368	2,671	2,986

¹ Richard Flint retired from the board on 12 September 2019. The payments in the table above reflect the payments made to Richard whilst in his role as a director.

² Pamela Doherty stepped down from the board on 31 January 2019. The payments in the table above reflect the payments made to Pamela whilst in her role as a director.

³ Kelda Group Pension Plan (KGPP)

Richard Flint was a member of the KGPP. This is an unregistered arrangement which gave the following benefits:

	Benefit for each year of service	Additional lump sum for each year of service	Pension per annum accrued as at 31 March 2020 £'000	Lump sum accrued as at 31 March 2020 £'000	Pension per annum accrued as at 31 March 2019 £'000	Lump sum accrued as at 31 March 2019 £'000
Richard Flint	1/40th of pensionable pay	3/40th of pensionable pay	177	221	162	185

Normal retirement age is 65 but members may take benefits built up for service prior to 1 April 2013 unreduced from age 60 and benefits accrued from 1 April 2013 unreduced from age 63.

The figures in the Single Total Figure Table (above) for Richard show the change in value of the pension over the period to 12 September 2019, when Richard retired from the board, net of inflation and contributions from Richard.

Kelda Stakeholder+ Plan

Nevil Muncaster opted for a full salary supplement instead of a contribution to the Kelda Stakeholder+ Plan. He received a cash sum of £39,561 (2019: £33,724) in the year.

Liz Barber opted for a full salary supplement instead of a contribution to the Kelda Stakeholder+ Plan. She received a cash sum of £63,433 (2019: £75,000) in the year.

⁴ The figure for the annual bonus for FY2020 relates to performance for the year ended 31 March 2020, for which the payment will be made in July 2020.

⁵ The figures included above for the LTIP that vested during the year relate to the LTIP awards granted in 2017 which vested on 1 May 2020. Further details of the scheme and the vesting are on pages 365 and 366.

Annual bonus

The annual bonus was designed to reward the delivery of in-year targets. Performance measures were based on a balanced set of performance measures which were linked directly to the corporate strategy. We describe our strategy in our ARFS on pages 12 to 78. The annual bonus scheme ended on 31 March 2020 and has been replaced from 1 April 2020 by the EIP, further detail on which can be found on page 368.

The performance targets for the annual bonus in 2019/2020 were determined by the committee at the start of the financial year, taking into account the approved five-year

business plan, with targets set to ensure the potential outcomes were affordable and aligned with the annual budget approved by the board.

The annual bonus scheme for 2019/2020 consisted of both corporate objectives and transformational programme targets. Up to 70% of the maximum bonus was payable for the corporate objectives and up to 30% of the maximum bonus for progress in relation to transformational programmes.

The scheme and the targets achieved are shown in the table below:

	Threshold level - bonus starts to accrue	Target level - 85% of maximum bonus generated	Maximum level - maximum bonus generated	Actual performance	
Target	Performance required	Performance required	Performance required	Performance level	% bonus triggered
Corporate objectives					
Delivering for our customers					
Achievement of our non-financial performance commitments (10%)	8 out of 12 are met	10 out of 12 are met	12 out of 12 are met	12 out of 12 have been met	10.0%
Achievement of our financial performance commitments, excluding the four upper quartile measures (5%)	Achievement of 5% lower than Business Plan target for 2019/2020	Achievement of Business Plan target for 2019/2020	Achievement of 10% better than Business Plan target for 2019/2020	The financial performance commitments significantly exceeded the stretch target.	5.0%
Achievement of measures in relation to leakage, internal sewer flooding, category 3 pollution events and supply interruptions (15%)	ODI net reward of £28.8m achieved	ODI net reward of £30.3m achieved	ODI net reward of £31.5m achieved	ODI net reward is £29.2m	5.9%
Driving efficient financial performance					
EBITDA (25%)	97% of planned EBITDA delivered	100% of planned EBITDA delivered	104% of planned EBITDA delivered	93.7% of planned EBITDA delivered	17.4%
Ensuring everyone, every day is safe and well					
Lost time injury rate (LTIR) (3.33%), completion of leadership health and safety visits (3.33%) and day one referrals by managers for stress and musculoskeletal conditions (3.33%)	LTIR = 0.26	LTIR = 0.23	LTIR = 0.20	LTIR = 0.36	0.0%
	Leadership health and safety visits = 5 per person	Leadership health and safety visits = 6 per person	Leadership health and safety visits = 7 per person	Leadership health and safety visits = 7.8 per person	3.3%
	Day one referrals = 65%	Day one referrals = 70%	Day one referrals = 75%	Day one referrals = 62%	0.0%
Investing in our people					
Colleague engagement score (5%)	75%	78%	79%	77%	3.2%
Transformational programmes					
Delivery of company-wide projects of strategic importance driven by the CEO with clear YWLT accountability for delivery (30%)	2 of the 4 programmes are "on plan".	3 of the 4 programmes are "on plan".	4 of the 4 programmes are "on plan".	4 of the 4 programmes are "on plan".	30.0%
Total					74.8%

The actual bonus amount earned by each of the executive directors is shown in the table below:

Bonus 2019/2020			
Name	Maximum bonus % opportunity	% of salary earned in 2019/20	£'000
Richard Flint	100%	74.8%	325
Liz Barber	100%	74.8%	283
Nevil Muncaster	85% ¹	63.7%	126

The bonus payments were considered and approved by the committee in June 2020 and will be paid in July 2020. Further information on the matters taken into consideration, including the impact of Covid-19 on the business, can be found on page 50 of the ARFS.

1. During the year the maximum bonus eligibility for Nevil Muncaster changed from 70% to 100% with effect from 1 October 2019, when his role changed to Chief Strategy and Regulation Officer. This is equivalent to 85% for the full year.

LTIP

The LTIP was a rolling three year plan based on the achievement of specific performance conditions with targets set at the start of each performance period. The proportion of the award that vests following the performance period is dependent on the performance of the company during the three-year period.

Awards were made with effect from 1 April of each year and details of the specific targets relating to each award were set out in the Annual Report on Remuneration each year. The last awards under the scheme were made with effect from 1 April 2019. From 1 April 2020 the LTIP has been replaced by the EIP, further detail on which can be found on page 368.

Awards will not vest unless the committee is satisfied that underlying financial performance has been satisfactory over the performance period, considering any relevant factors, including the regulatory regime in place over the period. The committee has authority to exercise its discretion to reduce the level of vesting to any extent considered appropriate. Any amounts that vest are paid in cash to participants in July of each year.

Performance Condition	Performance
Customer Satisfaction Results from the Consumer Council for Water survey being higher than average performance by Yorkshire Water over the previous AMP (from 2010 to 2015).	The average customer satisfaction score in AMP5, from 2010 to 2015, was 92%. The survey results for 2019/2020 were 94% for water services and 90% for wastewater services. Therefore no reduction in vesting is triggered.
Value for Money Results from the Consumer Council for Water survey being higher than average performance by Yorkshire Water over the previous AMP (from 2010 to 2015).	The average customer satisfaction score in AMP5, from 2010 to 2015, was 75%. The survey results for 2019/2020 were 79% for water services and 80% for wastewater services. Therefore no reduction in vesting is triggered.
Cash flow performance over the performance period < 90% of target - no LTIP vesting 90% but < 100% of target - vesting pro-rated between 1% and 70% 100% but < 120% of target - vesting pro-rated between 70% and 100% 120% or higher of target - vesting at 100%	Adjusted EBITDA indicates a vesting of 74.8%.
Stability and Reliability performance condition 25% of the vesting determined by the two measures above will vest for each of the four Stability and Reliability Measures that are assessed by Ofwat as "stable" or "improving".	All four Stability and Reliability Measures have been assessed by Ofwat as "stable". Therefore, no reduction in vesting is triggered.

LTIP awards vesting in 2019

On 1 April 2017, awards were granted to Richard Flint and Liz Barber equivalent to 200% of base salary at that time and to Nevil Muncaster equivalent to 150% of base salary at that time.

The specific targets attached to the LTIP awards granted in 2017, and the performance achieved in the three-year period to 31 March 2020, are shown in the table below. These are slightly revised measures from those set out at the time of the award, due to changes that were made in the year ended 31 March 2019. Further information on the changes made and the rationale for these can be found in the Annual Report on Remuneration for the year ended 31 March 2019. The performance in the year therefore indicated a vesting of the 2017 LTIP awards of 74.8%.

The committee reviewed the performance of the scheme over the performance period and took into consideration the underlying financial and non-financial performance of the company over that period.

It concluded that the vesting of the scheme need not be adjusted to reflect any additional factors and therefore participants would receive 74.8% of their maximum award, which will be paid in cash in July 2020. Further information on the considerations, including taking into account the impact of Covid-19 on the business, can be found on page 50 of the ARFS. Further details of the actual amounts received by each of the executive directors are shown in the table on page 363.

Awards made under the LTIP (audited)

For the year 2019/2020, awards were made under the LTIP scheme with effect from 1 April 2019. The performance period for these awards runs for three years to 31 March 2022. Any amounts that vest under this scheme will be reported in the Directors' Remuneration Report for the year ended 31 March 2022.

The performance measures agreed for the scheme awarded in 2019 are set out in the table below:

LTIP 2019 design and performance measures

Performance Condition
<p>Cash flow performance over the performance period: < 90% of target - no LTIP vesting 90% but < 100% of target - vesting pro-rated between 1% and 70% 100% but < 120% of target - vesting pro-rated between 70% and 100% 120% or higher of target - vesting at 100%</p>
<p>The amount vesting above would then be reduced for non-performance in the following areas:</p> <ul style="list-style-type: none"> • Up to 10% reduction for non-performance in relation to people measures; • Up to 40% reduction for non-performance in relation to customer experience; and. • Up to 40% reduction for non-performance in relation to resilience.

These measures were selected by the committee to align the targets for the LTIP participants with the objectives of the business and our commitment to customers, our people and the effective delivery of our services.

The performance period for the LTIP granted in 2019 covers two different AMPs and therefore the measures chosen are believed to be measurable in both periods and are expected to be resilient to the changes that will take place as the business moves from one AMP to another.

Outstanding awards under the LTIP scheme as at 31 March 2020

	Effective date of award	Awards outstanding at 1 April 2019 £'000	Awards made in the year £'000	Vested during the year £'000	Lapsed in the year £'000	Awards outstanding at 31 March 2020 £'000	Face value of maximum award £'000	Award that would vest at threshold performance £'000	Earliest date of vesting
Liz Barber	01.04.2017	574	-	430	144	-	574	402	01.05.2020
	01.04.2018	600	-	-	-	600	600	420	01.05.2021
	01.04.2019	-	618	-	-	618	618	433	01.05.2022
Nevil Muncaster	01.04.2017	247	-	185	62	-	247	173	01.05.2020
	01.04.2018	253	-	-	-	253	253	177	01.05.2021
	01.04.2019	-	261	-	-	261	261	182	01.05.2022
Previous Directors									
Richard Flint¹	01.04.2017	824	-	616	208	-	824	577	01.05.2020
	01.04.2018	845	-	-	254	591	591	394	01.05.2021
	01.04.2019	-	870	-	588	282	282	197	01.05.2022
Pamela Doherty	01.04.2017	243	-	111	132	-	149	104	01.05.2020
	01.04.2018	70	-	-	-	70	70	49	01.05.2021

1. The awards made to Richard Flint in 2018 and 2019 have been pro-rated in the year to the date of his departure from the business on 31 March 2020. The lapsed part of these awards therefore indicates the reduction in the maximum award now outstanding as a result of the pro-rating.

EIP

The new EIP took effect from 1 April 2020 and awards of up to 150% of base salary for the short term element and 150% of base salary for the long term element were made to all executive directors with effect from 1 April 2020. The initial performance period for these awards runs to 31 March 2021. The committee will then assess performance against the criteria set out below and determine the proportion that has vested in the year. The short term element that has vested will then be paid in cash to participants in July 2021 whilst the long term element will be carried forward and will vest, subject to further performance criteria, in three equal instalments in July 2023, July 2024 and July 2025. Any amounts that vest under this scheme will be reported in the Directors' Remuneration Reports for the years ended 31 March 2021 to 2025.

