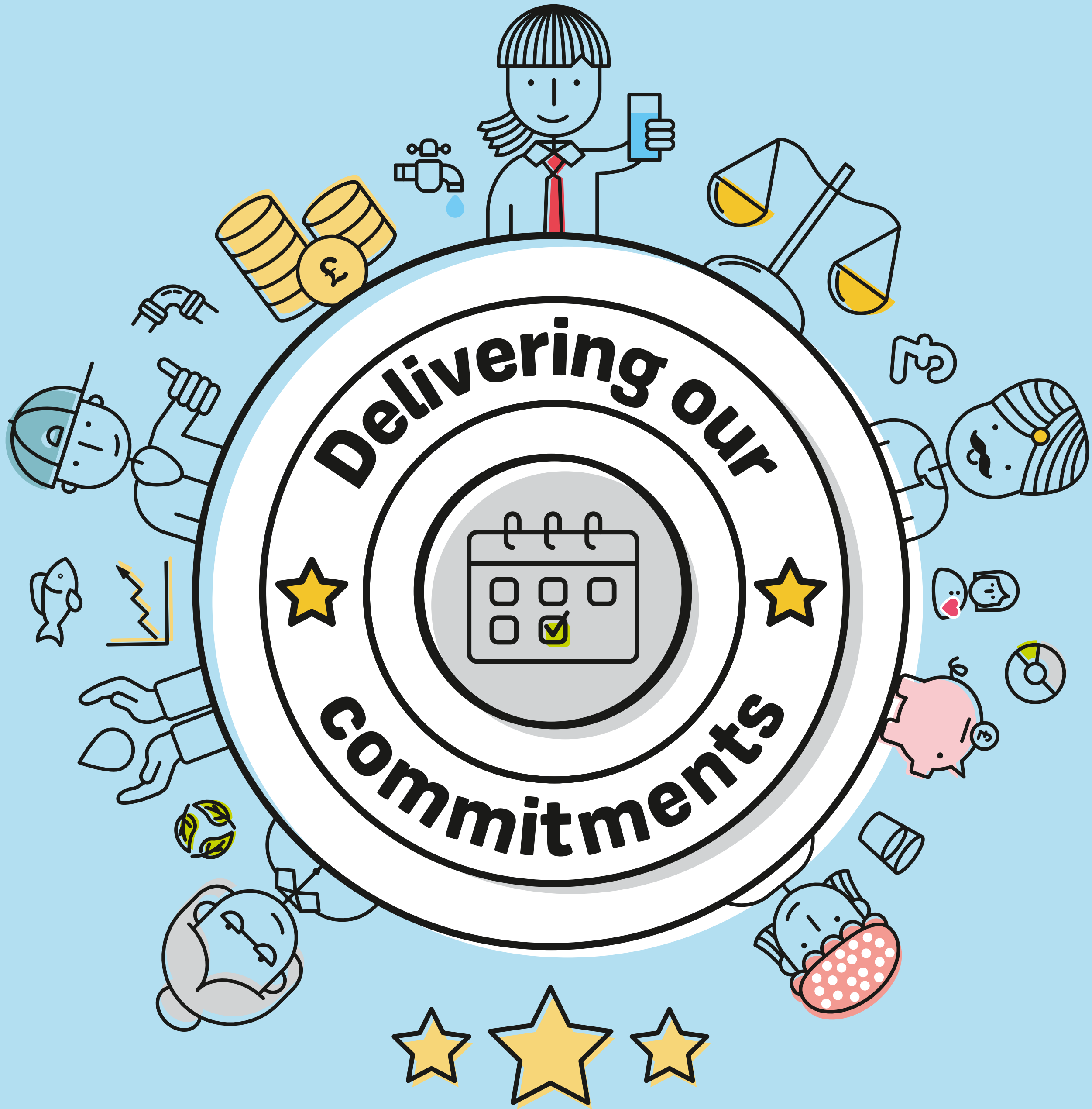

Our Annual Performance Report 2017/2018
Updated December 2018

YorkshireWater

We have made some changes to our Annual Performance Report (APR) since its first publication on 13th July 2018.

We have made a total of 20 changes to our APR this year. This is made up of:

- nine corrections,
- eight improvements, and
- three which are both a correction and improvement.

The information in our APR goes through several checks before it reaches you, this is to reduce the risk of errors within it. Sometimes, despite our checks, minor errors find their way into our report. Rather than just correcting those errors in our APR, we thought it would be better to be open and transparent and tell you about them. We want to make sure we deal with any changes appropriately and in a timely fashion. We want to be proactive with how we tell you about them at an early opportunity. That's why we have produced a change log.

To achieve our aim of being more transparent and providing the information that is needed, we have expanded some of the explanations in our APR.

Our objective is to have zero errors in our APR, so every correction we have had to make, even though it's a fraction of the potential errors that could have been made, is one too many.

We want to improve our performance in future years, so we will learn from these corrections and improvements, building the learning into our risks, strengths and weaknesses statement and our assurance plan for next year.

Click here to view our change log.
www.yorkshirewater.com/reports

We have left the original version of our APR in the archive section of our reports webpage for reference.

Contents

This report is set out into colour-coded sections to help everyone navigate the report easily.

The report is structured as follows:

1. Introduction 04

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2. Glossary 26

3. Review of our performance 36

In this section, we explain what our customer outcomes and performance commitments are. We also provide a summary of performance results.

4. Our process to provide trusted information 70

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.

5. Our engagement with our stakeholders and customers 92

In this section, we'll explain how we have engaged with our stakeholders and customers to create our annual performance report.

6. Our governance 100

In this section, we include information on our company structure and how we are governed.

7.	**Regulatory information** This section includes the information that we must report to our economic regulator, Ofwat. Information is shown in tables with supporting explanatory commentary.	108
8.	**Risk and compliance statement** In this section, we provide information on our reporting of risks, strengths and weaknesses identified by ourselves, and following a review with our customers and stakeholders.	262
Appendix 1.	**Financial auditor's opinion** This section includes a statement from our financial auditor, Deloitte.	280
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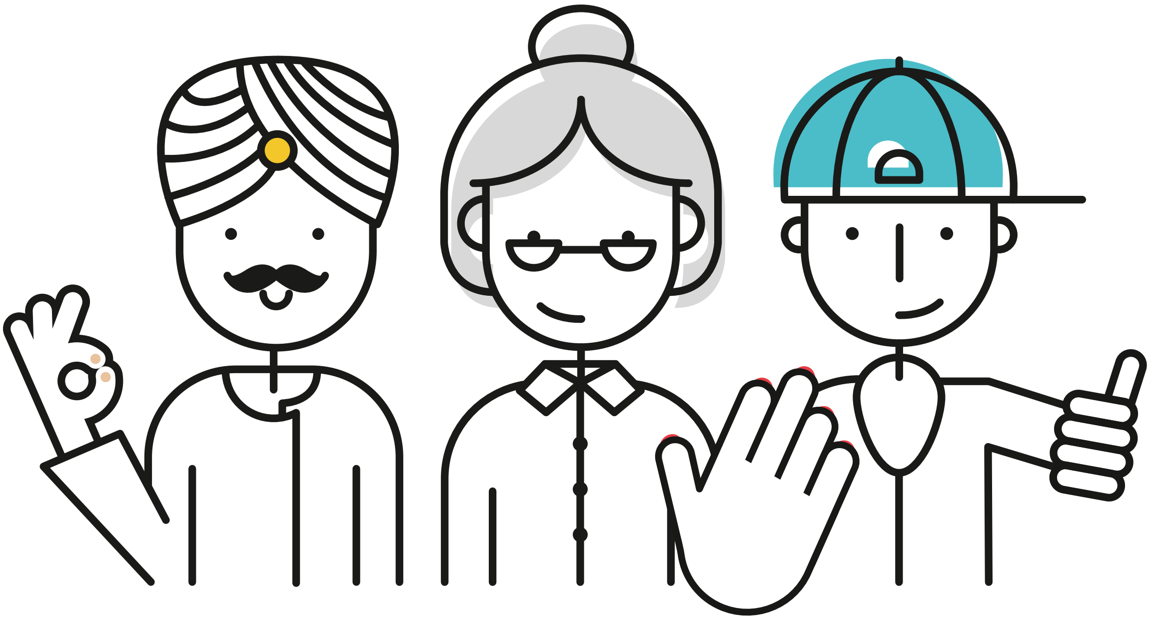
1.
Introduction



Welcome to our Annual Performance Report. 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.

Supporting publications

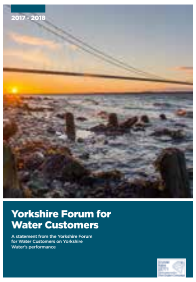
Every year we publish a series of documents which provide information on our services and performance; both financial and operational. These reports also contain information that all companies must publish, allowing readers to compare our performance with other water companies.

Our Performance Summary 2017/2018

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.
www.yorkshirewater.com/reports

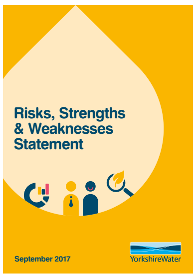
Risk & Compliance Statement

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. It also provides information on the steps we are taking to manage and mitigate any risks identified.
www.yorkshirewater.com/reports



Yorkshire Forum for Water Customers Statement

The Yorkshire Forum for Water Customers have published an independent statement on our performance. You can view the statement here:
www.yorkshirewater.com/customerforum



Risks, Strengths & Weaknesses Statement

Our Risks, Strengths & Weaknesses Statement provides information on our reporting of risks, strengths and weaknesses identified by ourselves and following a review with our customers and stakeholders. This enables confidence in the information we publish.
www.yorkshirewater.com/reports

Assurance Plan

Our Assurance Plan provides information on the processes and the steps we are taking to make sure the information we publish is accurate, easy to understand and accessible. This enables confidence in the information we publish.
www.yorkshirewater.com/reports

Data Assurance Summary

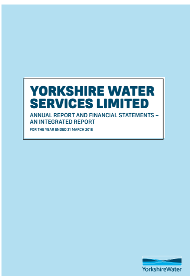
Our Data Assurance Summary provides information on the outcome of assurance we carry out throughout the year for all information we have published in 2017/2018
www.yorkshirewater.com/reports

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.
www.discoverwater.co.uk

Kelda Eurobond Co Ltd Accounts

Kelda is the owner of Yorkshire Water. This publication provides information on Kelda's performance.
www.keldagroup.com/investor-centre/kelda-holdings-ltd-and-kelda-eurobond-ltd-accounts.aspx



Yorkshire Water Annual Report and Financial Statements

Our Annual Report and Financial Statements 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.
www.yorkshirewater.com/reports

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

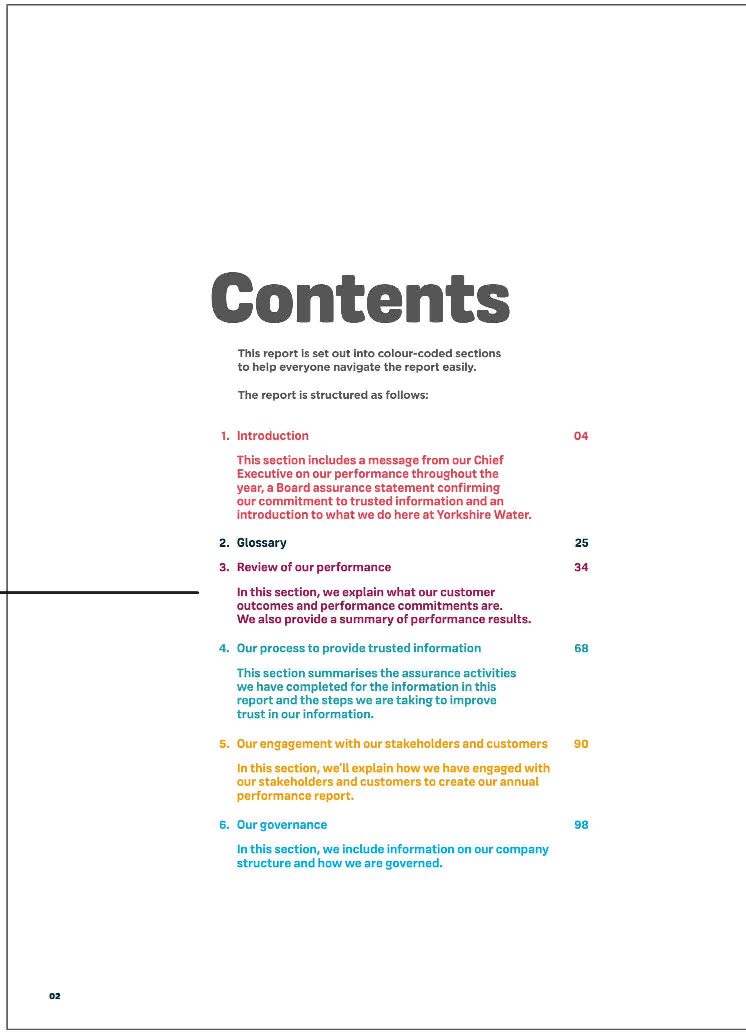
Annual performance report highlights

Section 3 - 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:

- Performance summary – how we've done.
- Performance by customer outcome – how we've performed on our promises to customers.



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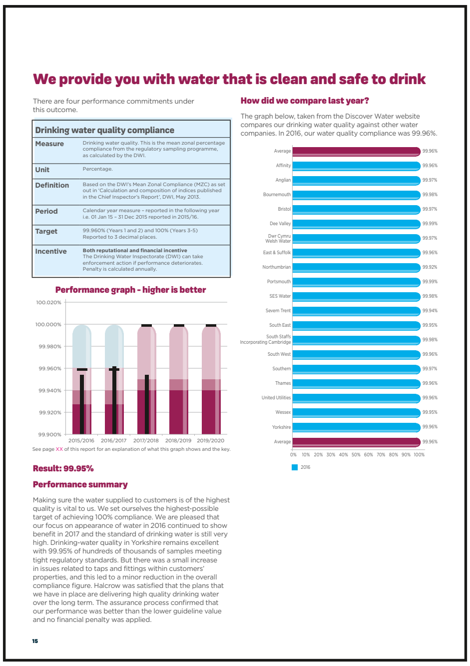


We provide you with water that is clean and safe to drink

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 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 15 – 31 Dec 2015 reported in 2015/16.
Target	99.960% (Years 1 and 2) and 100% (Years 3-5) Reported to 3 decimal places.
Incentive	**Both reputational and financial incentive** The Drinking Water Inspectorate (DWI) can take enforcement action if performance deteriorates. Penalty is calculated annually.

Performance graph - higher is better

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

Result: 99.95%

Performance summary

Making sure the water supplied to customers is of the highest quality is vital to us. We set ourselves the highest-possible target of achieving 100% compliance. We are pleased that our focus on appearance of water in 2016 continued to show benefit in 2017 and the standard of drinking water is still very high. Drinking-water quality in Yorkshire remains excellent with 99.95% of hundreds of thousands of samples meeting tight regulatory standards. But there was a small increase in issues related to taps and fittings within customers' properties, and this led to a minor reduction in the overall compliance figure. Halcrow was satisfied that the plans that we have in place are delivering high quality drinking water over the long term. The assurance process confirmed that our performance was better than the lower guideline value and no financial penalty was applied.

How did we compare last year?

The graph below, taken from the Discover Water website compares our drinking water quality against other water companies. In 2016, our water quality compliance was 99.96%.

15

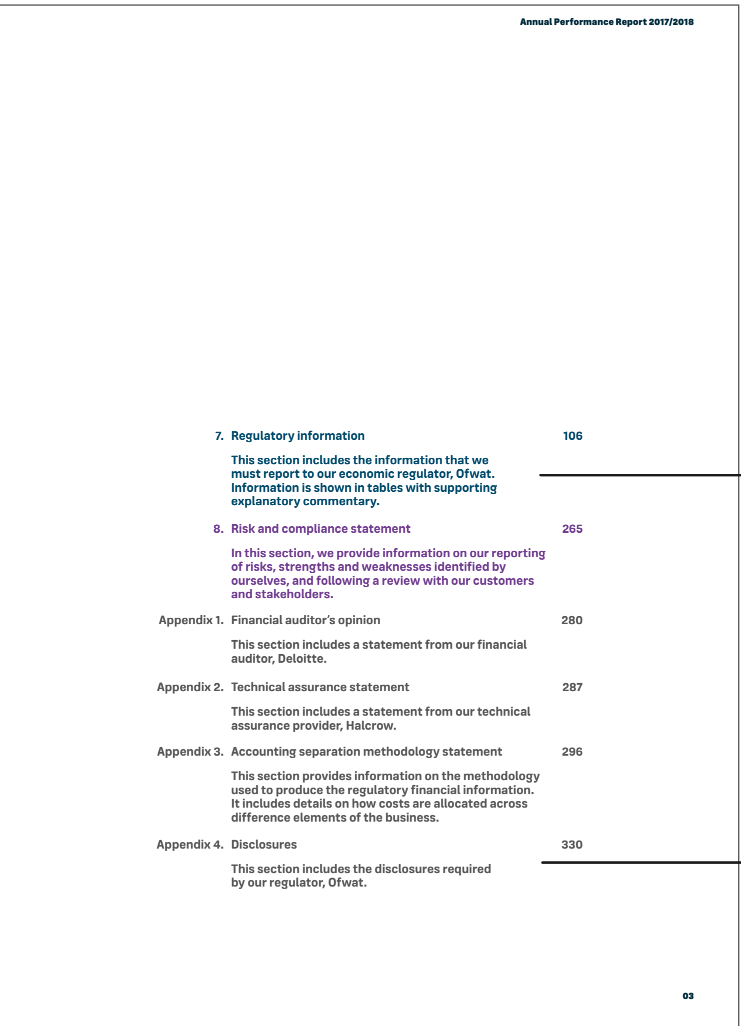
We welcome your comments and feedback on our annual performance report. Please do not hesitate to get in touch if you would like a paper copy of this report.

You can contact us in the following ways.

Email: **publicaffairs@yorkshirewater.co.uk**

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

Or posting them to us: **Regulation Department Yorkshire Water, Western House, Western Way, Buttershaw, Bradford BD6 2SZ.**



Annual Performance Report 2017/2018

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This section includes the disclosures required by our regulator, Ofwat.

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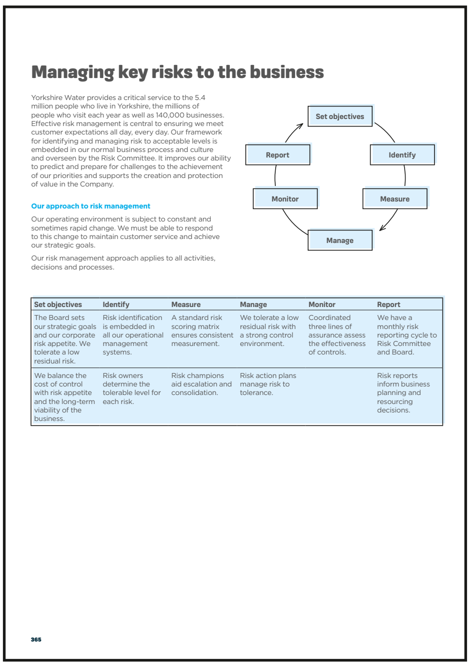
Section 7 – Regulatory information

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.
- Outcome performance summary. Information on how we are doing in meeting the commitments, we made to our customers.
- Additional regulatory information.



Managing key risks to the business

Yorkshire Water provides a critical service to the 5.4 million people who live in Yorkshire, the millions of people who visit each year as well as 140,000 businesses. Effective risk management is central to ensuring we meet customer expectations all day, every day. Our framework for identifying and managing risk to acceptable levels is embedded in our normal business process and culture and overseen by the Risk Committee. It improves our ability to predict and prepare for challenges to the achievement of our priorities and supports the creation and protection of value in the Company.

Our approach to risk management

Our operating environment is subject to constant and sometimes rapid change. We must be able to respond to this change to maintain customer service and achieve our strategic goals.

Our risk management approach applies to all activities, decisions and processes.

Set objectives	Identify	Measure	Manage	Monitor	Report
The Board sets our strategic goals and our corporate risk appetite. We tolerate a low residual risk.	Risk identification is embedded in all our operational management systems.	A standard risk scoring matrix ensures consistent measurement.	We tolerate a low residual risk with a strong control environment.	Coordinated three lines of assurance assess the effectiveness of controls.	We have a monthly risk reporting cycle to Risk Committee and Board.
We balance the cost of control with risk appetite and the long-term viability of the business.	Risk owners determine the tolerable level for each risk.	Risk champions aid escalation and consolidation.	Risk action plans manage risk to tolerance.		Risk reports inform business planning and resourcing decisions.

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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.

Statement from our Chief Executive

Overall performance review

At the end of the year we have delivered on 22 out of the 26 Performance Commitments agreed at the beginning of the five-year period. A strong performance in some areas, such as supply interruptions and internal sewer flooding, is balanced by a disappointing result in other areas such as leakage, customer service and water quality mean zonal compliance. The company deployed significant resources in the last quarter of the year to start its long-term plan to make substantial reductions in leakage. However, extreme weather conditions experienced in the first week of March resulted in a spike in burst mains which meant that the in-year target was not achieved.

These additional resources, combined with the widespread application of new network monitoring techniques, will remain deployed as part of our plan to achieve a step change in operational and customer service performance which is covered later in this review.

Despite highly improved performance on prior years, we narrowly missed our energy self generation target, due largely to delays in capital schemes. We expect to meet our 12% target in the next year.

The year end position on customer service, as measured by the water industry SIM score also shows a mixed position. A very strong performance on managing customer service on billing, in which Yorkshire Water ranks as number one in the sector, is balanced by significantly lower results for how we deal with clean and waste water customer service issues. This is clearly an issue which the company will be addressing. The way in which we service our customers will be a key feature of our organisational transformation programme which is introduced later in this review.

New service commitments

In the course of the year, we spent a significant amount of time talking to customers and getting their views on the service we provide both now and in the future. It was clear from this engagement that although customers are broadly content with the service they receive, they believe that our performance could be much improved in areas which mean the most to them – leakage, minor pollution incidents and instances of sewer flooding. Although they like our performance on interruptions to supply, where we are one of the leaders in the sector, they still think we could do better.

Based on this feedback, and also responding to the methodology introduced for the next periodic review by industry regulator Ofwat, the company decided to make a significant investment of £230m in service improvement. This investment, which was approved by the Yorkshire Water board in November and December, will deliver dramatic service enhancements including a 40 per cent reduction in leakage by the end of the next five-year period. Minor pollution incidents are also targeted under the plan and should also fall by 40 per cent, whilst we are targeting a 70 per cent reduction in sewer flooding.

The new performance levels will be delivered in three ways: first, the deployment of additional resources to traditional activities such as leakage inspection, providing much greater coverage in the field; secondly the use of new analytics to change the way in which we deploy those resources to ensure they have the greatest effect for our customers and finally the use of new technology to give us better information on the way in which our network is performing.

We will report every six months on the implementation of this plan and progress against the new targets.

Meeting the legitimacy challenge

Over the last 12 months there has been an increase in public and stakeholder concern over the way in which the water industry is structured and financed with questions being raised as to whether this is in the best interests of customers. Yorkshire Water has responded to this challenge in a number of ways, some of which have driven change elsewhere in the sector.

The company committed itself to removing its offshore financial structures in the Cayman Islands, a move which was then followed by others in the sector. These structures, although legitimate in purpose when set up and which delivered no taxation benefit, appeared opaque to customers and caused unnecessary suspicion. Yorkshire Water committed to the complex process of removing these companies in October 2017. This process will be completed during 2018.

In response to the Ofwat challenge on financial resilience, the company has strengthened its balance sheet through the successful disposal of non-core businesses and has also reduced interest costs, via both a lowering in the company's gearing, and changing the terms of our index-linked swaps.

We have also made considerable improvements in the transparency of our financial reporting. These improvements were recognised by Ofwat in its Company Monitoring Framework report issued on 30 November 2017. This report specifically complimented the steps we have taken to improve the clarity of our reporting and upgraded its evaluation of the quality of our data.

We have consulted with the public to establish the levels of financial and operational transparency which they would like to see from us and will publish the results of this in July 2018. This consultation will sit alongside an existing commitment which we have made to open data. This will see us working with the Leeds Open Data Institute to move to a position in which all our operational data will be open by default by 2020. The only exceptions to this will be where data could be personally identifiable or where there are information security issues.

Gender pay and workforce diversity

Yorkshire Water, and the customer service business Loop, reported their gender pay gaps according to the timetable set by government. The pay gap for both organisations is around 4%. This is lower than the national average of 12%, but we maintain a strong focus on ensuring that we have a fair system for pay which rewards men and women equally and fairly.

Building on this level of disclosure, the company has also published an extensive report on workforce diversity looking at representation at all levels across the protected grounds of race, gender and age. Compiling the report has shown some gaps in our data on the other protected grounds and filling those gaps to ensure we have a clear picture of representation is a priority under the new diversity commitments which the company has adopted. We will report on progress against those objectives every year.

Focus on health and safety

The determined roll out, company-wide, of our health and safety strategy is making good progress, and has achieved a wide level of engagement with our colleagues across the business. It is pleasing that we are seeing positive improvements in the level of reporting of both incidents and near misses as this is indicative of both an improving awareness of health and safety issues and the development of a more open culture.

The level of lost time injuries has decreased, which is clearly a positive step, but it remains higher than is desirable given that our view would be that any level of injury is unacceptable in a truly safe organisation. This remains a key area of focus for the management of Yorkshire Water and health and safety is a standing item for discussion at the weekly executive meeting.

In the year, we completed the introduction of our life saving rules programme and I would like to thank the many colleagues who participated in this programme and in particular the contribution made by our trades union representatives. The partnership with our trades unions was critical to the delivery of this exercise and we will continue to work closely with them on these issues.

Preparing for the next five years and beyond

The year has seen an intensification of the preparation of our plans for the next five-year period and has also involved further development of our long term strategic plans.

Much of this time has been spent in consultation with customers and stakeholders to ensure that our plans are closely aligned to their long-term aspirations for Yorkshire, its people, economy and environment. Based on this extensive consultation we have developed a new long-term strategy document which was published for further consultation in April 2018. This sets out the challenges we face, and the issues which our customers expect us to resolve. It is structured around the delivery of five big goals, on customers, water supply, affordability, the environment and openness and transparency.