The table below demonstrates the proportions of base salary that would be paid out under the scheme for executive directors at a threshold level, target level and maximum level, assuming the performance criteria for the deferred elements were met in full:

	FY2021	FY2022	FY2023	FY2024	FY2025	Total
Short term element						
Threshold (20% of maximum)	30%	-	-	-	-	30%
Target (80% of maximum)	120%	-	-	-	-	120%
Maximum (100%)	150%	-	-	-	-	150%
Long term element						
Threshold (20% of maximum)	-	-	10%	10%	10%	30%
Target (80% of maximum)	-	-	40%	40%	40%	120%
Maximum (100%)	-	-	50%	50%	50%	150%

The performance measures agreed for the scheme awarded in 2020 are set out in the table below:

EIP 2020 design and performance measures

The performance measures for the 2020 EIP have been agreed by the committee to have the following weightings:

	Weighting	Total Weighting
Operational and financial		35%
Regulatory operating expenditure	12.5%	
Capex spend	12.5%	
Operating cash	10%	
Customer, people and environment		60%
Colleague engagement score	5%	
Health and safety (LTIR)	5%	
Operational carbon	5%	
Environment	5%	
Customer satisfaction (C-MeX and D-MeX)	5%	
Accrued ODIs	25%	
Transformation	10%	
Strategic/other		5%
CMA process	5%	

These measures have been chosen by the committee to reflect the priorities of the business both at the current time and in the longer-term and reflect the needs of stakeholders through 60% of the performance being aligned to the needs of customers, people and the environment.

For each measure a threshold, target and maximum performance level has been determined. The total amount that may pay out if all performance measures reached the threshold level is 20%, the target level is 80% and the maximum is 100%. The specific targets which have been set for each of the measures have not been disclosed here due to commercial sensitivity, however the measures and the outcome against these will be disclosed in the Remuneration Report for the year ended 31 March 2021.

Payments for loss of office (audited)

Our policy in relation to exit payments for leavers is set out on page 362.

As noted on page 362, Richard Flint retired from the board on 12 September 2019. The payments made to Richard during his time as a director are disclosed in the table on page 363. Following his retirement from the board, Richard remained as an employee of the company, in accordance with his contractual notice period, until 31 March 2020 and continued to receive his salary and contractual benefits until this date.

In recognition of Richard leaving by reason of retirement, the committee resolved that he should be regarded as a good leaver in relation to the LTIP scheme and would therefore be eligible for any amounts that vested under the 2017, 2018 and 2019 schemes, pro-rated to the date of his leaving the company. The amount that has vested for the 2017 scheme is detailed on page 367. Richard will receive his payment under this scheme in July 2020.

It was also agreed that Richard would remain eligible to receive a bonus payment under the annual bonus scheme, subject to the satisfaction of the relevant performance conditions. Further information on the amount that vested can be found on page 365. This will be paid to Richard in July 2020.

There were no further payments made to Richard on his departure from the business and no payments were made for loss of office.

Payments to past directors (audited)

Pamela Doherty stepped down from the board on 31 January 2019. On 1 April 2017 she received an LTIP award of a maximum of £243,158, equivalent to 150% of her base salary upon her appointment to the board. As noted on page 365, this award vested on 1 May 2020 at 74.8% and therefore Pamela will receive a cash payment of £111,150 in relation to this award in July 2020.

No other payments to past directors were made in the year.

Non-executive directors

Single total figure table (audited)

The total annual fees paid to each non-executive director are shown below.

Non-executive director	FY2020 £'000	FY2019 £'000
Anthony Rabin ¹	275	275
Andrew Merrick ²	50	-
Raymond O'Toole	70	65
Julia Unwin	60	60
Andrew Wyllie	56	50
Previous non-executive director		
Teresa Robson-Capps ³	-	25

- The fee for Anthony Rabin includes his other responsibilities in relation to other Kelda Group Limited companies but is shown here in full. The proportion of his time spent on other group companies is recharged to the relevant company. This is explained in more detail in note 5 to the financial statements in the ARFS.
- Andrew Merrick joined the board on 1 June 2019 and as a result received a pro rata fee in the year.
- Teresa Robson-Capps stepped down from the board on 31 August 2018 and as a result received a pro rata fee.

The investor directors do not receive any remuneration from Yorkshire Water.

Remuneration of the chief executive

The table below sets out the remuneration for our chief executive in each of the last eight years. Unfortunately information prior to this date is not available. On 12 September 2019 a new chief executive was appointed and therefore the figures show the combined total paid to Richard Flint for the period from 1 April 2019 to 12 September 2019 and to Liz Barber for the period from 13 September 2019 to 31 March 2020.

	FY2020 £'000	FY2019 £'000	FY2018 £'000	FY2017 £'000	FY2016 £'000	FY2015 £'000	FY2014 £'000	FY2013 £'000
Total remuneration	1,469	1,328	932	1,328	1,231	1,291	861	1,288
Annual bonus paid against maximum opportunity	74.8%	64.6%	67.7%	73.5%	60.0%	87.0%	80.0%	85.0%
Long term incentive vesting against maximum opportunity	74.8%	50%	-	50%	50%	75%	-	60.0%

Chief executive pay ratio

The table below shows the pay ratio of our chief executive as required by the Companies (Miscellaneous Reporting) Regulations 2018. As our chief executive changed during the year, we have taken the total remuneration to be the remuneration of Richard Flint from 1 April 2019 up to 12 September 2019 added to the remuneration of Liz Barber from 13 September 2019 to 31 March 2020.

Year	Method	25th percentile pay ratio	Median pay ratio	75th percentile pay ratio
2019-2020	Option A	53 : 1	40 : 1	31 : 1

We have chosen Option A as we consider this to be the most statistically accurate methodology and uses the same calculation basis as shown for the total remuneration figure in the Single Total Figure Table on page 363. Our calculation was made by:

- Identifying all colleagues who received a base salary during the year ended 31 March 2020 and who were still employed on that date;
- Using the total pay and benefits received in respect of the year ended 31 March 2020, including bonuses earned for performance in the financial year and paid in July following the end of the financial year;
- Using the full-time equivalent figures for colleagues who were employed on a part-time basis or who were not employed for the full year;
- Taking into account any changes in working hours during the reporting period to ensure a consistent comparison; and
- Using the employer contribution to the defined benefit pension schemes for those colleagues within the schemes, to reduce administrative complexity.

Our Chief Executive has a significant proportion of her remuneration linked to variable pay and therefore it is expected that the ratios will vary each year depending on the outcome of the EIP. Participation in the EIP is currently limited to approximately 45 colleagues, with none of the individuals identified as P25, P50 and P75 in this group.

Set out in the table below are the base salary and the total remuneration details for those colleagues at the 25th percentile, the median and the 75th percentile:

	25th percentile	Median	75th percentile
Base salary	£18,412	£25,214	£34,562
Total pay and benefits	£27,588	£36,353	£48,008

The pay ratio calculation shows that in total remuneration terms, the Chief Executive earns 40 times that of the median employee. The pay ratio reflects the impact of the vesting of annual and long-term incentives which make up a higher proportion of the total remuneration of the Chief Executive compared with the wider workforce. These calculations have been independently verified by Ernst and Young.

This is the first year in which we have calculated the pay ratio in this way and therefore we do not have comparatives from previous years to compare this to. From next year the committee will consider the pay ratios in the context of the ratios reported in previous years, as well as other important metrics such as the gender pay gap and colleague engagement scores.

We have a whole range of policies and practices to ensure that colleagues are fairly rewarded. We also conduct an annual salary review that is underpinned by market benchmarking to ensure competitive and fair rates of pay are offered.

Change in remuneration

The table below sets out the change in the remuneration of the chief executive from the prior year in comparison to the average percentage change in respect of managers at Yorkshire Water and all colleagues. Due to the change of chief executive in the year, we have taken the remuneration of Liz Barber as at 31 March 2020 and compared it to the remuneration of Richard Flint as at 31 March 2019 to calculate the movements:

	% change in element between 2018/2019 and 2019/2020		
	Salary	Taxable benefits ¹	Annual bonus
Chief executive	3.0% increase	No change	19.3% increase
All colleagues	3.0% increase	No change	18.3% increase

¹ Taxable benefits include healthcare, car allowance and fuel provision for colleagues who receive such benefits.

The salary has been calculated by looking at colleagues in the same role on 31 March 2020 as at 31 March 2019 and calculating the change in salary between those two dates.

Relative spend on pay

The table below sets out the relative spend on pay for Yorkshire Water as a whole in comparison to distributions to shareholders:

	Year ended 31 March 2020 £m	Year ended 31 March 2019 £m	Percentage change
Total remuneration cost for all colleagues ¹	153.2	129.8	18%
Total distributions made ²	110.0	79.5	38.4%

¹ The total remuneration cost for all colleagues is taken from note 4 to the financial statements on page 157 of the ARFS and includes wages and salaries, social security costs and other pension costs.

² Total distributions made consists of £47.8m (2019: £46.7m) of distributions made to allow Kelda Holdings Limited to repay interest and loans to Yorkshire Water and £62.2m (2019: £32.8m) of other distributions, covering both current year (£32.1m) and 2020/21 (£30.1m) requirements.

Implementation of policy for 2020/21

The table below sets out how we will implement the Remuneration Policy for the 2020/21 financial year:

	Implementation in 2019/2020
Base salary	<p>The committee reviewed base salaries in March 2020 and agreed an increase of £26,000 (13.0%) for Nevil Muncaster with effect from 1 April 2020. Liz Barber recommended to the committee that she should not receive an increase to her pay in 2020, having received an increase when she stepped up to her new role as Chief Executive in September 2019. The base salaries for 2020/2021 are therefore as follows:</p> <ul style="list-style-type: none"> • Liz Barber: unchanged at £435,000 • Nevil Muncaster: £226,000 from 1 April 2020 <p>Chris Johns joined the company on 1 June 2020 on a base salary of £300,000.</p> <p>Further information for the rationale for this increase is on page 350.</p>
Benefits	Benefits remain unchanged from 2019/2020.
Retirement benefits	Retirement benefits have reduced from 2019/2020 with a new policy of company pension contributions for executive directors being capped at 12% of base salary. Liz Barber moved to the new policy from her appointment as Chief Executive on 12 September 2019 and Nevil Muncaster with effect from 1 April 2020.
EIP	EIP awards made with effect from 1 April 2020 are equivalent to a maximum of 150% of base salary for all executive directors for the short term element and 150% of base salary for the long term element, with the long term element potentially vesting in equal instalments in years three, four and five subject to further performance conditions. Further information on the performance conditions is shown on page 368. The maximum annual variable pay is consistent with the previous policy for executive directors, however in prior years the maximum for the Chief Strategy and Regulation Officer was 70% for the annual bonus and 150% for the LTIP scheme. From 1 April 2020 this has increased to be aligned with the other executive directors so that all receive the same maximum percentage variable pay to reflect the level of responsibility and contribution to company performance that is common across all of the executive directors.

Non-executive directors

The board has not proposed any increase to non-executive director fees for the 2020/2021 financial year. This will next be subject to an annual review in March 2021. The current fees to be paid are set out below:

	£'000
Chairman fee	275
Base independent non-executive director fee	50
Additional fee for committee chair ¹	10
Additional fee for senior independent director	10

1. The additional fee for the role of committee chair is not paid to the chairman for his role as nomination committee chair. The fee paid to Anthony as chairman already encompasses his additional role as committee chair.

The membership and attendance at committee meetings during the year is shown in the table (above). In September 2019 Ray O'Toole took over the position of chair of the committee from Julia Unwin and Andrew Wyllie joined the committee in place of Andrew Merrick. Meetings are also attended by the chief executive, the chief people officer, the head of reward and the company secretary. Liz Barber, our chief executive, is not present when her own reward is discussed.

The remuneration committee is a sub-committee of the board and has six scheduled meetings a year. Additional meetings are held as and when required. Two additional meetings were held in the year; in July 2019 to approve the proposed remuneration for Liz Barber on her appointment as chief executive, and in November 2019 to consider the departure of a senior colleague from the business and to receive an update on recruitment to senior roles across the Company.