Our business plan submission for Ofwat's periodic review is progressing well and will show a significant ambition for the company to achieve improved service and reductions in customer bills.

In conclusion this has been, as ever, a demanding year for the business and I am grateful to the hard work and commitment shown by all of our colleagues in helping us to deliver for our customers. On behalf of the board, I am delighted to thank them all for their contribution.

Richard Flint
Chief Executive
13 July 2018

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 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, the Yorkshire Forum for Water Customers and other external experts and 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 audit checks and challenges by Data Providers, Data Managers, Senior Managers and Directors. The assurance process also includes review and challenge by our financial auditor, Deloitte, and our Technical Auditor Halcrow. We have reviewed and actioned all findings from these assurance processes.
- We have worked with the Yorkshire Forum for Water Customers, and listened to our customers at focus groups, to ensure we meet our ambitions for a document that is accessible for all customers and our assurance means that our published information is trusted.
- The outputs from the assurance processes have been reviewed and challenged by the Board Audit Committee.

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 Audit Committee that there are appropriate controls and assurance processes in place regarding the information contained within the report.

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.

Anthony Rabin
Chairman

Richard Flint
Chief Executive

Liz Barber
Director of Finance, Regulation & Markets

Pamela Doherty
Director of Service Delivery

Nevil Muncaster
Director of Asset Management

Julia Unwin
Non-Executive Director

Teresa Robson-Capps
Non-Executive Director

Ray O'Toole
Non-Executive Director

Andrew Wyllie
Non-Executive Director

Mark Amsden
Company Secretary (Interim)

Scott Auty
Non-Executive Director

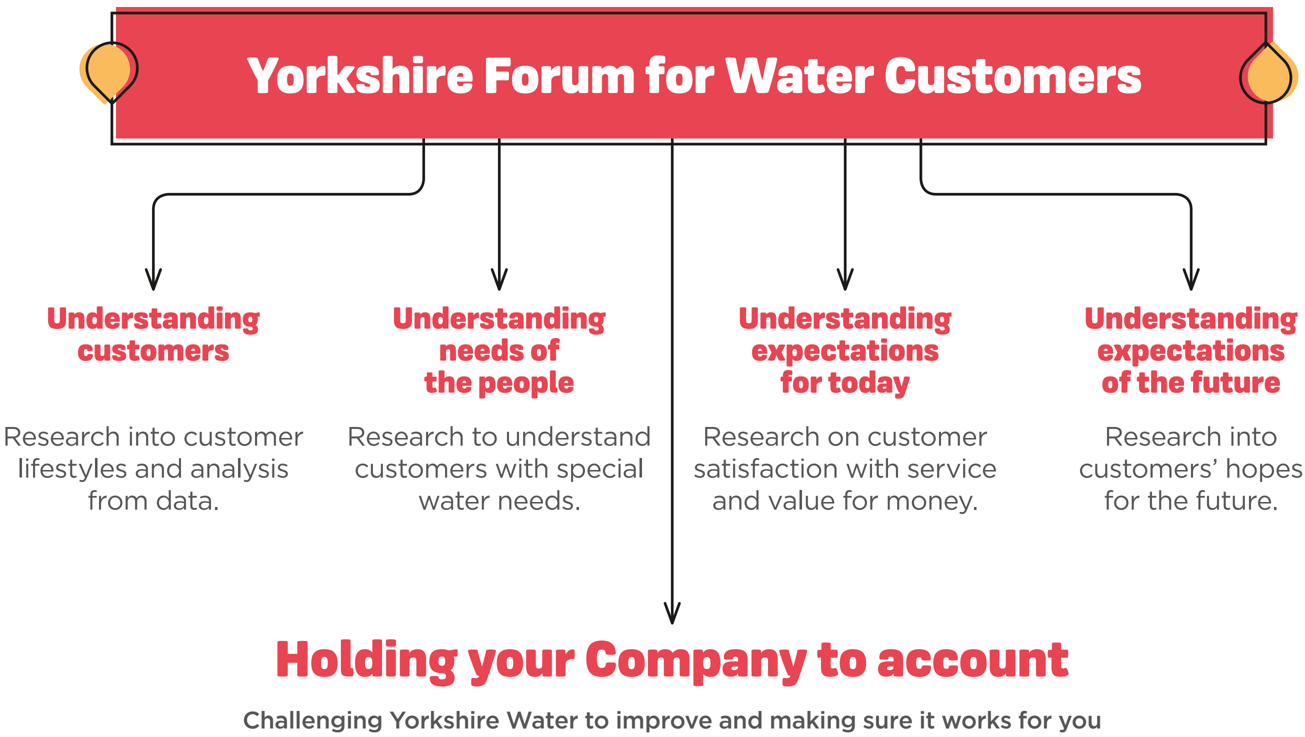
Andrew Dench
Non-Executive Director

Michael Osborne
Non-Executive Director

Statement from the Yorkshire Forum for Water Customers

We've engaged with the Yorkshire Forum for Water Customers (the Forum), which has given us valuable insight into what our customers want from us now and into the future. The Forum is an independent challenge group who are responsible for ensuring our customers' views are fairly reflected in our business plan and ensuring we meet the performance commitments we have made to customers.

The Forum have published a statement on our performance. You can view the statement here: **www.yorkshirewater.com/customerforum**



About Us

Yorkshire Water at a glance

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

We supply water and waste water 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 waste water bills in the country.

WHAT WE DO

We provide essential water and waste water 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

We're one of Yorkshire's biggest land owners

We collect water from three main sources

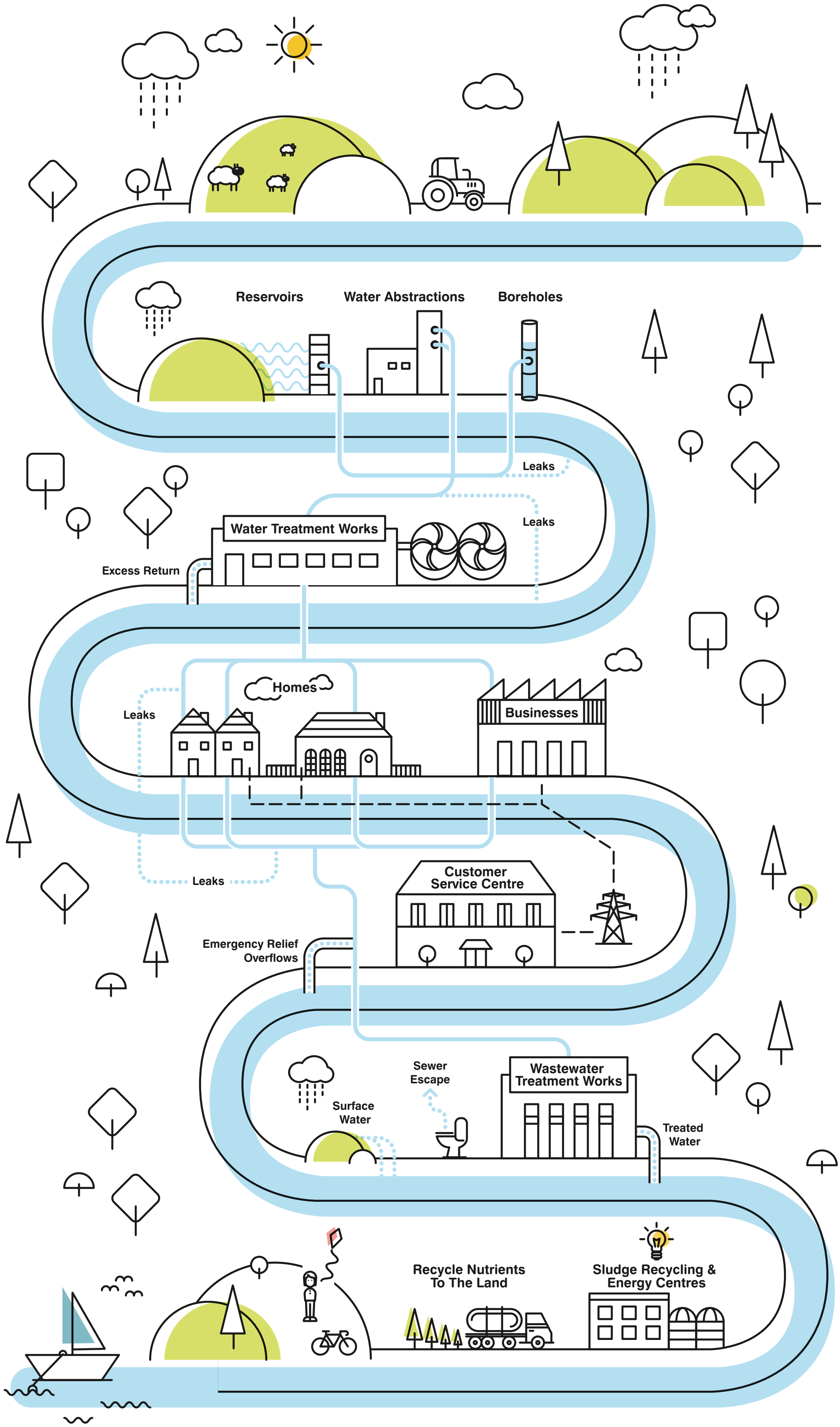
We manage 671 water and wastewater treatment works

We supply water to homes and businesses across the county

Our customer service team support our 5 million customers

We collect 1 billion litres of waste water every day

We safely return water back into the environment



Performance Highlights

£373

Average bills second lowest in the country, **increased by less than inflation**

(2016/2017: £368) See 'customer bills' in the introduction for more information.

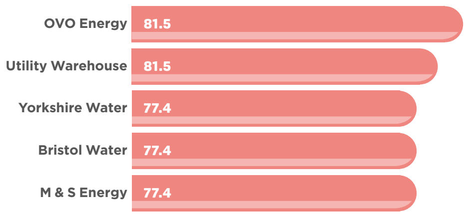
Operating profit £281.1m*

(2016/2017: £285.8m)
*Excluding exceptional items

Joint third highest performing company out of all the utilities in the UK customer satisfaction index

77.4 points out of 100

(2016/2017: 80.0)



CO_2

Continued reduction in operational emissions, **to lowest recorded levels**

288 KT CO_2e

(2016/2017: 307 KT CO_2e)

Continuing to meet and exceed our Performance Commitments

22 of 26

2016/2017: 24 of 26) See section 3 – review of our performance for more information

We pay at least the **Living Wage**

We are a Living Wage Employer

An externally verified leader in the BITC **Corporate Responsibility** index 5 stars

Business in The Community Corporate Responsibility Index (2016/2017: 5 stars)

TAX

Total tax contribution £119.9m

(2016/2017: £121.6m)

WATER AND US

The diagram below shows how having a sustainable and resilient supply of water is essential to our way of life.

Cup of tea
30 litres[1]

of water for a standard cup of tea

Paper
5,000 litres[4]

of water to produce one ream of A4 paper

Chocolate
1,700 litres[2]

of water for 100g bar of chocolate

Shower
10,140 litres[5]

of water for 5 showers per week for a year

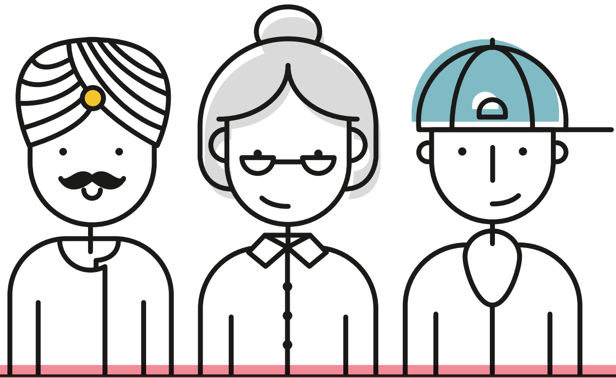
Cooking
2,000 litres[3]

of water to prepare food at home for a year

Toilet
12,140 litres[6]

of water to flush everyday for a year

[1]Papworth Trust, Disability in the United Kingdom 2013, Facts and Figures [2]Water Footprint Network website, Product Gallery [3]Energy Saving Trust [4]Friends of the Earth [5]Energy Saving Trust [6]Energy Saving Trust



Our commitments to customers

Our vision is 'taking responsibility for the water environment for good' and we recognise the responsibility we have in providing one of life's most essential services and protecting the natural environment. Our vision is about doing what's right for our customers, colleagues, partner organisations, the environment and our investors, both in the short and long term.

Central to our business strategy is the delivery of our customer commitments which were shaped in 2014 through engagement with over 30,000 customers, our regulators and the Forum. These are defined in seven customer outcomes and measured by 26 performance commitments, as shown in the diagram on the next page.

Customer outcomes	Our performance commitments
We provide you with water that is clean and safe to drink	**Our performance commitments:** • Drinking water quality compliance • Corrective actions • Drinking water quality contacts • Stability and reliability factor - water quality
We make sure that you always have enough water	**Our performance commitments:** • Leakage • Water use • Water supply interruptions • Stability and reliability factor - water networks
We take care of your waste water and protect you and the environment from sewer flooding	**Our performance commitments:** • Internal flooding • External flooding • Pollution incidents • Stability and reliability factor - waste water networks
We protect and improve the water environment	**Our performance commitments:** • Length of river improved • Visitor satisfaction • Working with others • Bathing water quality • Land conserved and enhanced • Stability and reliability factor - waste water quality
We understand our impact on the wider environment and act responsibly	**Our performance commitments:** • Energy generation • Waste diverted from landfill
We provide the level of customer service you expect and value	**Our performance commitments:** • Quality of customer service (SIM) • Service commitment failures • Overall customer satisfaction
We keep your bills as low as possible	**Our performance commitments:** • Number of people who we help to pay their bill • Value for money • Bad debt

Further information on these performance commitments and how we are performing against them can be found within Section 3 (Review of our performance) and Section 7 (Regulatory information) of this annual performance report.

Customer bills

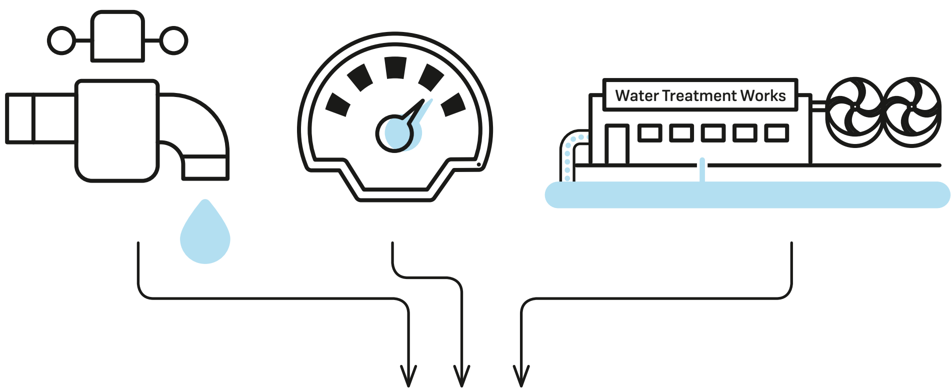
During 2015 to 2020 the average bill will not increase by any more than the rate of inflation.

When we developed our five-year plan, 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 service 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).
The average combined water and sewerage bill in 2016/2017 was £368.
The forecast average for 2017/2018 this is £373.

Providing safe drinking water
£151.39

Meter reading and billing services (retail services)
£30.29

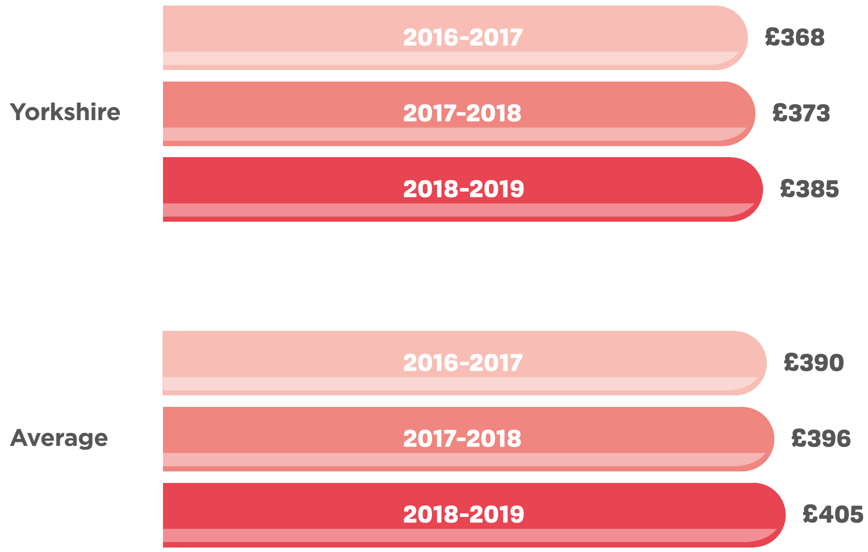
Collecting and treating waste water
£191.53



Total for 2017/2018: £373

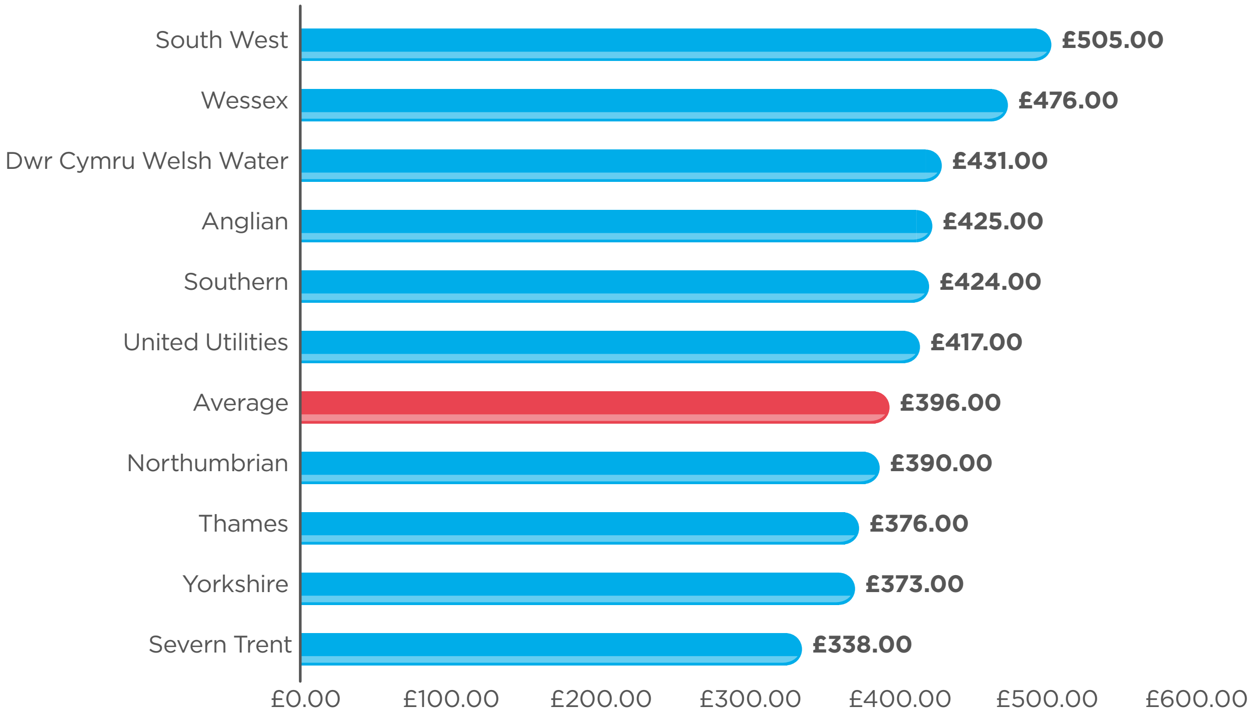
How does the bill compare?

The following graphs show how the forecast average bill for water and waste water services in Yorkshire compares with the UK average and other water companies. We have been cheaper than the UK average for the last two years. (Source: Discover Water. Visit the Discover Water website for more information. **discoverwater.co.uk/annual-bill**



Forecast average bill for water and waste water services in Yorkshire compared with the UK average.
Source: Water UK

2017/2018 – Forecast annual water and waste water services bills for all water companies.



The average annual bill for water services (including retail services) in Yorkshire is £165.

The average in the UK is £186.

The average annual bill for waste water services (including retail services) in Yorkshire is £208.

The average in the UK is £210.

What's Included

- Maintaining the network of reservoirs, treatment works, pumping stations and pipes.
- Gathering and collecting the water from rivers and reservoirs or pumping it from underground rocks.
- Storing the water ready to be treated.
- Treating, cleaning and distributing water to properties.
- Billing, queries, payments, debt management, meter reading, vulnerable customers (retail services).

What's Included

- Building and maintaining sewer pipes.
- Pumping sewage to treatment works.
- Various stages and methods of treatment.
- Flowing cleaned and treated wastewater back into rivers and the sea.
- Converting solid material from sewage into gas for energy.
- Billing, queries, payments, debt management, meter reading, vulnerable customers (retail services).

Total average water and waste water bill for 2017/2018 in Yorkshire is £373.

The average in the UK is £396.

2.
Glossary

Following feedback from our customers and Plain English Campaign, we have moved our glossary from the Appendix to the front of our annual performance report.

AMP	See Asset Management Period.
AMP Adjustment	The revision in the real value of fixed assets arising periodically from improved information in the five-year Asset Management Plan process.
Annual Performance Report (APR)	Our annual report that we publish to demonstrate compliance with our separate price controls, and our performance against the promises we have made to you.
Appointed Business	The appointed business comprises the regulated activities of Yorkshire Water. These are the activities necessary in order for us to fulfil the function and duties of a water and sewerage undertaker under the Water Industry Act 1991.
Arm's-length Trading	Trading in which Yorkshire Water treats the other party, usually an associate company on the same basis as an external party.
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 AMP6, which covers 2015 to 2020 and we are now starting to plan through the latest Price Review for AMP7, which will cover 2020 to 2025.
Associate Company	Condition A of the Licence defines an associate company to be any group or related company. Condition F of the Licence requires all transactions between the company and its associated companies to be disclosed subject to specified materiality considerations.
Assurance	Provides confidence and a level of certainty that a piece of information or data is correct.
Assurance Plan	A plan of the activities that we will carry out to provide assurance on the data, the information and the publications that we provide.
Board	The Board of Yorkshire Water Services Limited is accountable and responsible for the control of the business, its strategy and its decisions. The Board is accountable for the quality of our information and our publications.
Board Audit Committee	Board Audit Committee review the process and controls in place and the level of assurance in place. It reports its views of audit quality to the Board.
Capex	See Capital Expenditure.
Capital Expenditure	Capital Expenditure (capex) is expenditure to acquire or upgrade physical assets such as property, pipes and treatment works.
Company Monitoring Framework	Ofwat's framework that sets out the way in which companies provide performance information to their customers and stakeholders between 2015 and 2020.
Confidence Grades	Confidence Grades combine elements of reliability and accuracy to provide a clear base for companies to qualify their data.
Consumer Prices Index	The Consumer Prices Index is a measure of economic inflation based on a set series of goods and services set by the Office for National Statistics. This is the headline measure of inflation used in the Government's target for inflation.

Term	Definition
Code	The UK Corporate Governance Code. This sets out good standards in relation to board leadership and effectiveness, remuneration, accountability and relations with shareholders.
Cost Allocation	Cost allocation is the means by which all costs are allocated to appointed and non-appointed businesses, price control units, or specific supplies, works and services, ensuring a fair share of overheads, even where costs cannot be directly attributed to specific activities and associated services.
Cost driver	A cost driver is the factor or factors which cause the cost to occur. This can be further divided between the driver that causes an activity to occur, and a driver that determines how often it occurs. Costs may vary in relation to the cost driver over the short or longer-term, depending on the nature of cost concerned.
CPI	See Consumer Prices Index.
Cross-subsidy	Cross-subsidy in this context is monetary aid or contributions from the appointee to the associate, or between price control units, which does not reflect the value of the services received. It also relates to services provided by the appointee to associate companies where there has been an under-recovery of costs incurred by the appointee.
Customer Side Leakage	Leakage from customer side pipes that form part of our treated water distribution network.
Data Assurance	Processes in place to ensure that the data we produce is accurate.
Data Provider & Data Manager	Data providers have specific responsibilities as part of our data assurance process. They will document the steps we follow to capture, analyse, process and report on our performance. They will then provide this information for inclusion within the publication. The data provider is supported by a data manager. The data manager will ensure that the data produced and any supporting explanations align with reporting requirements.
Day-to-day Controls	These are the activities that we complete every day as part of our front line operations. Everything that we do supports the information that we eventually report. These controls provide the first level of assurance that the information we publish is accurate.
Deadband	Performance level classed as a 'neutral zone' where there is no financial consequence, to account for uncertainty.
Defra	Defra is the Department for Environment, Food and Rural Affairs. It is a UK government department responsible for safeguarding our natural environment, supporting the food and farming industry, and sustaining a thriving rural economy.
Delivery Assurance Groups	These are teams made up of managers and operational colleagues. They are responsible for monitoring our performance as we deliver the performance commitments that we agreed with you.
Deteriorating	We have four performance commitments that are titled Stability and Reliability Factors (S&R factor). These are given an overall assessment of stable, improving or deteriorating. An overall assessment of performance is made based on the performance of several sub-measures. If these fail to meet the levels agreed with Ofwat over a continued period of time, the overall S&R Factor will be assessed as deteriorating.