The specific matters considered by the committee at each of the meetings are shown in the table below:

Meeting	Matters considered
April 2019	<ul style="list-style-type: none"> • Review of the draft Remuneration Report for 2018-2019. • Update on the performance in relation to the LTIP scheme for 2016-2019 and the bonus scheme for 2018/2019. • Approval of the performance measures for the 2019/2020 annual bonus scheme and the 2019 LTIP award. • An update on the review of executive reward and the requirements in relation to remuneration under the UK Corporate Governance Code. • Review and approval of the remuneration of Nevil Muncaster. • Review of the good leaver principles to be followed by the committee. • Approval of revised terms of reference for the committee.
July 2019	<ul style="list-style-type: none"> • Update on the review of executive reward, including approval of the key principles to be applied in the review. • A detailed review of the remuneration requirements under the UK Corporate Governance Code with particular focus on the pension contribution requirements. • Review and approval of the final draft of the Remuneration Report for 2018/2019. • Approval of the good leaver status for Richard Flint to be granted upon his retirement from the business. • Approval of the remuneration to be offered to the new Chief Technology and Information Officer.
July 2019 – additional meeting	<ul style="list-style-type: none"> • Review and approval of the proposed remuneration for Liz Barber, upon her appointment to the role of chief executive.
September 2019	<ul style="list-style-type: none"> • Update on the review of executive reward. • Consideration of the remuneration of a senior colleague in relation to his retirement.
November 2019	<ul style="list-style-type: none"> • Update on the review of executive reward. • Initial review of the gender pay gap report.
November 2019 – additional meeting	<ul style="list-style-type: none"> • Review and approval of the remuneration arrangements relating to the departure of a senior colleague from the business. • Update on recruitment of senior roles within the organisation.
January 2020	<ul style="list-style-type: none"> • Update on the performance of the measures for the LTIP 2017-2020 and the annual bonus for 2019/2020. • Update on the review of executive reward. • Approval of the pay budget for the employee pay review across the business. • Review of the pension policy for executive directors. • Review of the policy in relation to redundancy payments. • Update on recruitment of senior roles within the organisation. • Review of the draft Remuneration Report for 2019/2020.
March 2020	<ul style="list-style-type: none"> • Update on the review of executive reward. • Review and approval of the gender pay gap report. • Review and approval of the pay awards for executive directors and senior management, effective from 1 April 2020. • Approval of the remuneration to be offered to the new Chief Financial Officer, the new Chief Operating Officer and the new Director of Health and Safety.

During the year under review, the committee received remuneration advice from PricewaterhouseCoopers LLP, who received fees of £103,000 for their advice. This was specifically in relation to the review of executive reward. PricewaterhouseCoopers LLP has provided other services to the business during the year, including assisting us with a review of employment terms and conditions for colleagues across the business. This was taken into account in the choice of advisor for the executive reward work and it was concluded that this did not compromise their independence from the business. PricewaterhouseCoopers LLP is a signatory to the Remuneration Consultants Group Code of Conduct and any advice received is governed by that Code.

The committee has reviewed the way in which PricewaterhouseCoopers LLP operates and its relationship with the business and is satisfied that the advice it receives is independent and objective.

In accordance with its terms of reference, the committee is responsible for:

- Setting the Remuneration Policy for all executive directors and YWLT members, including pension rights and any compensation payments, taking into account relevant legal and statutory requirements, the UK Corporate Governance Code and associated guidance, having regard to pay and employment conditions across the Company;
- Considering the clarity, simplicity, risk, predictability, proportionality and alignment to culture of the Remuneration Policy;
- Giving full consideration to succession planning for directors and other senior executives, taking into account the challenges and opportunities facing the Company and the skills and expertise needed in the future;
- Overseeing the development of a diverse group of employees for succession to ensure Yorkshire Water is a resilient and high-performing business over the longer term, which has the leadership and specialist talent it needs;
- Reviewing the work performed by Human Resources to identify key roles within the business and the mitigation of the risk to business performance if vacated;
- Receiving updates on legislation and best practice in relation to diversity and inclusion and overseeing the initiatives that promote a diverse and inclusive workforce at every level of the organisation, monitoring the impact of these initiatives and reviewing reporting on such matters;
- Reviewing information on remuneration in other companies of comparable scale and complexity;
- Establishing the selection criteria, selecting, appointing and setting the terms of reference for any remuneration consultants who advise the committee;
- Reviewing the design of all long term incentive plans for approval by the Board;
- Ensuring that contractual terms on termination, and any payments made, are fair to the individual and the company, that failure is not rewarded and that the duty to mitigate loss is fully recognised;
- Overseeing any major changes in colleague benefits structures throughout the company; and
- Agreeing the policy for authorising claims for expenses from the directors.

Copies of the Terms of Reference are available from the company secretary or on our website, yorkshirewater.com

Consideration of shareholders' views

The appointment of three directors representing shareholders to the board of Yorkshire Water in September 2017 enables a direct flow of communication and sharing of views by shareholders to the board. Two directors representing our shareholders sit on the remuneration committee.

Outside appointments

In 2019/2020 Liz Barber received £17,333 for her role as non-executive director and chair of the audit committee for KCOM Group PLC. She was entitled to retain this fee. Liz resigned from the board of KCOM Group PLC on 1 August 2019. No other fees were received by the executive directors for their outside appointments.

Signed by order of the board



Kathy Smith
Company Secretary
15 July 2020

Statement as to disclosure of information to auditors

Each director in office at the date of this report confirms that:

- So far as the director is aware, there is no relevant audit information of which the company's auditors are unaware; and
- Each director has taken all the steps he or she ought to have taken as a director in order to make him or herself aware of any relevant audit information, and to establish that the company's auditors are aware of that information.

Statement on dividend policy for the appointed business

A dividend of £110.0m was paid in the year (2018/2019: £79.5m), broken down as follows:

	2019/2020 £m	2018/2019 £m
Gross dividends	110.0	79.5
Dividends used to make inter-company interest payments	(47.8)	(46.7)
Dividends used by Kelda Group to pay head office costs and Kelda Finance interest	(62.2)	(32.8)
Net distributions available to shareholders of Kelda Holdings Limited	-	-

The company's dividend policy is to

- Deliver real growth in dividends recognising the management of economic risks, the continuing need for investment of profits in the business and to pay additional dividends which reflect efficiency improvement, and particularly improvements beyond those assumed in the determination of price limits.
- To pay dividends in respect of the non-regulated business reflecting the profitability of those activities.
- Where it is foreseeable that the company will have sufficient profits available for distribution, to continue to pay annual dividends consistent with this policy. The company can also pay special dividends as part of any capital reorganisation which the Board concludes to be in the best interests of the company and complies with its obligations under its licence.

The 2019/2020 dividend payments include £30.1m to cover Kelda head office costs and Kelda Finance interest for 2020/2021. The directors consider that the principles of the policy still apply for future years.

No dividends have been proposed post year-end (2018/2019 £nil).

Accounting policy note for price control units

The Annual Performance Tables that contain the regulatory accounts have been prepared in accordance with FRS102, except for capitalisation of interest and the presentation of grants and contributions. Details of all significant accounting policies are detailed with Yorkshire Water’s Annual Report and Financial Statements.

Ofwat has implemented four price controls, there are one each for retail water and sewerage services to household and non-household customers, one for wholesale water services and one for wholesale wastewater services. Using targeted price controls allows all stakeholders to understand the costs of the company by activity. Yorkshire Water applies all regulatory accounting guidelines to ensure the costs that are reported by the price control segments are consistent, non-discriminatory and transparent. The methodology to achieve these requirements and the governance in place over the process is explained in [Appendix 3](#) Methodology Statement.

Note on revenue recognition

The difference between statutory and regulatory policy on revenue recognition is explained in [Section 8](#) of this APR within Table 1 commentary. There is no turnover recognised for unoccupied properties. Yorkshire Water does not bill known unoccupied properties. If a bill is raised and it is subsequently identified that the property is unoccupied then the bill is cancelled and removed from revenue.

Water and sewerage charges fall into the following three categories:

Category	Business rule applied
Charges payable in full	<ul style="list-style-type: none"> Occupied and benefiting from supply. Unoccupied and benefiting from supply, which includes properties where significant renovation, redecoration or building work is being undertaken and where there is any known regular use of water.
Charges payable in part	<ul style="list-style-type: none"> Metered standing charges, payable on metered properties which are still connected. Surface water charge. Sewerage unmetered tariff, payable on unmetered, occupied properties where the water supply is disconnected but sewerage connection is still provided. Surface water and highway drainage, payable on occupied properties where the water supply is disconnected.
Not chargeable (void properties)	<p>Properties which are unoccupied are not chargeable for water and sewerage therefore no billing is raised and no turnover recognised in respect of these properties. To be classified as unoccupied a property must meet at least one of the following criteria:</p> <ul style="list-style-type: none"> A property is not benefiting from a water supply. A new property has been connected but is empty and not benefiting from supply. The company has been informed that the customer has left the property, it is not benefiting from supply and not expected to be reoccupied immediately. It has been disconnected following a customer request. The identity of the customer is unknown. Where the customer is in a care home, long-term hospitalisation, in prison, overseas long term, temporarily relocated due to a flood or in the event of the death of the customer.

Voids management process

Yorkshire Water has a robust process to determine whether a property is occupied and therefore whether charges are due. The occupier is any person who owns a premises or who has agreed to pay water and sewerage services in respect of the premises. The property management process is followed to identify whether the property is occupied or not and if occupied to identify the chargeable person and raise a bill.

Yorkshire Water adopts a risk-based approach to its voids to ensure the process is cost effective, whilst targeting high risk properties. The property management process, therefore, uses several different tools to manage voids including customer telephone contact, mailings, meter readings, residency checks using credit reference agencies and physical inspections. If the property management process confirms that the property is unoccupied, the property will be declared void.

New properties

All new properties are metered. Charges accrue from the date at which the meter is installed. The developer is billed between the date of connection and first occupancy and this is recognised as turnover. If the developer is no longer responsible for the property and no new occupier has been identified, the property management process referred to above is followed to identify the new occupier. Until the new occupier has been identified the property is treated as unoccupied and is not billed.

Measured accrual

Measured income of £627.6m in 2019/2020 compared to £614.3m in 2018/2019 has been billed (in arrears) to customers in the year. The measured income accrual of £63.2m (2018/2019: £77.7m) is an estimation of the amount of water and wastewater charges unbilled at the year end. Key points to consider around this accrual are as follows:

- The accrual calculation is system generated based algorithms. The system methodology uses historical water consumption and tariff data at a customer account level. For high billing value accounts, additional manual adjustments are made where the latest customer intelligence and billing data varies from the system generated calculations.
- Each year following the year end, a review of the actual amount billed against the accrual is conducted to examine the accuracy of the measured accrual. For 2018/2019 the review indicated an overestimation of the measured accrual of £2.2m (2017/2018 £1.4m underestimation).

A consistent approach has been taken in this area.

Note on capitalisation policy

Costs are capitalised following the company's capitalisation policy which states that capital expenditure includes:

- Acquisition of land and buildings.
- Expenditure of more than £3,000 on the construction, provision, purchase, replacement or improvement of other fixed assets or their major renewal. Where individual items each costing less than £3,000 are part of an approved project falling within this definition then the whole of the expenditure is to be capitalised, e.g. Initial furniture and equipment for newly constructed premises.
- Salaries, salaries on cost and associated costs of staff employed on capital works.

The cost of a tangible fixed asset comprises its purchase price and any costs directly attributable to bringing it into working condition for its intended use. Any other costs are treated as operating expenditure.

Directly attributable costs are:

- The labour costs of Group employees arising directly from construction or acquisition of the tangible fixed asset.
- The incremental costs to the Group that would have been avoided only if the tangible fixed asset had not been constructed or acquired.

Administration and other general overhead costs are excluded from the cost of a tangible fixed asset.

Note on bad debt policy

Debt is only written off after all available economic options for collecting the debt have been exhausted and the debt has been deemed to be uncollectable. This may be because the debt is considered to be impossible, impractical, inefficient or uneconomic to collect. Debt may also be written off as part of the customer help schemes that Yorkshire Water offers.

Situations where this may arise and where debt may be written off are as follows:

- Where the customer has absconded without paying and strategies to trace their whereabouts and collect outstanding monies have been fully exhausted.
- Where the customer has died without leaving an estate or has left an insufficient estate on which to levy execution.
- Where the customer does not have any assets/has insufficient assets on which to levy execution.
- Where the age and/or value of the debt makes it uneconomic to pursue – all debts of less than £65 are written off.
- Where county court proceedings and attempts to recover the debt by debt collection agencies have proved unsuccessful.
- Where the customer has been declared bankrupt, is in liquidation or is subject to insolvency proceedings or a debt relief order and no dividend has been or is likely to be received.

Bad and doubtful debts provisions policy

The bad debt provision is charged to operating costs to reflect the company's assessment of the risk of non-recoverability of debtors. It is calculated by applying expected residual debt rates to debts outstanding at the end of the accounting period. These rates consider the age of the debt, write offs, payment history and type of debt.

The provision is built on a 'by customer' basis ageing all debt by customer against the oldest invoice date. It is calculated by applying expected residual debt rates to arrears outstanding at the end of the accounting period.

The residual debt values are tracked over a period of 2 years and these rates are then applied to the debts outstanding at the end of the accounting period aged on a 'by customer' basis. The remaining debt values are then fully provided for.

The bad and doubtful debts provisioning policy is applied to both unmeasured and measured accounts. A provision of £49.9m is held at 31 March 2020 (31 March 2019: £40.4m). The main elements of the provision are as follows:

- £26.8m unmeasured debtor provision (direct billing). This is calculated using information based on the age of debts.
- £14.4m measured debtor provision. This is calculated using information based on the age of debts.
- £1.8m unbilled metered accounts provision.
- £5.7m provision relating to the Covid-19 pandemic and resulting economic impact.

As is the case with any accounting estimate, actual amounts recovered may differ from the estimated levels of recovery which would impact on operating results. The Yorkshire Water website contains details of our guide to debt recovery services.

Movement in trade debtor balance

The movement between the 2 years is as follows:

	2018/2019 £m	2019/2020 £m	Movement £m
Trade debtors	251.2	281.4	30.2
Bad debt provision	-40.4	-49.9	-9.5
Total	210.8	231.5	20.7

Statement on sufficiency of non-financial resources

Compliance with paragraph 3.1 of Condition K at the end of the financial year.

As required in paragraph 3.1 of Condition K of the Licence, the directors state that as at 31 March 2020, if a special administration order had been made under the Water Industry Act 1991, Yorkshire Water Services Limited would have had available, in their opinion, sufficient rights and assets (not including financial resources) to have enabled the special administrator to manage the affairs, business and properties of the company so that the purpose of the order could have been achieved.

Ring-Fencing Certificate: Certificate of Adequacy for Yorkshire Water (sufficiency of financial resources and facilities)

In line with the requirements in condition I13 of the Yorkshire Water Services Instrument of Appointment, the Board of Directors (the Board) confirm that:

1. Yorkshire Water Services Limited (Yorkshire Water) shall at all times act in the manner best calculated to ensure that it has adequate: financial resources and facilities; management resources; and systems of planning and internal control, to enable it to secure the carrying out of the Regulated Activities including the investment programme necessary to fulfil its obligations under the Appointment(s).
and that in accordance with condition I17:
2. in the opinion of the Board, Yorkshire Water has available to it sufficient financial resources and facilities to enable it to carry out, for at least the next 12 months, the Regulated Activities (including the investment programme necessary to fulfil Yorkshire Water's obligations under the Appointment(s));
3. in the opinion of the Board, Yorkshire Water will, for at least the next 12 months, have available to it:
 - (a) financial resources and facilities;
 - (b) management resources;
 - (c) systems of planning and internal control; and
 - (d) rights and resources other than financial resources

which are sufficient to enable it to carry out those functions as required by paragraph 1 above.

In making this declaration, the Directors have taken into account the following key areas:

Financial resources and facilities

This area is supported by a detailed going concern review, which has considered:

- The company's business activities, together with the factors likely to affect its future development and performance, as described within the Strategic Report within the Yorkshire Water Annual Report and Financial Statements (ARFS);
- Performance against the AMP6 Final Determination, as detailed in [Section 4](#) and [Section 8](#) of Yorkshire Water's Annual Performance Report (APR);
- The company's cash position including available cash and committed undrawn bank facilities, headroom and details of refinancing activity;
- The company's available funds to cover operating and capital investment activities of the company for the twelve months from the date of signing the Financial Statements;
- Compliance with covenants associated with our securitised financing arrangements;
- The company's business plan for the five-year AMP7 period;
- The board's decision to challenge the AMP7 Final Determination with the Competition and Markets Authority (CMA); and
- The potential impact of the Covid-19 pandemic and economic impact of the lockdown restrictions.

Detail of the going concern review is shown within the Directors Report section of the ARFS. In addition, the company has completed a long-term viability assessment for the ten years to 31 March 2030, details of which are shown in the ARFS.

Further information detailing our credit ratings and financing arrangements is shown in the ARFS within the section titled 'Our financial performance and governance'.

The banking arrangements of the company operate on a pooled basis with other members of the Yorkshire Water Financing Group and the bank balances of each subsidiary can be offset against each other. The company had guaranteed bonds with Yorkshire Water Services Finance Limited and Yorkshire Water Finance Plc at 31 March 2020 as detailed in note 24 to the Yorkshire Water Financial Statements.

Amounts owed to group and subsidiary companies are detailed in notes 15, 16 and 17 of the Yorkshire Water Financial Statements.

Management resources

We have applied good governance principles in the way in which the Board and its supporting committees operate. We have reported on how we have complied with the UK Corporate Governance Code, the Ofwat Board Leadership, Transparency and Governance Principles and the Wates Corporate Governance Principles for Large Private Companies. This information can be found in [Section 7](#) of the APR and in the Governance Report of the ARFS.

The ARFS also includes reports from board committees reporting to the Board on management activities and resources in the following areas:

- Nomination Committee;
- Social Value Committee;
- Safety, Health and Environment Committee;
- Audit Committee; and
- Remuneration Committee.

The 'Our people' section of the ARFS discusses our processes for:

- Health, safety and wellbeing of our employees;
- Attracting great people and maintaining the skills we need;
- Championing diversity;

Attracting and maintaining the talent and culture required to achieve our objectives is considered a principal risk. Processes to mitigate this risk and assurance in this area are discussed within the section titled 'Our principle risks' in the ARFS.

The company's employment policies and strategy are described in detail in the Directors' Report of the ARFS. This section also discusses our new Colleague Engagement Forum where nominated and selected colleagues represent their business areas at a company level on a wide range of topics, including remuneration. The minutes of this forum are reviewed at each board meeting. Regular colleague engagement surveys are undertaken and the resulting colleague engagement score forms part of the measures of the annual bonus scheme.

The balance of management skills and recruitment processes at board level are considered by our Nomination Committee and are discussed in the Directors' Report and in the Nomination Committee report, both contained within the ARFS. Succession planning for Yorkshire Water directors and other senior executives is within the remit of the Remuneration Committee and discussed in the Remuneration Committee report contained within the ARFS.

Independence of the independent non-executive directors is reviewed annually by the Board as noted in the Corporate Governance report in the ARFS. The Board believe that all remain wholly independent in relation to the Corporate Governance Code at the date of approval of the ARFS.

Systems of planning and internal control

The Audit Committee monitors the effectiveness and operation of Yorkshire Water's system of internal control on behalf of the Board. Our controls are designed to achieve compliance with obligations and manage the risk of failing to achieve the business objectives we have agreed with our customers and our regulators. The operational policies and procedures which set out these controls are contained within the Integrated Management System, or similar repositories, and achieve international quality standards for Environmental Management, Quality Management, Occupational Health and Safety and Asset Management.

Three lines of assurance work together to ensure that there is adequate, proportionate coverage across the whole control environment, including all corporate risks, and provide confidence to senior leaders and other stakeholders over the adequacy of the design and operation of the controls. The outcome from this integrated assurance is reported to the risk owners to inform decision making. The achievement of actions to address identified control weaknesses is monitored by the Risk and Resilience Committee as well as the Audit Committee. It helps senior managers understand the true risk profile, current levels of control and increasingly the culture in our business.

The company's formal risk appetite and management processes review, monitor and report on the company's risks and mitigating controls and considers the potential impact on the long-term viability of the company. The long-term viability statement as at 31 March 2020 covers a ten-year period.

Detail of Yorkshire Water's risks, risk appetite, mitigating controls and assurance process are detailed within the section 'Identifying and managing our risks' in the ARFS. The findings from the audit of our 2019/2020 annual Control and Risk Self-Assessment (CRSA) process are shown in section 3 of the Risk and Compliance Statement, as published within the APR. This confirms that we have a good understanding of the Company's relevant obligations and appropriate systems and processes in place to run the business and identify and manage risks in a way that meets its relevant obligations.

Other policies relating to this area are discussed in the ARFS as follows:

- Ethical behaviour, anti-corruption and anti-bribery (see the section 'Our people' in the ARFS).
- 'Speak Up', our whistleblowing policy is reviewed regularly by the Audit Committee (see the Audit Committee report within the ARFS).

Detail on how the Board sets ambitions, how we monitor performance and make decisions, how we involve our customers and stakeholders and how we change and update our commitments is provided in the Board Statement on Company Direction and Performance, as published within the APR.

Rights and resources other than financial resources

Work has been undertaken in the last year to review the purpose, vision and values of the company. This process includes working groups with representation from across our business, involving a broad range of colleagues, stakeholders and customers, with the Board participating as a further working group. Proposals were reviewed by the Board throughout the process and approved in January 2020.

Our company purpose sets out what we are here to do and is now defined as: **To play water's role in making Yorkshire a great place to be - now and always.**

Our company vision is **Putting people at the heart of everything we do.** This reflects our awareness that customers, colleagues and stakeholders should be at the heart of all we do and reflects the sense of social purpose that is felt across the business, including at board level.

The Directors' Report in the ARFS further describes the company's purpose, strategy, values and desired behaviours.

Over the last six months, the leadership team has been reshaped to ensure we have the right skills to lead the company into the new five-year asset management period. In the 2019/2020 financial year, the company recruited a Chief Information and Technology Officer who provides insight and updates to the Board on all technology matters. This role was specifically identified through a board skills review.

In 2019/2020 we continued with the investment in and implementation of the upgraded SAP system. New technology has been instrumental in improving the effectiveness and sustainability of our operations, for example in waste management and renewable energy, pollution reduction and leakage detection and repairs across the region. There are plans to continue to develop SAP across the business, including implementation of the work management systems, to ensure an integrated approach across activities.

The Asset Strategy and Planning team assures that the design and build of assets meets our future needs and quality standards. Our 'Disclosing our climate change risk and strategy' section in the ARFS details how we will adapt our assets and services to the climate change we can reasonably expect in the future based on latest expert analysis.

Our Insurance team also works to ensure that we manage and mitigate our exposure to costs from public liabilities and damage to our assets.

Our investment and operating strategies fully embrace totex decision making approaches.

Contracting

Our Board Investment Committee (BIC), uses delegated authority from the Board to govern the effective and efficient delivery of our investment programmes and deliver best value for customers and the business. The committee oversees all totex expenditure in line with the approved five-year plan.

Our sustainable procurement strategy sets out our objective to ensure the resilience of our supply chain enables us to provide our services to customers in the long-term. This is discussed in the 'Our people' section in the ARFS.

Transactions with associated companies and checks that these contracts comply with licence requirements are detailed within the Accounting Separation Methodology, which is published in [Appendix 3](#) of the APR, and within the transfer pricing disclosures in [Appendix 4](#) of the APR.

Compliance with the licence provision on cross-subsidies between Yorkshire Water and associated companies is detailed within the Accounting Separation Methodology, which is published in [Appendix 3](#) of the APR, and within the transfer pricing disclosures in [Appendix 4](#) of the APR.

Material issues or circumstances

In addition to the risk management processes detailed on page 56 of the ARFS, an extensive risk assessment was undertaken of the full range of principal and emerging risks faced by the company as part of our going concern and long-term viability assessment processes. Detail of our long-term viability review can be found in the ARFS.

The Audit Committee reviewed the significant issues facing the business at the March 2020 committee meeting, as detailed in our Audit Committee Report in the Yorkshire Water ARFS. A detailed paper on going concern was considered at the audit committee meeting on 8 July 2020 including updated information available at that date. Detail of the going concern review, including available mitigations to the issues identified, is shown within the Directors Report section of the ARFS.

In the course of the year, we have dealt with three major storms and consequent flooding events. Over 40 of our assets, ranging from pumping stations through to major wastewater treatment works such as Blackburn Meadows, were affected by the widespread flooding in the Don Valley in November 2019.

Although many continued to operate despite the inundation, damage was extensive and there are unexpected costs associated with the reinstatement. More information on the flooding events is provided in the CEO Statement in the ARFS and in [Section 4](#) of the APR.

As detailed above, Yorkshire Water's CMA challenge and the Covid-19 pandemic and economic impact of the lockdown restrictions were identified as material challenges and uncertainties for the 12 month period covered by the Condition I17 certificate. However, taking into account the strength of the mitigations available, the directors consider that the company is well placed to manage its business risks successfully and meet the requirements of the Condition I17 Certificate.

Statement Approval

This statement, and supporting evidence, has been reviewed by the external financial auditors, Deloitte, as part of the annual audits of Yorkshire Water's statutory accounts and regulatory accounts. A report from Deloitte has been provided to Ofwat on this matter.

In approving this statement, the Board has considered a wide range of factors to take a holistic view of the risks the business faces. The Board has considered feedback from the Board Audit Committee on the controls and processes in place for the development of this Ring-Fencing Certificate and the supporting evidence. At the Board meeting on 8 July 2020, the Board approved this Ring-Fencing Certificate.



Liz Barber

Chief Executive

Signed for and on behalf of the Board of Directors
of Yorkshire Water Services Ltd

Tax strategy for the appointed business

Yorkshire Water is committed to acting with integrity and transparency in all tax matters.

A copy of the tax strategy adopted by the Yorkshire Water Board is publicly available at: yorkshirewater.com/tax and is included below.