Term	Definition
External Audit: Financial	Deloitte, our external auditors, provide an opinion on the accuracy of our financial statements.
External Audit: Other	The independent assurance providers that we procure to review the information that we publish. We work with Halcrow as our operational performance assurance providers. We also worked with other independent assurance providers as required. This can include interviews with colleagues, tracing information back to source data and assessing the quality of our processes.
Final Determination	The outcome of a price review setting out water companies' price limits that will operate for a five-year period and the specific outputs that they will have to deliver. The last final determination was made in 2014 for 2015-2020.
Financial Incentives / Rewards & Penalties	In our business plan, we consulted with you to set stretching performance commitments. We agreed with you that some of our performance commitments would carry a financial as well as a reputational incentive. The incentives are set to reward performance that beats stretching commitments and penalise performance that falls short.
Financing Adjustment	The impact of RPI on the real value of net finance for the business.
FTEs	See Full Time Equivalent.
Full Time Equivalent	For the purposes of cost allocation, FTEs (or 'full-time equivalents') should include all full-time staff, and contractors/temporary staff directly employed. Where there is an existing contractual arrangement in place with an associate or third party for example a third party billing arrangement, FTEs (or 'full-time equivalents') will include all full-time staff, and contractors/temporary staff directly employed by the associate or third party involved in providing that service to the appointee.
Halcrow	Yorkshire Waters external assurance providers for non-financial information between 2015-2020.
Households	These are properties used as single domestic dwellings (normally occupied), receiving water for domestic purposes which are not factories, offices or commercial premises. These include cases where a single aggregate bill is issued to cover separate dwellings having individual standing charges. (In some instances, the standing charge may be zero.) The number of dwellings attracting an individual standing charge and not the number of bills should be counted. Mixed/commercial properties and multiple household properties – for example, blocks of flats having only one standing charge – should be excluded.
Improving	We have four performance commitments that are titled Stability and Reliability Factors (S&R factor). These are given an overall assessment of stable, improving or deteriorating. An overall assessment of performance is made based on the performance of several sub measures. If we have substantially exceeded the target over a continued period of time for the majority of the sub measures, the overall S&R Factor will be assessed as improving.
Infrastructure Assets	Infrastructure assets are mainly our below-ground assets, such as pipes, water mains, sewers, dams and reservoirs.
Instrument of Appointment	Water companies operating the public water networks hold appointments as water undertakers, and those operating the public waste water networks hold appointments as sewerage undertakers, for the purposes of the Water Industry Act 1991. They also supply water and waste water services direct to household and non-household customers who are connected to their networks.

Term	Definition
Internal Audit	Internal Audit is an independent team, governed by international standards, focussing on higher risk areas across the business. They review second line activity and test the design and operation of the controls to ensure accurate information.
ISO 9001: 2015 Quality Standard	ISO 9001:2015 is the internationally recognised Quality Management System (QMS) standard. It is the quality management standard that our regulatory reporting process has been externally judged to meet. By being ISO 9001:2015 accredited, our regulatory reporting process is considered to consistently provide information that meets customer and applicable statutory and regulatory requirements.
Licence	Our licence is also known as the Instrument of Appointment. The Secretary of State for the Environment appoints companies as water and sewerage undertakers. We have been issued with a licence to allow us to deliver the services we do. We need to comply with the requirements of the licence.
Measured	These are properties where some or all of the charges for supplies are based on measured quantities of volumes.
Modern Equivalent Asset (MEA)	The cost of an asset of equivalent productive capability to satisfy the remaining service potential of the asset being valued if the asset would be worth replacing or the recoverable amount if it would not. The gross MEA value is what it would cost to replace an old asset with a technically up to date new asset with the same service capability allowing for any difference both in the quality of output and in operating costs. The net MEA value is the depreciated value taking into account the remaining service potential of an old asset compared with a new asset, and is stated gross of third-party contributions.
MOSL	Market Operator Services Limited (MOSL). They work with Ofwat and water wholesale and retail companies in managing the world's largest water retail market for business customers across England and Wales.
Non-appointed Business	The non-appointed business activities of the Company are activities for which the Company as a water and sewerage undertaker is not a monopoly supplier (for example, the sale of laboratory services to an external organisation) or involves the optional use of an asset owned by the Company (for example, the use of underground assets for cable television).
Non-financial Information	The customer, service and operational information we collect, assure and report on. This includes information regarding the delivery against our performance commitments.
Non-households	These are properties receiving water for domestic purposes but which are not occupied as domestic premises, or where domestic dwellings are combined with other properties, or where properties are in multiple occupation but only have one standing charge. In this case, it is the number of bills that should be counted.
Non-infrastructure Assets	Non-infrastructure assets are those mainly found above ground, such as water and sewage treatment works, pumping stations, laboratories and workshops.
ODIs	See Outcome Delivery Incentive.
Ofwat	The Office of Water Services, which is the economic regulator of water services in England and Wales.
Operating Expenditure	Payments for the day-to-day operations of our business, such as operating and maintaining our network and treatment works, paying our staff and our energy bills.

Term	Definition
Opex	See Operating Expenditure.
Outcome Delivery Incentive (ODI)	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.
Outcome Totex	The total expenditure (totex) we can invest between 2015-2020 allocated between each of our seven customer outcomes.
Penalty Value	(S&R Factors) - The amount of outcome totex the company is required to pay if one or more of the S&R Factors is assessed as deteriorating based on our agreed penalty process. (General) – For ODIs with an associated penalty this is the calculated value based on the extent to which we have failed our agreed target for that ODI, outside of any agreed deadband.
Performance Commitment	In 2015 we worked with you to identify seven things that you want us to achieve between 2015 and 2020. We called them 'Outcomes for Yorkshire'. These seven outcomes are supported by 26 performance commitments. These are our commitments to you and the targets that we are working towards between 2015 and 2020.
Persistent	We have four performance commitments that are titled Stability and Reliability Factors (S&R factor). Each S&R factor is made up of several sub measures. A sub measure will be labelled as persistently failing where it is recognised that it has been failing over a continued period of time. This will have an impact on the overall assessment for the S&R Factor.
PR14	Periodic Review 2014; the Ofwat periodic review of price limits completed in 2014 to set prices for 2015 to 2020.
PR19	Periodic Review 2019; the Ofwat periodic review of price limits to be completed in 2019 to set prices for 2020-2025.
Price Control Units	At the 2014 price review Ofwat introduced separate binding price controls. These include wholesale water, wholesale waste water, retail household and retail non household.
Price Review (PR)	The price determination process undertaken by Ofwat every five years. Each water and sewerage undertaker submits a Business Plan covering the five-year period for which Ofwat will determine cost and revenue allowances.
Procedures	A document that is completed by the Data Provider and then approved by the Senior Manager to say how we collect the information that we report. This ensures consistency of reporting over the years.
Publication Manager	They will review the guidance, design the format of the final report, assign data providers required, develop the timeline for publication, collate all the information, write the publication in Plain English and ensure the publication is delivered on time.
RAG	See Regulatory Accounting Guidelines.
RCV	See Regulatory Capital Value.

Term	Definition
Reference Level	We have four performance commitments that are titled Stability and Reliability Factors (S&R factor). These are given an overall assessment of stable, improving or deteriorating. Each S&R factor is made up of several sub measures. Each sub-measure will have a reference level. This is the minimum yearly performance level expected for each sub measure as agreed with Ofwat.
Regulatory Accounting Guidelines (RAG)	The accounting guidelines for regulatory accounts issued, and amended from time to time, by Ofwat.
Regulatory Capital Value (RCV)	The capital base used in setting price limits. The value of the appointed business that earns a return on investment. It represents the initial market value (200-day average), including debt at privatisation, plus subsequent net new capital expenditure including new obligations imposed since 1989. The capital value is calculated using the Ofwat methodology (i.e. after current cost depreciation and infrastructure renewals accrual).
Regulatory, Financial & Legal Oversight	The teams that provide oversight of the publications, regulations and legal obligations. The teams will review the information and the publications to ensure they meet our requirements and meet any guidance that we have.
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.
Retail Price Index (RPI)	The RPI is compiled and published monthly by the Office for National Statistics. RPI is an average measure of change in the prices of goods and services bought for the purpose of consumption by the vast majority of households in the United Kingdom.
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.
Risks, Strengths and Weaknesses Statement	This is an annual document produced following consultation with our customers and stakeholders. It provides information on what you think about the performance information that we publish and how we will respond to any risks identified as part of this process.
RPI	See Retail Price Index.
S&R Factor	See Stability & Reliability Factor.
Senior Manager / Director Reviews	Senior Managers will review the information produced, how it has been calculated and any explanation of the results. They will check to ensure that the information is accurate, consistent and meets reporting requirements. They will review that the information is in line with their expectations of company performance and ensure any variance is explained. They will complete a review of other information published internally and externally for consistency.
Senior Manager / Director Self-Certification / Sign Off	Senior Managers will be asked specific questions in the annual self-certification process. These questions will relate to the quality of reporting information. Heads of departments must state whether the information reported is accurate. Evidence must be obtained to make this statement.

Term	Definition
Service Incentive Mechanism (SIM)	The Service Incentive Mechanism was introduced by Ofwat to replace the Overall performance assessment (OPA) as a measure of the service customers experience from their water company. It is now in its second year. There are two elements to the SIM: 1) A quantitative measure awards penalty points for issues ranging from callers to our customer centre receiving an engaged tone, through to complaints. 2) A qualitative measure is calculated via telephone interviews to assess the satisfaction of customers who have contacted us to resolve queries.
SIM	See Service Incentive Mechanism.
Stability & Reliability Factor	The four stability and reliability performance commitments agreed with our customers and regulator, Ofwat, to determine our ability to deliver our core water and waste water services and protect public health.
Stability & Reliability Sub-measure	Each of the four Stability and Reliability Factors have several supporting measures. These measures are used to assess the overall S&R assessment of stable, improving or deteriorating.
Stable	We have four performance commitments that are titled Stability and Reliability Factors (S&R factor). These are given an overall assessment of stable, improving or deteriorating. An overall determination of performance for the S&R factor is based on the assessment of a number of indicators and sub measures, which confirm the annual performance levels agreed with Ofwat are being consistently met over a continued period of time.
Steering Groups	Steering Groups are established to help programme delivery. They will be involved in ensuring that any requirements for a publication have been met.
Targeted Assurance	Areas that we have identified as being important to you or being higher risk should have more assurance to give the confidence that the information is correct.
Total Expenditure (Totex)	Totex (total expenditure) is the mechanism, introduced in PR14 (price review 2014) for planning and reporting capital and operational spend. The object is to achieve the optimum combination to deliver the required business plan outcomes. It applies to both water and waste but not to retail.
Totex	See Total Expenditure.
Transfer Pricing	A transfer price is the price paid by one group company to another for transactions between the two companies or for transactions within the appointee between price control units or between appointed and non-appointed business.
UK Customer Service Index (UKCSI)	UK Customer Satisfaction Index (UKCSI) is the national measure of customer satisfaction. It gives a unique insight into the quality of customer service in the UK as a whole and 13 sectors of the economy. It is based on a six-monthly online survey of consumers which is demographically representative of the UK population.
Unmeasured	These are properties where none of the charges for supplies are based on measured quantities of volumes. These include properties which receive an assessed charge because metering is not possible or economic.

Term	Definition
Water 2020	An Ofwat work programme, which aims to establish what will be required of water and sewerage companies in the 2019 Price Review.
Water Resource Management Plan (WRMP)	Our 25-year Water Resources Management Plan is updated every five years and sets out how we aim to meet the predicted demand for water in our region over that period.
Wholesale	Wholesale services are the delivery of water via networks of pipes to and from customers' property boundaries, including abstracting, treating and transporting water, as well as collecting, treating and disposing of waste water.
Wider Assurance	Processes in place to ensure that the overall publication meets any guidance and is accessible and easy to understand.
WRMP	See Water Resource Management Plan.
Yorkshire Forum for Water Customers (the Forum)	Independent group of domestic customers, business customers and environmental representatives, to ensure that we continue to be held to account for delivering our commitments and meeting the promises we made to our customers.

3.
Review of our performance

In this section

In this section we will take you on a journey through our performance for the last financial year.

01. We will start with an introduction on the promises we made to you, called the 'customer outcomes' and our performance commitments

02. We'll then explain how the financial rewards and penalties work

03. We'll explain the assurance we carry out on our performance

04. We'll then talk about 'Discover Water' how you can compare our performance against other water companies

05. We'll then talk about our financial outperformance and our forecast penalty/ reward position

06. We'll then give you a summary of our performance for the year

07. Finally, we'll go into a little more detail for each of our performance commitments

Here is a link to the independent report from the Yorkshire Forum for Water Customers (Our customer challenge group)

www.yorkshirewater.com/customerforum

We have created a summary of this section – here is a link to our performance summary report –

www.yorkshirewater.com/reports

We spoke with over 30,000 customers to ask them what they wanted us to focus on. Together we created seven key themes, known as customer outcomes, which they wanted us to deliver. To measure progress on these seven customer outcomes, we developed 26 key performance indicators, known as performance commitments.

These commitments are our promises to you and we'll be measured against them both by Ofwat, our regulator and the independent Yorkshire Forum for Water Customers. The diagram below shows our seven customer outcomes and 26 performance commitments.

To make sure we deliver against the performance commitments, we have developed a number of rewards and penalties 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.

The boxes shaded in burgundy on the diagram show which of the performance commitments carry a reward or penalty.

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 waste water 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	Value for money
Drinking water quality contacts	Water supply interruptions	Pollution incidents	Working with others		Overall customer satisfaction	Bad debt
Stability and reliability factor - water quality	Stability and reliability factor - water quality	Stability and reliability factor - waste water networks	Bathing water quality			
			Land conserved and enhanced			
			Stability and reliability factor - waste water quality			

These performance commitments have a reward or a penalty attached to them

Financial incentives and penalties

Out of our 26 performance commitments, we agreed some would carry a financial penalty as well as have a reputational impact. We have designed these incentives to reward performance that beats a stretching target and to penalise us if our performance falls short.

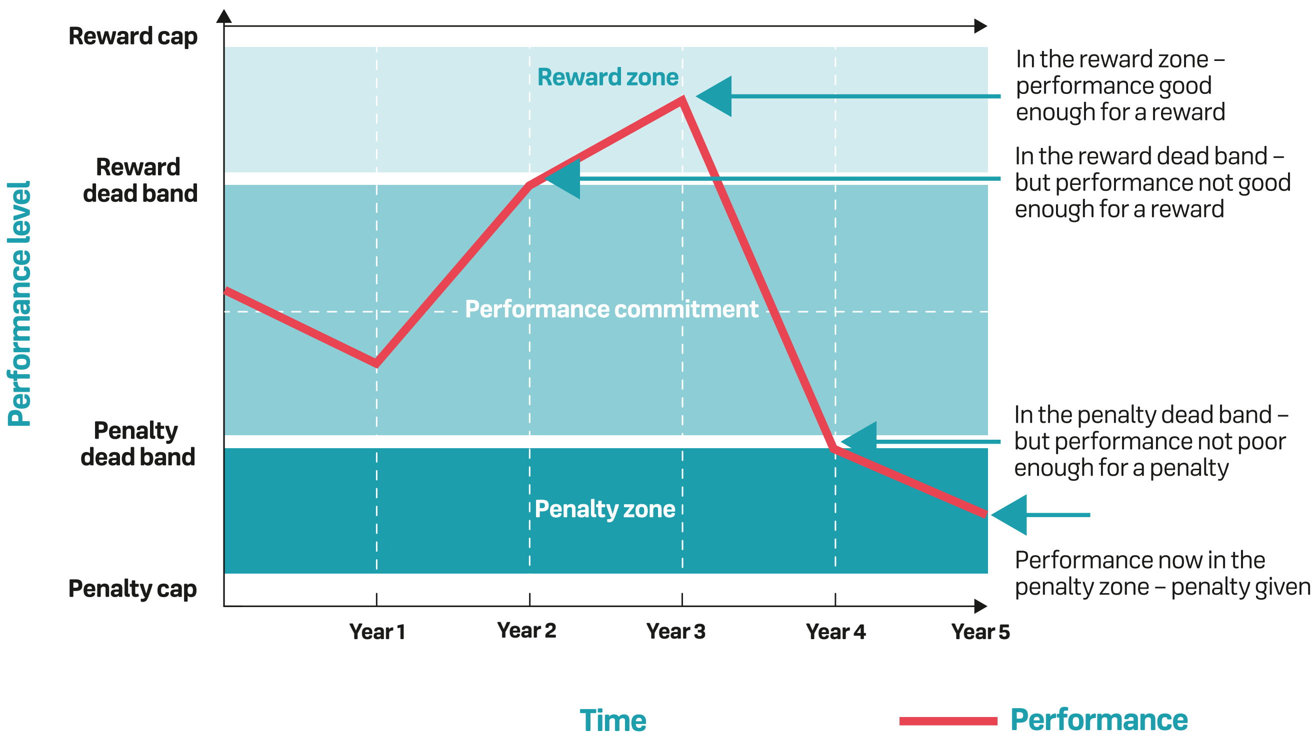
We have 14 performance commitments that carry a reward or penalty. Although performance commitments with a reputational incentive don't offer a reward or penalty, poor or good performance can affect how we are seen as a company making them just as important.

So, how does it work?

For performance commitments which have a financial incentive, if we overperform, we can earn a financial reward (where the performance moves into the Reward zone as shown on the diagram below) or receive a financial penalty if we underperform (where the performance moves into the Penalty zone as shown on the diagram below).

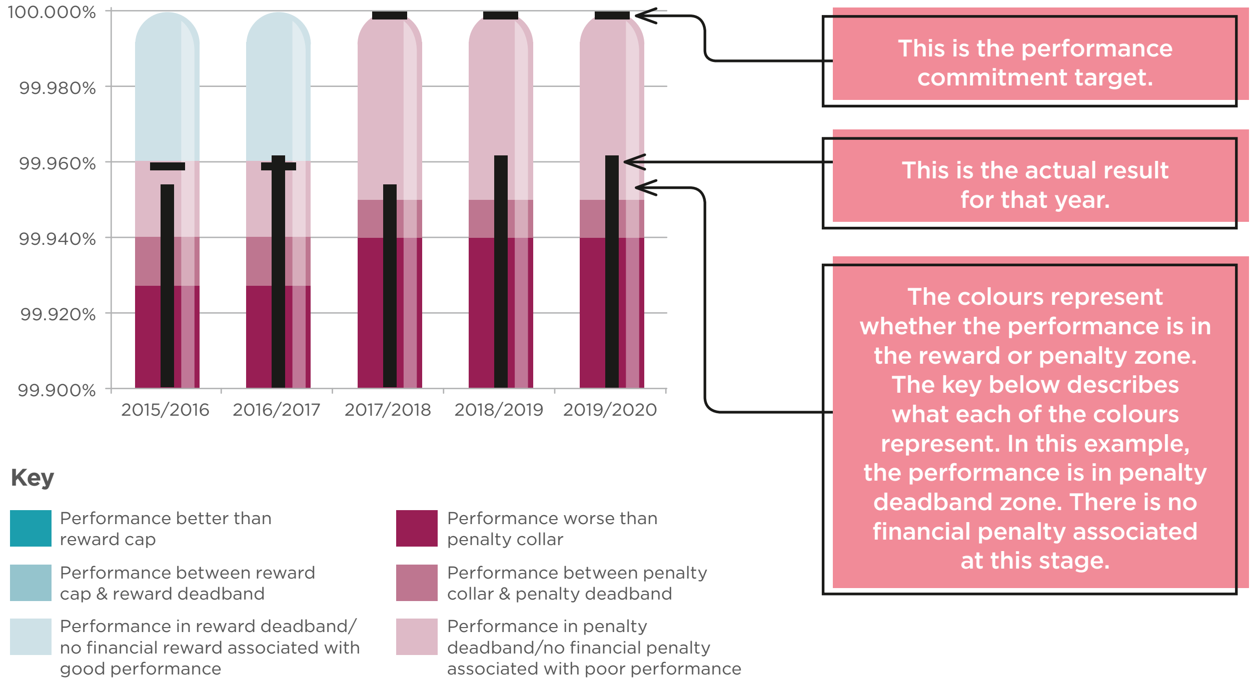
There is a reward cap, which is the maximum reward we can achieve in any given year for each performance commitment and an equivalent cap on penalties, which is the maximum we can be penalised.

There is also a reward and penalty dead band. This acts as a buffer between the target and the reward and penalty zones. This is so that we aren't immediately rewarded or penalised for small moves away from the target performance which is some cases can be caused by natural factors such as the weather.



What do the graphs show?

We will portray how we are performing against our performance commitments using graphs like the example below.



How do we calculate the outcome delivery incentives?

We explained earlier in this section 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 (reward and penalty), one sided (reward only) and one sided (penalty only).

Performance commitments with two sided incentives – reward and penalty

- Drinking water quality contacts
- Leakage
- Water supply interruptions
- Internal flooding
- Minor and serious pollution incidents
- Length of river improved
- Land conserved and enhanced
- Measure of customer service

Performance commitments with one sided incentives – penalty only

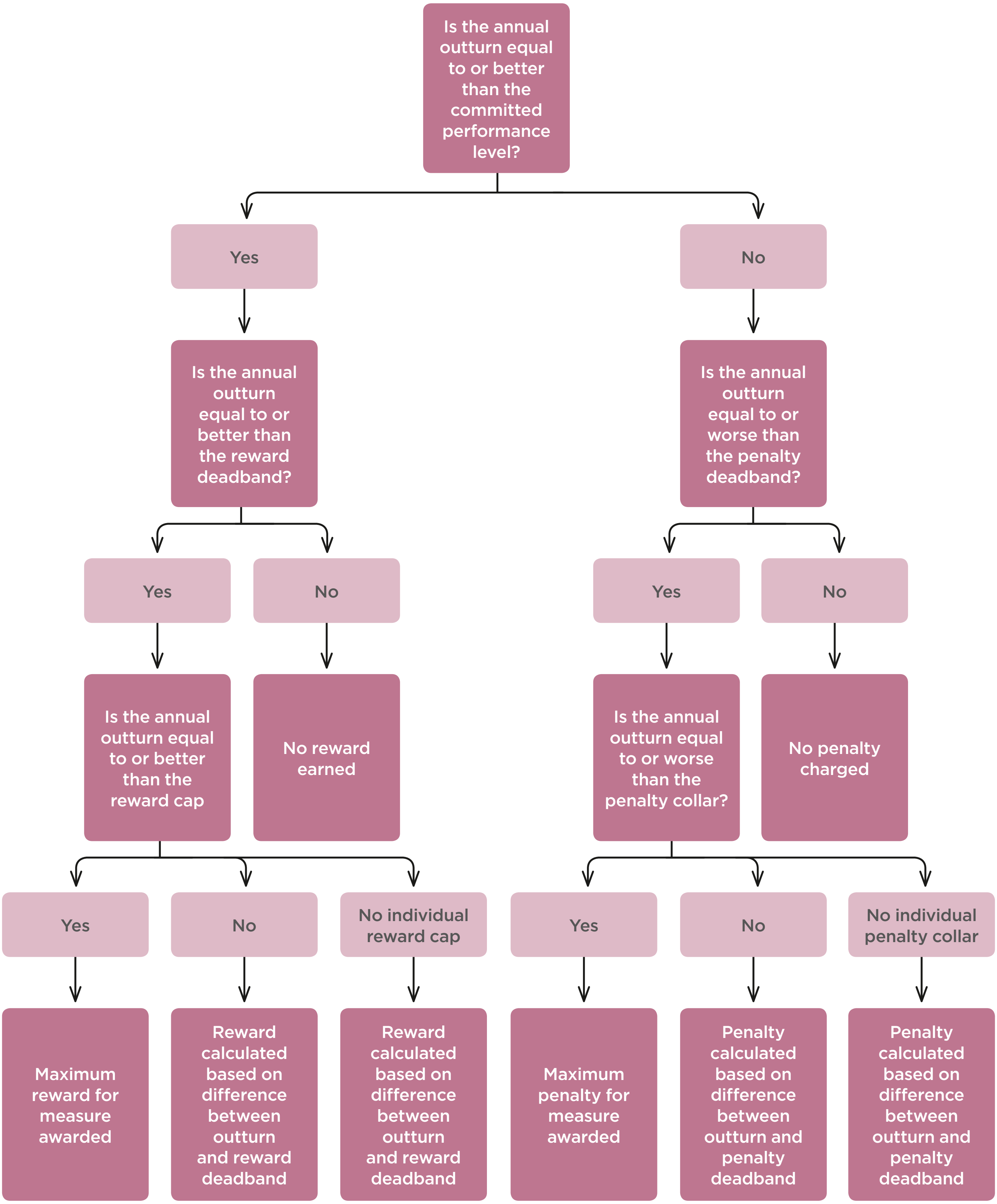
- Drinking water quality compliance
- Long term stability and reliability of water quality
- Long term stability and reliability of water networks
- Long term stability and reliability of waste water networks
- Long term stability and reliability of waste water treatment

Performance commitments with one sided incentives – reward only

- Working with others

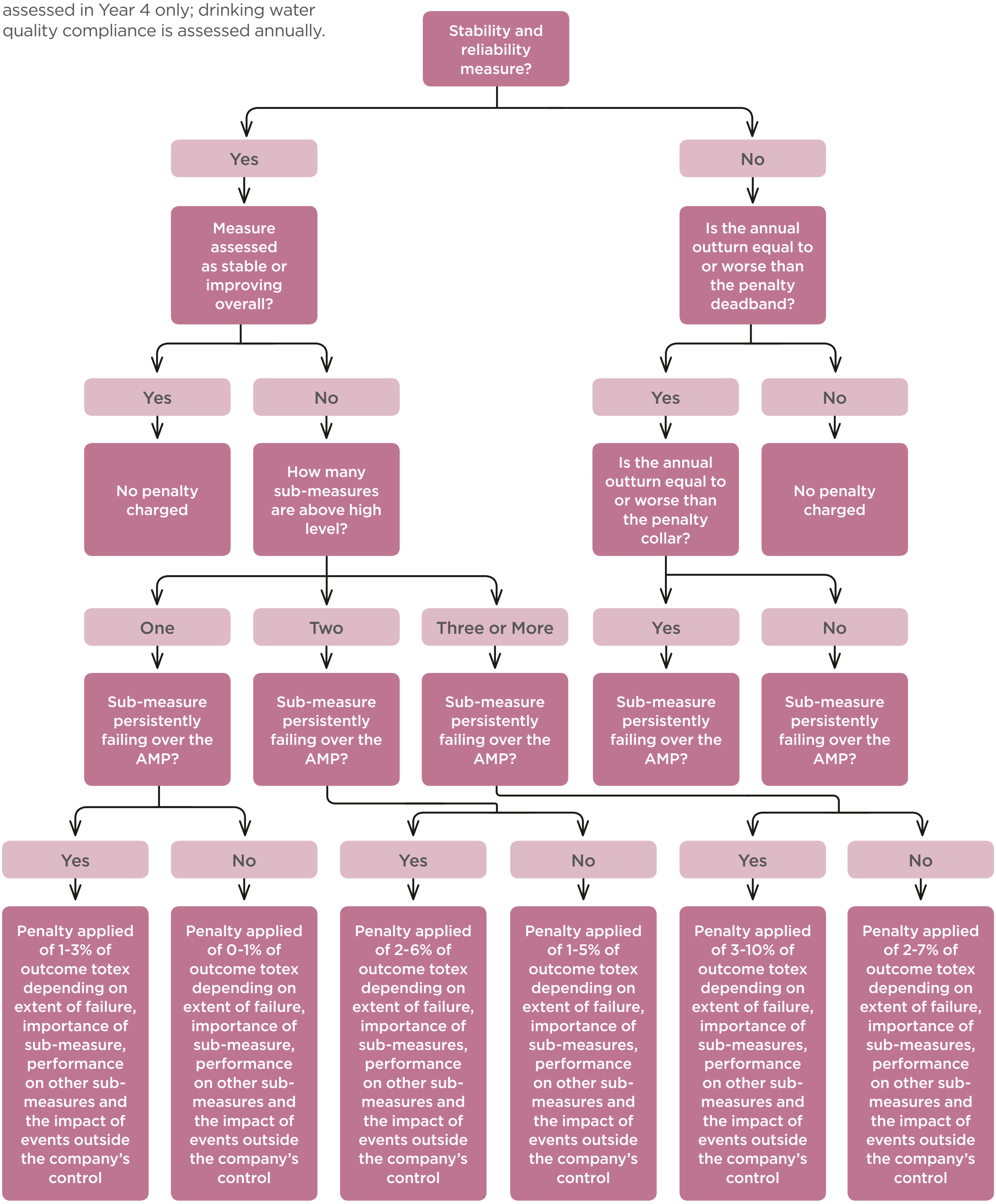
Two-sided incentives calculation methodology