Yorkshire Water Services Limited Tax Strategy and Policies

Adopted by the Board of Yorkshire Water Services Limited on 10 September 2019

This strategy applies to the group of companies headed by Yorkshire Water Services Limited (“the YW Group”) in accordance with Schedule 19 to the Finance Act 2016. It is effective for the year ending 31 March 2020.

Our approach to management of our tax affairs is driven by the following two of our five “Big Goals”:

- Goal Four: Transparency – we will be a global benchmark for openness and transparency; and
- Goal Five: Bills – we will use innovation to improve service, eradicate waste and reduce costs so no one need worry about paying our bill. We will not waste money.

Such Goals mean that we have a tax strategy and policies that address the need to be transparent regarding our approach to tax matters, to build and maintain trust with stakeholders while also recognising appropriate legislative concessions and reliefs for the benefit of customers.

Goal Four: Transparency

We are committed to acting with integrity and to adopt the highest standards of openness and transparency with regards to our approach to our tax affairs. Our tax strategy and policies require that we fully comply with both the letter of UK tax law and its application as it was intended. We make timely and accurate tax returns that reflect our fiscal obligations to Government.

We aim for certainty on the tax positions that we adopt, however, tax law can be unclear at times or subject to interpretation. With this in mind, our policy is:

- not to enter into transactions that have a main purpose of gaining a tax advantage; and
- not to make interpretations of tax law considered to be opposed to the original published intention of the specific law.

To support us in ensuring that we have interpreted tax law and its intended application correctly, we seek advice from large accounting firms, legal firms and/or tax counsel as appropriate.

For example, we do not use artificial tax avoidance schemes or use tax havens to reduce our tax liabilities.

Relationship with HM Revenue & Customs

An important part of our tax strategy and policies, and to support our Goal of Transparency, is the maintenance of a strong, proactive working relationship with HM Revenue & Customs (“HMRC”). We are transparent with HMRC and, in cases of interpretation or complexity, work with them on a real time basis to determine the amount of tax due.

Tax disclosure

We understand the value of our financial reporting to customers, investors and other stakeholders. We work to provide enhanced, transparent and balanced disclosure in communicating our tax affairs.

Goal Five: Bills

Managing our tax liabilities by recognising appropriate legislative concessions and reliefs is of benefit to customers (through fair and affordable bills) and investors (through fair and sustainable returns).

Our tax strategy and policies seek to make use of such appropriate reliefs and to control our tax costs so that money is not wasted. Decisions regarding such reliefs are taken using a decision-making framework that addresses the control of tax costs with being trusted by stakeholders.

Whilst seeking to manage tax liabilities, our policy is not to take an aggressive interpretation of tax legislation or use artificial tax avoidance schemes.

Tax governance

Tax is part of the Finance & Regulation function and is the ultimate responsibility of the Director of Finance, Regulation & Markets who is responsible for our tax strategy and policies.

Tax strategy and policies are reviewed on an on-going basis by the Audit Committee and Board of Directors. Our tax status is reported regularly through the Financeability Governance Group, chaired by the Director of Finance, Regulation & Markets. Tax status is also reported via the Audit Committee through the Strategic Risk Register.

Tax strategy and policy issues are assessed on a case by case basis by the Tax & Treasury Team with appropriate input from the Director of Finance, Regulation & Markets in conjunction with the Chief Executive.

Day-to-day tax matters are delegated to the Head of Corporate Finance and a team of in house professionals who hold a combination of accounting and tax qualifications.

Statement on differences between statutory and Regulatory Accounting Guidelines (RAG) definitions

Differences between statutory and regulatory definitions has been provided within [Section 8](#) of this Annual Performance Report. Line by line explanation of differences and narrative from Tables 1A, 1B, 1C and 1D has been provided. We have also provided a narrative explanation on the significant differences and what they relate to.

We have provided a reconciliation of borrowings between Table 1E and Table 1C and an explanation of the reasons for the differences within [Section 8](#) of this Annual Performance Report.

Long term viability statement

We publish our long-term viability statement in our Annual Reports and Financial Statements (ARFS) on page 68 and this is published simultaneously with this Annual Performance Report. Information on how we identify and manage our risks is also included in our ARFS on page 56. Click here to view our ARFS on our reports webpage: yorkshirewater.com/reports

Statement explaining out/under performance of the return on regulatory equity (RORE)

The RORE calculation is based on the cumulative position at the end of 2019/2020.

This is based on an average RCV figure of £28,019m at 2012/2013 average prices.

A notional gearing of 62.5% has been used.

The base return for the 5 years has been calculated using the 5.59% equity return as included within the PR14 final determination.

All values have been included post tax.

Description	2019/2020 %	2019/2020 £m	Cumulative %	Cumulative £m
4H.21 Base return	5.59%	121	5.59%	587
4H.22 Totex out/(under) performance	(0.67%)	(15)	(0.22%)	(23)
4H.23 Retail cost out/(under) performance	(0.71%)	(15)	(0.39%)	(41)
4H.24 ODI out/(under) performance	1.03%	22	0.49%	51
4H.25 Financing out/(under) performance	0.77%	17	(0.31%)	(32)
4H.26 Other factors	0.00%	0	0.00%	0
4H.27 Regulatory return for the year	6.01%	130	5.16%	542

The adjustments are explained below:

1. 4H.22 Totex outperformance

We have included a cumulative under performance against totex of £23m at 2012/2013 average prices.

2. 4H.23 Retail underperformance

We have included a cumulative underperformance against PR14 of £41m at 2012/2013 average prices.

This has been calculated by comparing the actual retail costs reported in [Table 2C](#) to the adjusted operating cost allowances included within the PR14 final determination.

3. 4H.24 ODI reward

We have included a cumulative ODI reward of £51m at 2012/2013 average prices.

The explanation of how this has been calculated within [Section 3](#).

4. 4H.25 Financing impact

We have included a cumulative financing impact of (£32m) at 2012/2013 average prices.

This has been calculated by assuming a gearing of 62.5% against the average RCV.

The nominal cost of debt has been taken from [Table 1E](#), line 9 for all four years. This has been adjusted by the average RPI for all years using the Fisher formula.

This calculation provides a real cost of debt of 4.46% for 2015/2016, 4.13% for 2016/2017, 1.85% for 2017/2018, 1.80% for 2018/2019 and 2.02% for 2019/2020 against the 2.59% cost of debt as included within the PR14 final determination.

5. 4H.26 Other factors

We currently have no values calculated under this section.

Narrative disclosures

We have provided the following narrative disclosures within [Section 8](#) of this APR:

- Outcomes
- Totex
- Retail
- Wholesale revenue control reconciliation
- Financial flows
- New connections.

Current tax reconciliation

The table opposite reconciles the difference between:

- the tax charge that would be expected if the standard rate of corporation tax in the UK (19%) was applied to the Company's profit before tax and fair value movements; and
 - the appointed current tax charge for the year.
- 1) The Company has claimed tax losses in the year from other Kelda Group companies. As a result, the Company has reduced its capital allowance claim on its capital expenditure for the year. This tax relief is deferred to later periods. Utilising tax losses in this way and deferring capital allowances will ultimately benefit customers through lower bills in the future.
 - 2) Non-deductible costs mainly relate to non-deductible professional fees, the Company's provision for potential fines and operating expenditure which is capital for tax purposes.
 - 3) Income reflected in the accounts which is not subject to tax as either there is no cash received by the Company or the income has reduced the amount of capital allowances that can be claimed on the assets associated with the income. This amount also includes R&D credit income that has been subject to tax in previous periods.
 - 4) The appointed current tax charge represents payments to other Kelda Group companies as compensation for them surrendering tax losses to the Company. The Company has no current tax charge for the year in relation to corporation tax liabilities owed to HM Revenue & Customs.

	£m
Profit before tax and fair value movements in relation to appointed activities	54.7
Tax charge at the standard rate of corporation tax in the UK of 19%	10.4
<i>Adjustments in relation to fixed assets</i>	
Non-deductible accounting depreciation on fixed assets and amortisation of intangible assets	43.0
Potential capital allowances available to claim on fixed assets (1)	(45.0)
Capital allowances waived and deferred to future years (1)	13.4
<i>Adjustments in relation to financial instruments</i>	
Adjustment to allow an element of the Company's fair value losses as they represent an accruals basis of accounting which is deductible for tax purposes	(8.7)
<i>Other adjustments</i>	
Chargeable gain crystallising in the year	2.7
Deductible payments to pension scheme	(0.9)
Employee remuneration accrued but not deductible until paid	0.4
Non-deductible costs (2)	1.0
Non-taxable profits (3)	(0.9)
Difference between accounting profit and taxable profit on sale of non-household retail business	(0.5)
Adjustments in relation to prior years	(1.2)
Appointed current tax charge (4)	13.7

The current tax charge allowed in price limits is reconciled to the appointed current tax charge as follows:

	£m
Total current tax charge allowed in price limits (based on corporation tax rate of 20% used in setting prices)	12.3
Tax effect of differences due to:	
Lower actual corporation tax rate (19%) than that estimated when setting prices (20%)	(0.7)
Lower operating profit	(23.8)
Lower finance costs included in corporation tax calculations	8.5
<i>Fixed assets</i>	
Assumptions regarding allowable depreciation and potential capital allowance claims	1.2
Capital allowances waived and deferred to future years (1)	14.1
<i>Other</i>	
Chargeable gain crystallising in the year	2.8
Assumptions regarding non-tax deductible expenses (2)	0.6
Prior year adjustments	(1.3)
Appointed current tax charge (3)	13.7

- 1) The Company has claimed tax losses in the year from other Kelda Group companies. As a result, the Company has reduced its capital allowance claim on its capital expenditure for the year. This tax relief is deferred to later periods. Utilising tax losses in this way and deferring capital allowances will ultimately benefit customers through lower bills in the future.
- 2) This mainly relates to reduced amounts paid in relation to pension contributions.
- 3) The appointed current tax charge represents payments to other Kelda Group companies as compensation for them surrendering tax losses to the Company. The Company has no current tax charge for the year in relation to corporation tax liabilities owed to HM Revenue & Customs.

Factors that will impact future tax charges will include:

- changes in corporation tax rates;
- any changes in tax legislation or practice not reflected in the relevant FD.

Transfer pricing disclosures

Loans by or to the appointee

The following points detail Yorkshire Water's transactions with associated companies and its non-appointed business.

Loans between Yorkshire Water and its subsidiaries

Loans between Yorkshire Water and its subsidiary companies are as follows:

1. Yorkshire Water Finance plc

Yorkshire Water Finance plc (YWFplc) is a public limited company incorporated in England and Wales on 2 July 2018 under the Companies Act (registered number 11444372) and has its registered office at Western House, Halifax Road, Bradford, BD6 2SZ, England.

As part of a re-organisation that took place in the 2018/2019 financial year, YWFplc was substituted as the issuer on approximately £3 billion of listed bonds and private notes that had been previously issued by Cayman Island incorporated companies (being Yorkshire Water Services Odsal Finance Limited and Yorkshire Water

Services Bradford Finance Limited respectively - both of which have now been liquidated).

YWFplc is a wholly owned subsidiary of Yorkshire Water and it is intended that it will conduct all future public bond financings that will be on-lent to (and guaranteed by) Yorkshire Water. Finance raised will fund, amongst other things, Yorkshire Water's extensive regulated capital programme and ongoing operating expenditure ("Totex").

2. Yorkshire Water Services Finance Limited

Yorkshire Water Services Finance Limited (YWSFL) is a private company incorporated with limited liability in England and Wales (registered number 04636719) and has its registered office at Western House, Halifax Road, Bradford, BD6 2SZ, England.

YWSFL is a wholly owned subsidiary of Yorkshire Water.

YWSFL is the issuer of legacy bonds that have been on-lent to (and guaranteed by) Yorkshire Water, however YWSFL has not issued any bonds since 2007/2008 and will not issue any bonds in the future as all new bonds will be issued by YWFplc.