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



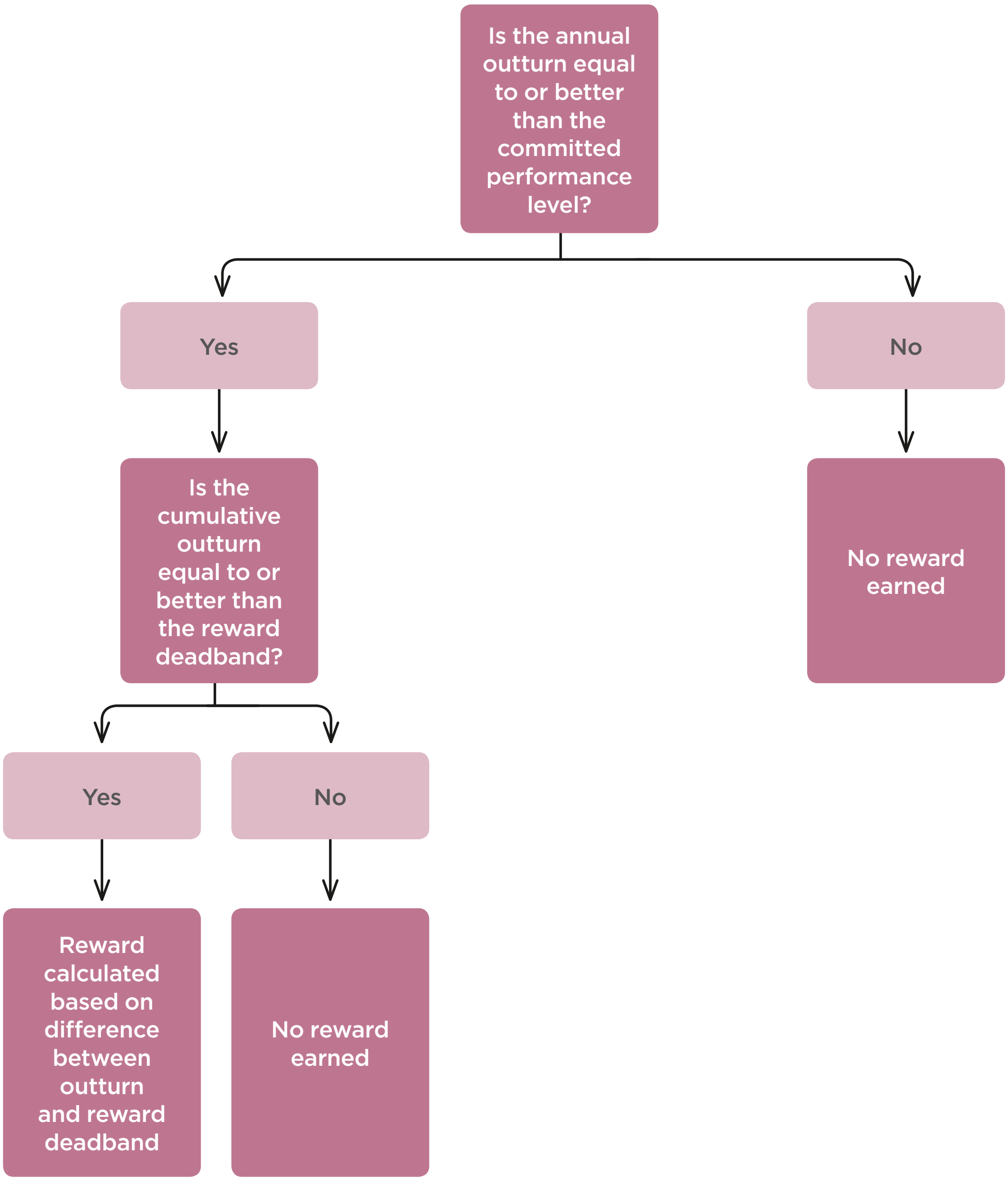
One sided incentives – penalty only calculation methodology

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



One sided incentives – reward only calculation methodology

These are all calculated annually.



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 4 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).

Our technical assurance providers, Halcrow, attended a Forum meeting to present their 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:
www.yorkshirewater.com/customerforum

You can view the independent assurance statement from Halcrow in Appendix 2 of this report and a summary of their findings in Section 4.

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.

In recognition of this, Discover Water (**www.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.

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 on the following pages. We've shown comparisons for the following performance commitments:

- Drinking water quality compliance
- Water use
- Water supply interruptions
- Leakage
- Measure of customer service

Financial outperformance and outcomes

Outperformance

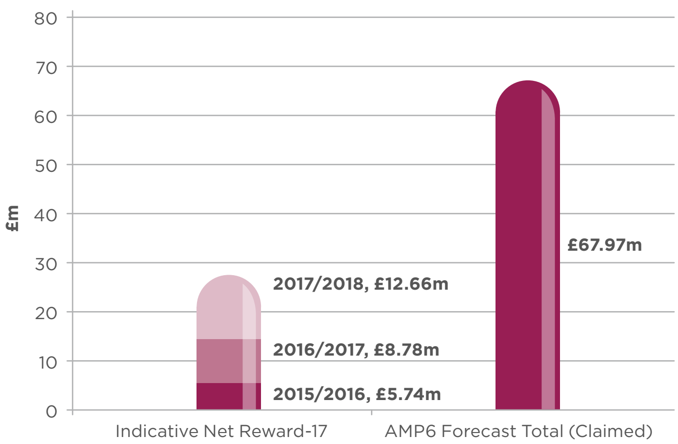
In 2014 Ofwat allowed a level of total expenditure (totex), to deliver the performance commitments for customers. We seek to beat those allowed costs as this produces short term savings for the company and long-term savings for customers through Ofwat's incentive sharing mechanisms.

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 to the end of 2017/2018 and forecast it to the end of the current price control period, 2019/2020.

Forecast ODI penalty/reward position

Overall the programme of delivering our commitments remains positive in delivering improved service levels for customers. The chart below illustrates the forecast balance of ODI rewards and penalties up to the end of 2019/2020. Overall, we forecast a net reward of £67.97m. Customers are currently not asked to pay for these rewards; they will be incorporated into the next review of prices for the period 2020-2025.



In the current year (2017/2018) we earned an indicative net reward of £12.66m. This is made up of good all-round delivery of the performance commitments, with rewards and penalties occurring as follows:

- £1.67m reward for Category 3 Pollution Incidents
- £10.23m reward for Water Supply Interruptions
- £7.24m reward for Internal Flooding Incidents
- £0.09m reward for Working with Others
- £6.57m penalty for Drinking Water Contacts

This means that for the three years from 2015-2018 our progressive improvement in services means we have earned a net indicative reward of £27.17m, this is made up of:

- £8.15m reward for Category 3 Pollution Incidents
- £16.02m reward for Water Supply Interruptions
- £9.49m reward for Internal Flooding Incidents
- £0.09m reward for Working with Others
- £6.57m penalty for Drinking Water Contacts

Now that our investment programmes for AMP6 are mature, we can forecast the likely outturn performance against the commitments. This yields a forecast net reward position of £67.97m made up of:

- £24.25m reward for Category 3 Pollution Incidents
- £36.47m reward for Water Supply Interruptions
- £19.20m reward for Internal Flooding Incidents
- £0.17m reward for Working with Others
- £1.97m for Leakage
- £0.34m for River Length Improved
- £14.44m penalty for Drinking Water Contacts

In summary the water wholesale ODI reward is forecast to be £24m, and for the wastewater wholesale ODI the reward is forecast at £44m.

Total expenditure (Totex) outperformance

Returning to totex outperformance, overall our investment in services is delivering improved service for customers. Overall, we are expecting to overinvest in services and assets by £52m (at 2012/2013 prices) compared with the allowed expenditure of £3.42bn for the period 2015-2020.

In considering the overall overspend it is important to note that we have experienced significant unexpected totex to recover the performance and condition of assets damaged during the floods on 26 December 2015. In this case we received £51.9m (2012/2013 prices) of insurance reflecting the fair value of estimated exceptional costs to restore the assets. This is not reflected in our allowed totex. Adjusting for this exceptional totex changes the overinvestment of £52m into an underlying outperformance of £0m (at 2012/2013 prices).

The two graphs in this section illustrate the delivery for each of the water and wastewater wholesale services. For each year we show the allowed expenditure, the actual/forecast expenditure and the difference. Where we have expended less than was allowed the difference is shown in green. Where we have expended more this is highlighted in red.

For the water service, we have delivered the required performance for £83m (at 2012/2013 prices) less than the allowance in the first two years. This has been a function of efficient planning and delivery of projects coupled with some rephasing of works to ensure effective delivery later in the plan.

In the last year we have seen an acceleration of delivery of activity to meet our drinking water improvements coupled with additional costs to reduce the number of times customers need to contact us about the appearance of their drinking water.

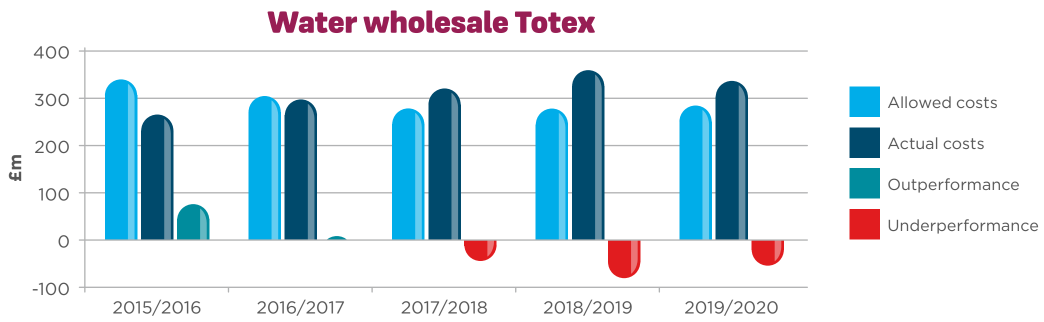
In the latter two years of the plan we have injected significant additional activity into the plan to drive up service standards in response to feedback from customers, who told us they expect better service from us.

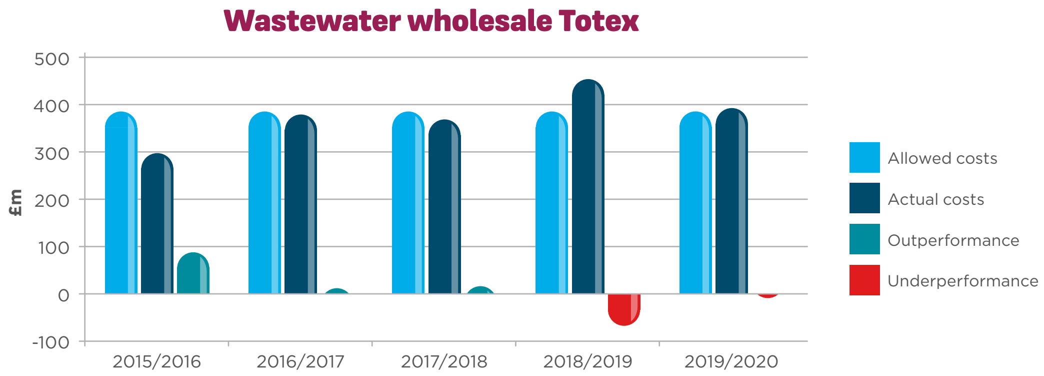
Overall, we forecast to overspend the water totex allowance by £94m (at 2012/2013 prices). This is represented in the Water Wholesale Totex diagram below.