As at 31 March 2020 Yorkshire Water has guaranteed the following bonds issued by its subsidiaries:

	Nominal £m	Coupon %	Maturity date year	Liability at 31 March 2020 £m
Fixed rate				
Yorkshire Water Services Finance Limited	6.703	5.375	2023	5.769
Yorkshire Water Services Finance Limited	7.400	5.500	2027	6.731
Yorkshire Water Services Finance Limited	0.100	6.625	2031	0.786
Yorkshire Water Services Finance Limited	200.000	5.500	2037	195.845
Yorkshire Water Finance Plc	72.300	3.770	2021	94.697
Yorkshire Water Finance Plc	25.100	3.770	2022	32.976
Yorkshire Water Finance Plc	47.200	5.070	2022	61.759
Yorkshire Water Finance Plc	29.900	6.588	2023	29.898
Yorkshire Water Finance Plc	180.800	6.588	2023	180.794
Yorkshire Water Finance Plc	94.300	3.870	2023	128.129
Yorkshire Water Finance Plc	200.000	3.750	2023	194.950
Yorkshire Water Finance Plc	33.800	5.875	2023	27.489
Yorkshire Water Finance Plc	18.800	3.870	2024	25.649
Yorkshire Water Finance Plc	300.000	1.750	2026	298.601
Yorkshire Water Finance Plc	135.500	6.454	2027	135.476
Yorkshire Water Finance Plc	60.000	2.030	2028	59.825
Yorkshire Water Finance Plc	250.000	3.625	2029	274.662
Yorkshire Water Finance Plc	90.000	3.540	2029	107.049
Yorkshire Water Finance Plc	255.000	6.601	2031	254.974
Yorkshire Water Finance Plc	50.000	2.140	2031	49.840
Yorkshire Water Finance Plc	90.000	4.965	2033	111.793
Yorkshire Water Finance Plc	50.000	2.210	2033	49.832
Yorkshire Water Finance Plc	40.000	2.300	2036	39.860
Yorkshire Water Finance Plc	50.000	2.300	2036	49.825
Yorkshire Water Finance Plc	300.000	6.375	2039	303.142
Yorkshire Water Finance Plc	450.000	2.750	2041	447.453
Total fixed rate				3,167.804
Yorkshire Water Services Finance Limited	0.100	3.048	2033	-0.794
Yorkshire Water Services Finance Limited	65.000	1.823	2050	91.963
Yorkshire Water Services Finance Limited	125.000	1.462	2051	181.877
Yorkshire Water Services Finance Limited	85.000	1.758	2054	120.426
Yorkshire Water Services Finance Limited	125.000	1.460	2056	181.812
Yorkshire Water Services Finance Limited	100.000	1.709	2058	141.454
Yorkshire Water Finance Plc	127.800	3.306	2033	171.302
Yorkshire Water Finance Plc	260.000	2.718	2039	365.203
Yorkshire Water Finance Plc	50.000	2.160	2041	60.865
Yorkshire Water Finance Plc	50.000	1.803	2042	60.443
Total inflation linked				1,374.551

Yorkshire Water – banking arrangements

The banking arrangements of Yorkshire Water operate on a pooled basis with its subsidiaries. Bank balances of each subsidiary can be offset with each other.

Dividends paid to any associated company

Amounts paid to the parent company and the underlying dividend policy, are disclosed within the dividend policy in this Annual Performance Report.

Guarantees or other forms of security by the appointee

The main bank accounts held by Yorkshire Water and YWSFL form a pooled arrangement, whereby the balances of both subsidiaries are offset with each other. This facility is subject to a provision of a cross guarantee between YWSL and YWSFL whereby each company guarantees the other's current account liabilities and the account bank. This pooling arrangement has a net overdraft limit of £5.0m.

As disclosed above, Yorkshire Water has also guaranteed bonds issued by its subsidiaries.

Transfer of any asset or liability by or to the appointee

During the financial year ended 31 March 2020, Yorkshire Water sold the properties below to Keyland Developments Limited, an associate of Yorkshire Water. These properties were sold at market price per RAG 5.

Asset or liability	Value
Release of covenant at Baildon Golf Club	£6,000.00
Land at 193 Rochdale Road, Ripponden	£5,000.00
Building and land forming FCC Knostrop	£512,000.00
Dockfield Road, Shipley SPS	£6,500.00
Thornton-le-Moor	£7,000.00
Former WPS building, South Bank, Goole	£2,000.00
Lindale Lane, Wrenthorpe	£6,420.00
Calm Land Rd	£15,000.00
Land to south of the Avenue, Esholt	£125,000.00
Felixkirk	£25,000.00
Total	£709,920.00

During the financial year ended 31 March 2020, Yorkshire Water purchased the following asset from Kelda Energy Services (Old Whittington) Ltd.

Asset or liability	Value
Wind turbine at Old Whittington WWTW, Chesterfield	£1,450,000.00
Total	£1,450,000.00

Transfer of any corporation tax group losses by or to the appointee

Corporation tax group relief received by regulated business £m	Associate surrendering the group relief	Turnover of the associate £m	A statement of the means by which the payment for the group relief has been established	Value of group relief £m
49.458	Kelda Eurobond Co Limited	nil	Prevailing corporation tax rate	9.397
19.756	Kelda Finance (No2) Limited	nil	Prevailing corporation tax rate	3.754
2.813	Kelda Group Limited	10.367	Prevailing corporation tax rate	0.535
(0.174)	ThreeSixty Water Limited	3.479	Prevailing corporation tax rate	(0.033)
(0.210)	ThreeSixty Water Services Limited	1.387	Prevailing corporation tax rate	(0.040)
71.643				13.612

Notes for the transfer of any corporation tax group losses by or to the appointee table.

- 1) Negative amounts in the table are as a result of reductions in the amount of group relief that was claimed by Yorkshire Water from the indicated associated company for prior years.

Supply of any service by or to the appointee

A significant proportion of the activities identified within retail (household and non-household) are performed by separate companies, Loop and Three Sixty, both of which are UK based companies. All the costs associated with these contracts are charged to Yorkshire Water via an annual contract fee. Yorkshire Water, Loop and Three Sixty companies are wholly owned subsidiaries of Kelda Group Limited.

In April 2016 Yorkshire Water entered into an outsource agreement with Three Sixty. This contract was in preparation of the market opening for non-household (NHH) customers in the following April 2017 and created an arm's length agreement between retail and wholesale. This contract was agreed on a fixed price fee with the value derived from the final determination, it included an element of management fee for Three Sixty. Three Sixty continued to use Loop's customer service function to fulfil Yorkshire Water's requirements and formed a separate contract with Loop to do this. As part of the group's strategy to focus on wholesale and household retail activities the sale of the non-household retail customer base was completed in 2019.

Yorkshire Water receives supply of services from associates within the Kelda Group. These charges are for corporate functions including teams such as Finance, Internal Audit & KTML.

The below table shows the services received by the regulated company in accordance with the threshold of 0.5% appointed turnover or greater than £100k.

Services received by regulated business	Associate company (providing service)	Turnover of the associate £m	Terms of supply	Value of service received by regulated business £m
Corporate charges	Kelda Group Limited	10.367	Cost allocation	9.485
Customer services (HH)	Loop Customer Management Limited	31.030	Cost allocation	28.098
Customer services (NHH)	Three Sixty Water Limited	3.854	Fixed contract price	3.854
Property services	Keyland	6.362	Cost allocation	0.000
Transport management	KTML	1.828	Management charge	1.828

Yorkshire Water also charges Kelda Group/associates for any support service function activity. This includes functions such as IT, facilities charges and other variety common services within the Group. The cost and revenues associated with this is allocated to non-appointed and follows RAG 5 guidelines. The strategic decision by the company's parent company to seek of disposal of non-regulated businesses, with most of the companies sold in previous reporting years (2017/2018 & 2018/2019).

The table below shows these recharges.

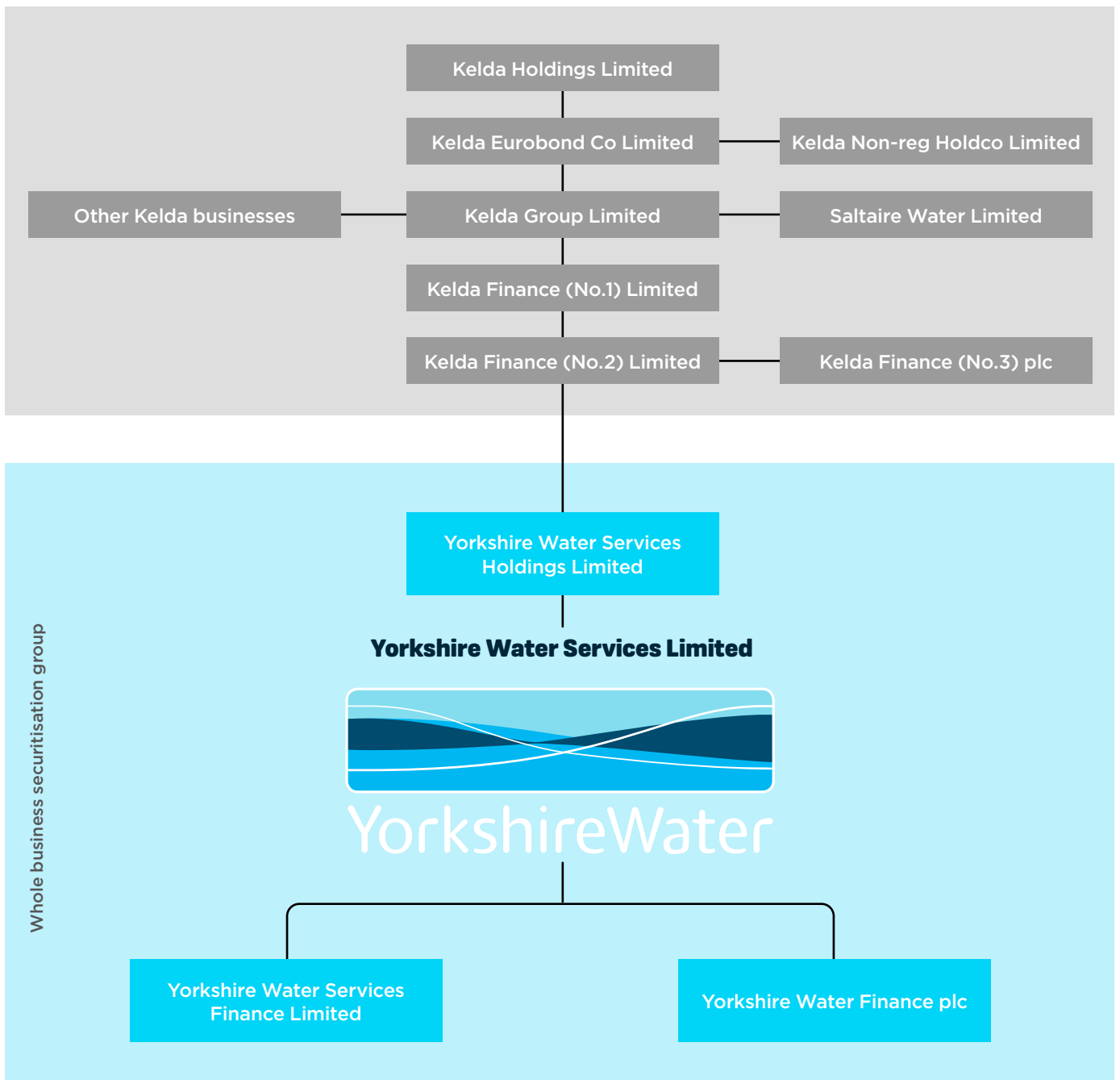
Services provided by regulated business	Associate company	Turnover of the associate £m	Terms of supply	Value of service provided by regulated business £m
Business support services	Kelda Group Limited	10.367	Cost allocation	0.949
	Loop Customer Management Limited	31.030	Cost allocation	1.612
	Three Sixty Water Limited	3.854	Cost allocation	0.295

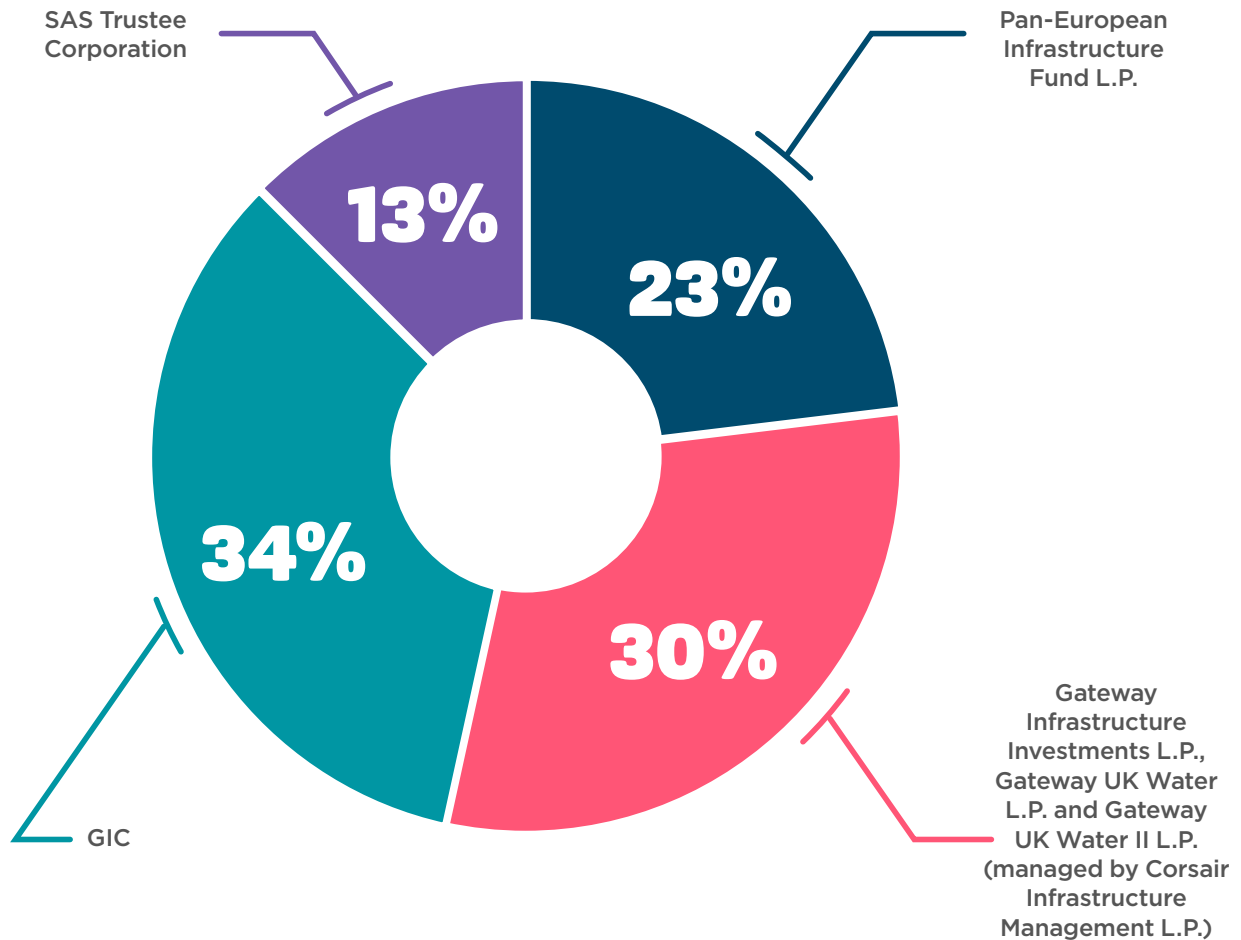
Other disclosures

Information on our corporate structure – this provides additional information to the summary information provided within [Section 7](#) on our governance.

Corporate structure

Yorkshire Water Services Limited is part of the Kelda Holdings Limited group of companies. The diagram below shows a summary of the companies in the group structure around Yorkshire Water Services Limited. Other active companies are described on the following page. Details of the group’s shareholders and capital structure are also published on the group’s website, found at this link: keldagroup.com





As at 31 March 2020 shareholder ownership is as shown in the diagram above.

Summary of Group company activities

The details and activities of the companies within the condensed group structure chart above are as follows:

Kelda Holdings Limited – the ultimate parent undertaking for the group. Whilst the company is incorporated in Jersey, it is wholly and exclusively resident for tax in the UK. The company was incorporated in Jersey because Jersey law allows greater choice than the UK as to the way distributions can be made to shareholders.

Kelda Eurobond Co Limited – a group subsidiary incorporated in England and Wales and wholly and exclusively resident for tax in the UK. It was incorporated for the purposes of issuing bonds as part of the acquisition of the shares of Kelda Group Limited (formerly Kelda Group PLC) by the shareholders in 2008. This bond debt meets the eligibility requirements of the “quoted Eurobond exemption”. All bond debt issued by Kelda Eurobond Co Limited is held by the shareholders of Kelda Holdings Limited.

The bonds issued by Kelda Eurobond Co Limited are listed on the International Stock Exchange in the Channel Islands (TISE). TISE is regarded by the UK’s HMRC as a recognised stock exchange for the purposes of the quoted Eurobond exemption.

Listing on TISE was chosen rather than the London Stock Exchange (LSE) for ease of administration; since the bonds in question are not traded the greater administrative requirements imposed by the LSE are not necessary.

Kelda Non-reg Holdco Limited – a group subsidiary incorporated in England and Wales and wholly and exclusively resident for tax in the UK. The company’s primary activity is to provide finance for Kelda Group’s businesses other than Yorkshire Water, most of which have now been sold.

Kelda Group Limited – originally the ultimate holding company in the group and formerly a public listed company. It was incorporated in England and Wales and is wholly and exclusively resident for tax in the UK. The shares were acquired and the company de-listed in February 2008.

Saltaire Water Limited – this was the acquisition vehicle for the purchase of Kelda Group Limited's shares (formerly Kelda Group Plc) in February 2008. The shares of Kelda Group Limited are now held by Kelda Eurobond Co Limited. The company was incorporated in England and Wales and is wholly and exclusively resident for tax in the UK.

Other active Kelda businesses

The following group companies operate in the UK and are wholly and exclusively resident for tax in the UK:

- **Three Sixty Water Limited** – offered water and wastewater retail and added value services to non-household customers across the UK up to 1 October 2019. The non-household retail business was sold to Business Stream on this date. Three Sixty continues to provide services to Business Stream under a transition services agreement.
- **KeyLand Developments Limited (KeyLand)** – manages the group's surplus property assets, either on its own or in partnership with outside organisations.
- **Loop Customer Management Limited (Loop)** – delivers customer service support to Yorkshire Water that includes billing, debt recovery and incident management.
- **Kelda Transport Management Limited** – provides operating licence compliance and promotes safe and efficient practices for Yorkshire Water's fleet of Large Goods Vehicles.

Following the strategic review conducted during the year ended 31 March 2017, the majority of non-regulated businesses outside of Yorkshire Water have been divested. This action has enabled us to enhance the leadership of the Yorkshire Water business by removing potential distractions that arise from other parts of the Group. This has allowed greater simplification of the Kelda Group structure.

Kelda Finance (No.1) Limited, Kelda Finance (No.2) Limited, Kelda Finance (No.3) PLC – these companies were incorporated to issue debt and raise loan financing facilities outside of the Whole Business Securitisation (WBS) Group, described below. They are all incorporated in England and Wales and are wholly and exclusively resident for tax in the UK.

Yorkshire Water Services Holdings Limited – incorporated in England and Wales and wholly and exclusively resident for tax in the UK. The company is the immediate holding company of Yorkshire Water Services Limited.

Yorkshire Water Services Limited – incorporated in England and Wales and wholly and exclusively resident for tax in the UK. This is the main company in Kelda Group, providing water and wastewater services to the Yorkshire region. This is the company to which this Annual Report and Financial Statements publication refers.

Yorkshire Water Finance Plc, Yorkshire Water Services Finance Limited – companies within the Whole Business Securitisation are described on the next page.

Yorkshire Water Whole Business Securitisation

Yorkshire Water established a financing structure known as a Whole Business Securitisation (WBS) in 2009. The WBS enhances the creditworthiness of Yorkshire Water by setting strict rules that demonstrate to lenders that the Company is a safe and reliable business in which to invest. Lenders are therefore more prepared to lend to Yorkshire Water at lower rates of interest than would otherwise have been the case.

The WBS works by placing a protective ring-fence around Yorkshire Water's business that includes the way it operates, the way it trades with other group companies outside the WBS, and the way it finances itself. The protections include limits on borrowings, dividends and the ability to lend money to other Kelda companies. The protections also require a measure of net cash flow to more than cover the amount of interest that Yorkshire Water pays.

All the companies within the WBS ring-fence are incorporated in England and Wales and are wholly and exclusively resident for tax in the UK. Yorkshire Water Finance Plc is the principal financing company for Yorkshire Water and holds corporate debt issued since the establishment of the WBS. Yorkshire Water Services Finance Limited is a legacy financing company that holds debt issued prior to the WBS being established. In both instances, funds raised from debt issuance have been on-lent to Yorkshire Water Services Limited to fund, amongst other things, its operating and capital requirements.

Corporate governance statement

However, up until July 2019 it had been a requirement of the terms of our Instrument of Appointment to conduct our business as if we were a separate listed company in compliance with the UK Corporate Governance Code.

Whilst this requirement has now been replaced with a requirement to report our compliance with the new Ofwat Board Leadership, Governance and Transparency Principles, for part of the year the requirement was still in place and therefore for completeness we have reported below our compliance with the UK Corporate Governance Code. The Board considers that it has complied with all the principles of the UK Corporate Governance Code published in July 2018 throughout the year ended 31 March 2020, with the exception of the following provisions:

- **Provision 11** – this principle requires that at least half the Board, excluding the chairman, should be independent non-executive directors. We have not complied with this provision during the year due to the presence on our Board of three investor directors who represent our shareholders and are therefore not independent. We have found having investor directors on our Board extremely beneficial so that we can hear shareholder views first-hand and ensure that our shareholders have a full understanding of the opportunities and challenges facing the business. It also enables the business to operate as if it is a separate entity as required by the Ofwat Board Leadership, Governance and Transparency Principles.
- **Provision 17** – this provision requires the nomination committee to consist of a majority of independent non-executive directors. This principle is not met for the same reason as Provision 11. There are three investor directors on the nomination committee, which the Board believes brings valuable insight from our shareholders to the committee.
- **Provision 18** – this provision relates to the annual re-election of directors by shareholders at the annual general meeting. As a private limited company, we do not hold an annual general meeting and therefore this provision does not apply.
- **Provision 24** – this provision states that the audit committee membership should consist of at least three independent non-executive directors and specifically states that the chairman of the Board should not be a member. For the period from 1 April 2019 to 10 June 2019, our audit committee consisted of two independent non-executive directors and two investor directors, with the chairman of the Board, Anthony Rabin, acting as the interim chair of the committee due to his recent and relevant financial experience. Andrew Merrick was appointed to the Board on 1 June 2019 and took up the role of chair of the audit committee on 11 June 2019, with Anthony Rabin stepping down from the role on that date, therefore our committee membership reverted from 11 June 2019 onwards to three independent non-executive directors and two investor directors.
- **Provision 32** – this provision relates to membership of the remuneration committee and states that membership must consist of at least three independent non-executive directors. For the period from 1 April 2019 to 31 May 2019 the committee only had two independent non-executive directors as members, in addition to the chairman of the Board who was independent on appointment. Following the appointment of Andrew Merrick to the Board on 1 June 2019, the committee returned to having three independent non-executive directors, two investor directors and the chairman of the Board as members for the remainder of the year. In September 2019 Andrew Merrick stepped down from the Remuneration Committee as part of a reshuffle of Committee membership and was replaced by Andrew Wyllie.

The UK Corporate Governance Code is available on the website of the Financial Reporting Council at [frc.org.uk](https://www.frc.org.uk)

A statement on Directors' responsibility

The Annual Report and Financial Statements are prepared to FRS102. The Annual Performance Report is prepared following the Regulatory Accounting Guidelines for each financial year. Under that law the directors have prepared the financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising Financial Reporting Standard 102. "The Financial Reporting Standard Applicable in the UK and Republic of Ireland" (FRS 102), and applicable law). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the company and of the profit or loss of the company for that period. In preparing these financial statements, the directors are required to:

- Select suitable accounting policies and then apply them consistently.
- State whether applicable UK Accounting Standards comprising FRS 102 have been followed, subject to any material departures disclosed and explained in the financial statements.
- Make judgements and accounting estimates that are reasonable and prudent.
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the Financial Statements comply with the Companies Act 2006. The directors are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the ultimate parent Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors' Report was approved by the Board and is included in the ARFS.

Appendix 5. Performance commitments in 2020-2025

Further information on performance commitments for Asset Management Period 7 (2020-2025)

As required by the PR19 Final Determination, Appendix 5 provides further information and baseline performance on selected performance commitments for the 2020-2025 period. This is in line with Ofwat's final determination requirements that can be found on the Ofwat website ofwat.gov.uk/regulated-companies/price-review/2019-price-review/final-determinations

Leakage (PR19YKY_22)

This performance commitment is measured as the percentage reduction of three-year average leakage in megalitres per day (MI/d) from the 2019/2020 baseline.

Baseline total leakage is calculated as a three-year average of annual values for 2017/2018, 2018/2019 and 2019/2020 and expressed in megalitres per day (MI/d).

The 2019-2020 baseline total leakage level is 313.4 MI/d. This is 16.5 MI/day higher than our business plan forecast of 296.9 MI/day.

Since 2017 we have dual-reported leakage using both the AMP6 methodology, and Ofwat's new AMP7 procedure. The AMP7 reporting guidance was finalised in March 2018, and given the scale of the changes required, we have gradually implemented the new methodology into our dual reporting. This has included a new way of calculating Trunk Main leakage, surveys of customer plumbing losses, and a significant upgrade of our leakage reporting software.

Given the extent of the changes required to become compliant with the new reporting guidance, our preparations did not come into fruition until March 2020, and our software upgrade has only recently been delivered (June 2020). As a result, the business plan forecast of our baseline (set in May 2019) did not include the full impacts of changing to the new reporting methodology and included assumptions that have since been validated and revised.

In April 2020, Ofwat asked all companies to re-calculate their historic leakage performance with the AMP7 procedure. It is now known that the new guidance significantly changes how we report leakage. We see an increase of c.25MI/d when we implement the new AMP7 guidance, but this is not a deterioration in business performance. Historic performance under the new reporting methodology clearly shows the same performance trends as in the old AMP6 methodology:

- in 2018/2019 – a 9 MI/d reduction (10 MI/d in AMP6 methodology)
- in 2019/2020 – a 22.5 MI/d reduction (19.5 MI/d in AMP6 methodology).

Although our reported leakage volume has increased, our 'Water Balance' gap has reduced – it is now less than 1.5% of our distribution input volume (under 2% is considered good practice) and is significantly less than the 4.5% in AMP6 methodology. We also achieved 'green' compliance in 14 of the 16 components of the new methodology compliance RAG, with no areas of 'Red' non-compliance. This is a result of improvements to our calculation of customer consumption and more accurate reporting of leakage volumes across our trunk mains, and in our heavy commercial and industrial areas. The new leakage figures are not only more accurate but are now underpinned by robust and validated assumptions.

Per capita consumption (PR19YKY_25)

This performance commitment is measured as the percentage reduction in per capita consumption in litres/person/day (l/p/d) from the 2019/2020 baseline.

Per capita consumption is calculated as an annual average and is defined as the sum of measured household consumption and unmeasured household consumption divided by the total household population. Three-year average values are calculated from annual average values for the reporting year and two preceding years. 2019/2020 per capita consumption is 129.4 l/p/d.

The three-year rolling average of 2017/2018, 2018/2019 and 2019/2020 is 130.1 l/p/d. This is our baseline for AMP7 and is 2.3 l/p/d lower than our business plan forecast of 132.4 l/p/d.

Since 2017 we have dual-reported PCC using the AMP6 methodology, and Ofwat's new AMP7 procedure. In both cases, PCC must be determined following reconciliation of the company 'Water Balance', which requires the implementation of new AMP7 procedures for both Leakage and PCC. Therefore, our dual-reported PCC has been tied to our compliance with dual-reporting of Leakage and given the scale of the changes required, we have gradually implemented the new methodology into our dual-reporting. This has included surveys of customer properties to validate our assumption of customer plumbing losses in our calculation. The business plan forecast of our baseline did not include the full impacts of changing to the new reporting methodology and included assumptions that have since been validated and revised.

In April 2020, Ofwat asked all companies to re-calculate their historic PCC performance with the AMP7 water balance. It is now known that the new guidance reduces the volume of reported PCC, but this is not an improvement in business performance. Historic performance under the new reporting methodology clearly shows similar performance trends as in the old AMP6 methodology:

- in 2018/2019 – a slight uplift, driven by the hot dry summer (stable in old reporting AMP6 methodology which had additional corrections for dry weather)
- in 2019/2020 – a 2 l/h/d reduction (2 l/h/d in old reporting AMP6 methodology).

Although our reported PCC has decreased, our ‘Water Balance’ gap has reduced; it is now less than 1.5% of our distribution input volume (under 2% is considered good practice) and is significantly less than the 4.5% in AMP6 methodology. The new PCC figures are not only more accurate, but are now underpinned by robust and validated assumptions.

Inclusive customer service (PR19YKY_16)

We know that speaking to our customers gives us great insight into what we need to improve. We know there is more we can do to understand how we can improve our service for customers who have disabilities, mental health issues or for those who may be in vulnerable circumstances. Working with charities and organisations who have specialist knowledge around the needs of these customers and what good practice looks like is a great way to ensure we can improve customer outcomes.

Inclusive customer service is defined as the improvement in the services provided to customers in circumstances that make them vulnerable, specifically those on the company’s Priority Services Register (PSR). This performance commitment is measured as the percentage improvement on an overall score from the 2019/2020 baseline. With the help of the Yorkshire Forum for Water Customers we ask a selection of 15 charities to assist with evaluating our service for these customers in three core areas:

- the accessibility of service provision
- the types of services provided
- the effectiveness of service provided.

We asked these organisations to score these criteria in 2019/2020 to give us a baseline score to improve on. From this we calculated our overall score for 2019/2020. This score is calculated as an average across all the scored criteria (the sum of all scores divided by the number of scores). Our target is to improve this score by 20% across the AMP. The below table shows our current score (baseline) and targeted progression throughout AMP7. We will report a percentage increase on our baseline each year in our APR.

2019/2020 Baseline	3.21
Year 1 target	3.34
Year 2 target	3.47
Year 3 target	3.60
Year 4 target	3.73
Year 5 target	3.86

We also advised that we would track the criterion score, which is the average score for each criteria question. This is our current position for each criterion.

Accessibility of service provision	3.02
Types of services provided	3.73
Effectiveness of service provided	2.89

We will look to improve the services that we provide to our vulnerable customers in order to improve on our scoring year-on-year.

Working with others (PR19YKY_1)

This performance commitment is defined as the cumulative number of partnership projects Yorkshire Water delivers with independent agencies, organisations or individuals in the 2020-2025 period.

Projects are activities where Yorkshire Water contributes to direct financial or in-kind support, capital or operational programmes, investigations, and feasibility studies or investigations.

Once a partnership project has been identified, acceptance of the project will be determined through an internal governance process. The approval process, including the full list of eligibility criteria, is set out below. This has been assured by the Yorkshire Forum for Water Customers.

1

Identify a partnership project

Partnerships are defined as:
 projects where the company engages in activity with independent not-for-profit third-party organisations, agencies or individuals for the delivery of a shared objective.

Project is defined as:
 activities where the company contributes to direct financial or in-kind support, capital or operational programmes, investigations, and feasibility studies or investigations.

Included projects:

- Partnerships and projects may be established to test or trial a concept or technique. If, in the event the test or trial is unsuccessful, the project can still be claimed, provided the company can demonstrate that substantive benefits have been delivered.
- Individual projects that are part of a broader partnership can be claimed as long as they are self-contained projects with their own distinct goals and benefits. i.e. projects within a programme.

Projects excluded:

- The company's own research and development activity;
- Business as usual delivery of capital projects by contractors; and
- Repair and maintenance or other framework contracts
- Projects that deliver benefits taken into account for the PR19YKY_2 Land conserved and enhanced performance commitment.

2

Partnership projects must have benefits

Benefits can include but are not limited to the following:

- Enable delivery of a much larger/wider schemes than if the company acts in isolation;
- Save money, including avoided operational costs;
- Provide additional benefits such as recreational or biodiversity benefits;
- Enable access to specialist technical expertise, such as local charities/volunteers;
- Remove surface water from the company's network; and
- Leveraging additional funding with the company's involvement (e.g. by demonstrating match funding for bids).

Additional project benefits:

- Protecting or enhancing raw water quality
- Managing the risk of sewer escapes, for example by removing surface water from our network
- Promoting water efficiency and responsible use of sewers
- Protecting our assets or services from flooding, or coastal erosion
- Increasing the diversity of visitors to the countryside particularly at Yorkshire Water locations
- Supporting the health and welfare of individuals through visits to the countryside and other nature-based activities
- Protecting or enhancing the natural environment
- Building community resilience.

3

Partnership projects go through our business approval process



Business approval process is defined as:

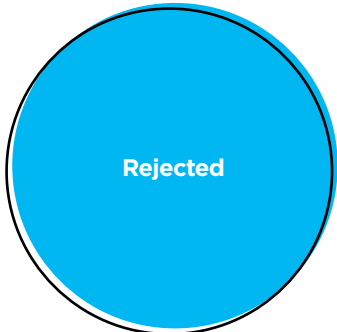
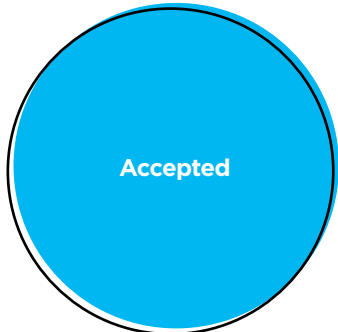
- Must be the same business approval processes as any other projects within the company and have the same level of scrutiny and challenge
- Only partnership projects with a clear cost benefit to help meet the company’s business objectives and customer outcomes will be selected.
- Partnership project must include the following information:
 - partners involved;
 - total costs of the scheme;
 - contribution required from the company (financial or otherwise);
 - timescales for completion;
 - criteria for determining a successful outcome;
 - proposed project steering group (including third party members) including relevant skills and qualifications; and
 - project governance.



Business approval process will check the partnership project meets the eligibility criteria
 (Full list of eligibility criteria will be documented in advance of the 2020-2021 reporting year and will be published in the company’s Annual Performance Report (APR). The Yorkshire Forum for Water Customers will provide assurance if it is appropriate.)

Eligibility criteria includes all the information in Steps 1-3 including:

- Projects should have local or community benefits, we cannot fund projects outside our operational boundary (which largely matches the Yorkshire & Humber Government Office Boundary).
- We will carefully consider projects which resolve a long-standing issue, or which are the right thing to do, but which fall outside our regulatory business and what we normally fund.
- We will consider projects which build capacity within partner organisations (i.e. skill development, sharing good practice, secondments and mentoring).



4

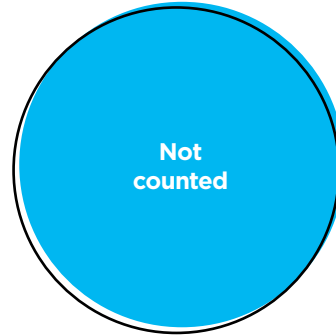
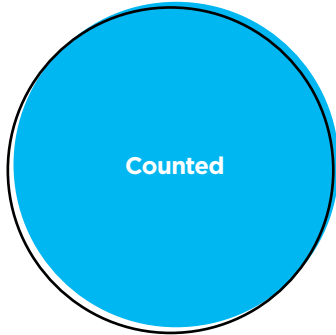
Deliver partnership project

5

Is the project successful?
 Partnership projects completed on or before the 31 March will be reported in that year.



Each partnership project will only be considered to contribute to the performance commitment if it meets the published criteria.
 The Yorkshire Forum for Water Customers will provide assurance on this.
 Some partnership projects will deliver benefits upon completion. Others may take longer to achieve measurable benefits. In these cases, projects will be considered completed when the project steering group agrees that the substantive benefits of the partnership project have been delivered.



6

Report information



The company will report cumulative progress on an annual basis through its Annual Performance Report setting out if it is on track to achieve the cumulative 2024-2025 performance commitment level. Any outperformance payments will be calculated and applied based on the cumulative total in 2024-2025.
 The company will commission and publish a report at PR24 by an appropriately qualified third party that estimates the additional benefits to customers delivered from the company working with third parties as opposed to what the company would have achieved on its own. It will also set out any learning that would increase the benefits of partnerships in the future.
 The company will maintain documented reports that set out the benefits delivered from each partnership project and how these have been determined.

D-MeX

The Developer Services Measure of Experience (D-MeX) measures the level of customer service provided to those who use our developer services. This includes developers, new appointments and variations (NAVs) and self-lay providers.

The qualitative measure of this is taken from the D-MeX Customer Satisfaction Survey and the quantitative measure is based on our performance against common Water UK performance metrics. These metrics measure the practical service levels we provide to our developer services customers including the timeliness of the work carried out.

This measure was trialled in 2019/2020 and our score was 69.57. This is a new measure and we are exploring ways in which we can continually improve our service and scoring in AMP7.

C-MeX

The Service Incentive Mechanism (SIM) has been the water industry regulatory measure of customer service since 2010, reporting a score out of a maximum 100 points through an independent assessment of each UK water company. From 2020 onwards, Ofwat is replacing the SIM with a metric called the Customer Measure of Experience (C-MeX) and has trialled this already in 2019/2020. Our C-MeX score for 2019/2020 is 79.20.

In these shadow C-MeX surveys we have seen an improvement in overall performance compared to the SIM, ranking sixth out of 17 in our industry. In the SIM our average score from 2015 to 2019 was 83.51, which left us 11th in the rankings.

Our focus in 2019/2020 has been to develop a customer experience strategy fit for the future needs of our customers. The positive results in the C-MeX shadow surveys give us confidence we are set up to improve further in AMP7.

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