For the wastewater service, we have delivered the required performance for £99m (at 2012/2013 prices) less than the allowance in the first three years. As with the water programme, this has been a function of efficient planning and delivery of projects. In addition, our national environmental improvement programme went through a significant reprioritisation with the Environment Agency. This meant that we had to update our programme which has resulted in expenditure occurring in the latter years of the programme.

In the latter two years of the plan we observe increased activity from the updated national environment programme coupled with significant additional activity into the plan to drive up service standards associated with reducing sewer flooding of homes and pollution incidents in response to customer expectations.

Overall, we are forecasting an outperformance of £42m (at 2012/2013 prices) against the wastewater totex allowance. This is represented in the diagram below. Adjusting for the exceptional flood recovery totex increases the underlying outperformance to £94m.





A summary of our performance

2017/2018 has been a busy, challenging and broadly successful year. At the heart of our business is the need to deliver high standards of customer service at all times and we are particularly pleased to have made further improvements in this area, as well as delivering strong operational performance. We were pleased to again improve our score in Ofwat's assessment for customer service (the annual Service Incentive Mechanism (SIM)), making this our highest ever score.

For 2017/2018 we have met or exceeded 22 of our 26 performance commitments. Although we are meeting our regulatory targets we are committed to going beyond these in the future making sure we deliver the best service possible to our customers. Whilst performance in the first three years has been strong and we are currently in a 'reward' position; we are disappointed not to have met the measures in four areas and we also know that the targets for the next two years are extremely challenging.

Where we need to improve

We set ourselves the highest possible target of achieving 100% compliance for drinking water quality, we unfortunately didn't meet this target and achieved 99.95% compliance.

During the year we further reduced the number of times customers needed to contact us regarding drinking water quality, down to 8,100 in 2017/2018, from 9,093 in 2016/2017. We improved our performance on the drinking water quality contacts performance commitment, but it wasn't enough to meet our challenging target of 6,108, however we will continue with our initiatives to reduce the number contacts we receive. We actively measure, monitor and reduce leakage as the dominant source of water waste. We have almost halved leakage since 1995 and this year we narrowly missed our performance commitment to make sure leakage is no higher than an average of 297.1 mega litres a day (Ml/d) throughout the year. In December, we announced to reduce leakage by over 40% by 2025 and become one of the leaders in the water industry. We have recruited over 100 additional leakage inspectors, implemented new detection technologies such satellites and drones to locate leaks, and installed 600 additional loggers which listen for bursts in pipes to find leaks. We know that we need to improve our performance in these areas.

Despite highly improved performance on prior years, we missed our energy generation target, due largely to delays in capital schemes. We expect to meet our 12% target next year. For the water supply interruptions performance commitment, we have significantly beaten our target of 12 minutes. However, we know that we can still improve. We continue to develop our response to incidents and aim to plan our maintenance work more efficiently to drive this performance down even further in the future.

Where we have done well

We took some significant steps in the year to prepare not just for the next five-year investment period, but also to set its longer term strategy.

Having studied the challenges posed by Ofwat's proposed methodology for the periodic review and seen how these chimed with the aspirations of our customers, we put together plans to deliver significant improvements to operational performance. These plans, confirmed by the board in November 2017, involve investment of around £230m and will deliver a 40% reduction in leakage, 70% fewer sewer flooding incidents, a 40% fall in pollution incidents and a cut in the average length of time customers' water supply is interrupted.

At the same time, after a period of consultation with customers, we issued a document setting out our long-term strategy. The strategy, titled #notjustwater, outlines how we are proposing to respond to the challenges of population growth and climate change as well as contributing to the economic growth of the county. The strategy sets out our five big goals: customer service, water supply, environment, openness and transparency and affordability. We are currently engaged in a consultation with our customers, stakeholders and colleagues to gauge their response to the strategy and intend to publish a revised version later in 2018.

Linked to our plans to improve performance is a commitment to open data. We publicly committed to becoming open by default by 2020, which means that all operational data will be publicly available through open data portals. There are two drivers behind the open data initiative. First is the stimulation of innovation. We will be encouraging analysts and stakeholders who do not normally engage with water company data to work with us to identify new solutions to perennial issues such as leakage and pollution. Secondly, in the longer term the intention is to create "citizen regulation" by publishing operational performance data and encouraging the public to hold us to account, questioning the reasons behind our performance.

To date some 75 million lines of leakage data has been published and we are soon going to release five years of pollution incident reports and telemetry monitoring data from our combined sewer overflows.

In addition to the planned or strategic developments in the year, we managed the impact of extreme weather conditions in February and March. The combination of a prolonged cold period combined with a rapid freeze -thaw resulted in an unprecedented surge in leakage and customer demand in the first week in March. Despite the operational and health and safety challenges of this period, including limited access to some works and some customers being hard to reach because of the weather conditions, we managed the impact extremely effectively. Relatively few customers had their supply interrupted for an extended period, the impact of a temporary failure in a water treatment works was mitigated and contingency plans were put in place to provide alternative supplies to customers at scale should this have proved to be necessary.

How did we perform against our performance commitments?

Here, we will go into more detail on our performance for each performance commitment.

We achieved 22 out of 26 performance commitments this year. The table below summarises the target and actual performance for each performance commitment. Further detail on our performance commitments is provided in Section 7.

Customer Outcome	Performance Commitment	Unit	2016/2017 Performance Achieved	2017/2018 Performance Achieved
We provide you with water that is clean and safe to drink	Drinking water quality compliance	%	99.96%	99.95%
	Corrective actions	Number	3	4
	Drinking water quality contacts	Number	9,093	8,100
	Long term stability and reliability factor of water quality	Classification	Stable	Stable
We make sure that you always have enough water	Leakage	Megalitres per day	295.16	300.28
	Water use	Litres per household per day	137.4	135.85
	Water supply interruptions	Minutes	9:47 (mins:secs)	6.58 (mins:secs)
	Long term stability and reliability of water networks	Classification	Stable	Stable
We take care of your waste water and protect you and the environment from sewer flooding	Internal flooding	Number	1,769	1,682
	External flooding	Number	9,145	9,296
	Pollution Incidents (Cat 1 & 2) - Serious	Number (Cat 1 & 2)	4	3
	Pollution Incidents (Cat 3 Only) - Minor	Number (Cat 3)	207	202
	Long term stability and reliability of waste water networks	Classification	Stable	Stable
We protect and improve the water environment	Bathing water	Number	17	18
	Working with others	Number	5	12
	Visitor satisfaction	Survey	Survey published 97%	Survey published 96%
	Land conserved and enhanced	Ha.	11,492	11,479
	Length of river improved	km	Programme commenced	Programme commenced
	Long term stability and reliability of waste water treatment	Classification	Stable	Stable
We understand our impact on the wider environment and act responsibly	Waste diverted from landfill	%	99.3%	99.4%
	Energy generation	%	10.4%	11.4%
We provide the level of customer service you expect and value	Measure of customer service - Service Incentive Mechanism (SIM)	Score	83.4	84.3
	Overall customer satisfaction	%	93% (Water), 91% (Waste Water)	94% (Water) 89% (Waste Water)
	Service commitment failures	Number	10,356	12,203
We keep your bills as low as possible	Helping you pay	Number	26,902	28,853
	Bad debt	%	2.94%	3.10%
	Value for money	%	79% (Water), 82% (Waste water)	76% (Water), 79% (Waste water)

Performance Commitment (our target)	Commitment Met	Impact	Reward/ Penalty Value
100%	No	Penalty Deadband	£0
Maximum of 6	Yes	-	Reputational
Less than or equal to 6,108	No	Penalty	-£6,573,600
Stable	On track	-	Assessed in Year 5
Less than or equal to 297.1Ml/d	No	Penalty Deadband	£0
Less than or equal to 140.4 l/h/d	Yes	-	Reputational
Less than or equal to 12:00 (mins:secs)	Yes	Reward	£10,226,817
Stable	On track	-	Assessed in Year 5
Less than or equal to 1,919	Yes	Reward	£7,244,622
Less than or equal to 10,487	Yes	-	Reputational
Less than or equal to 4	Yes	-	Reputational
Less than or equal to 211	Yes	Reward	£1,666,197
Stable	On track	-	Assessed in Year 5
15	Yes	-	Reputational
3	Yes	Reward	£90,984
-	Yes	-	Reputational
11,689* hectares by 2020	On track	-	Assessed in Year 5
More than or equal to 440km by 2020	On track	-	Assessed in Year 5
Stable	On track	-	Assessed in Year 5
More than or equal to 95%	Yes	-	Reputational
More than or equal to 12%	No	-	Reputational
83.4	Yes	-	Reputational
To improve 2015-2020 performance on average compared to 2010-2015	On track	-	Reputational
Average of 2015-2020 performance to be less than the average of the last 3 years of 2010-2015	On track	-	Assessed in Year 5
To publish data annually on the number of people who have been helped	Yes	-	Reputational
Less than or equal to 3.16%	Yes	-	Reputational
To improve 2015-2020 performance on average compared to 2010-2015	On track	-	Assessed in Year 5

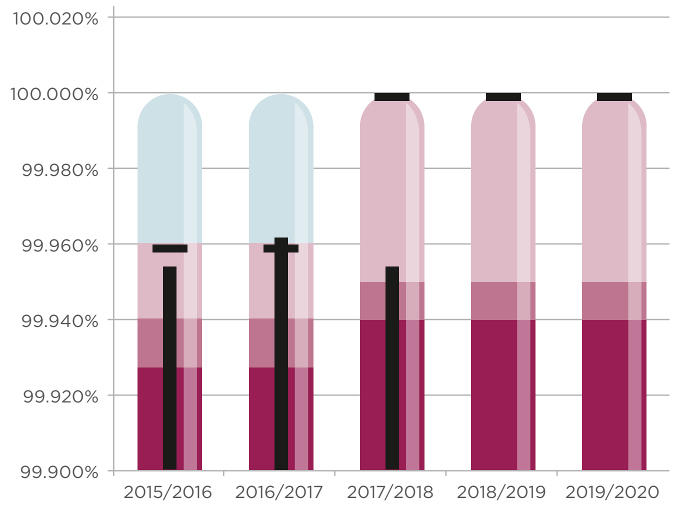
* Note: We reduced the value by 47 Ha to reflect that we have removed SSSI land as we no longer own it.

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 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 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 Drinking Water Inspectorate (DWI) can take enforcement action if performance deteriorates. Penalty is calculated annually.

Performance graph - higher is better



See page 40 of this report for an explanation of what this graph shows and the key.

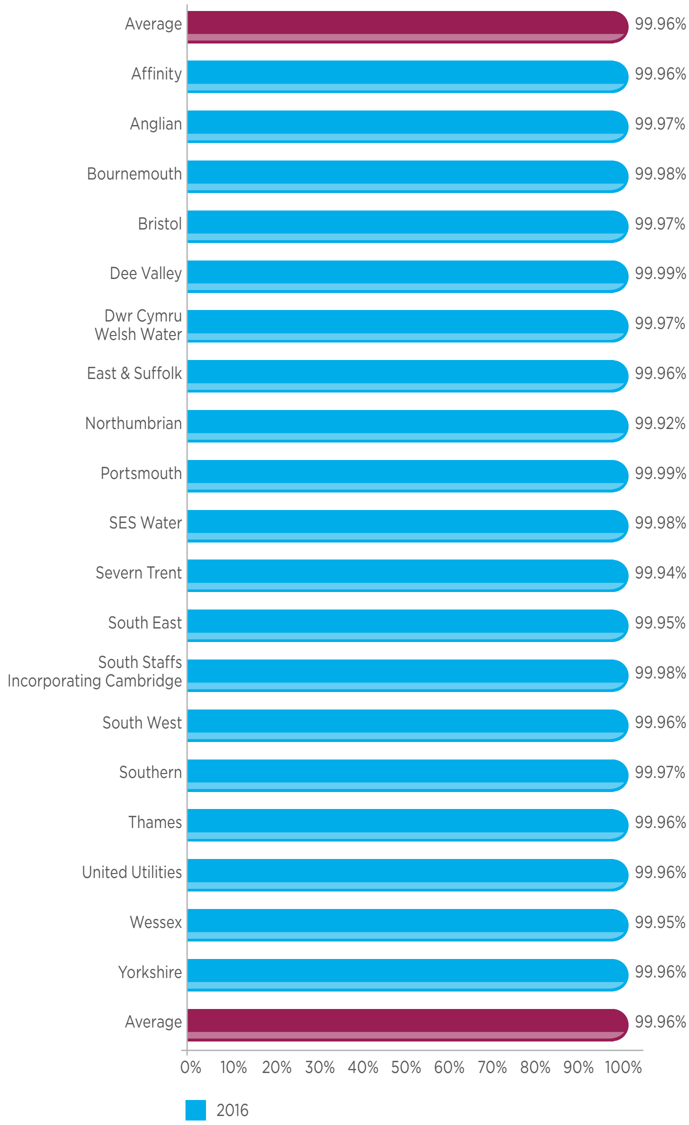
Result: 99.95%

Performance summary

Making sure the water supplied to customers is of the highest quality is vital to us. We set ourselves the highest-possible target of achieving 100% compliance. We are pleased that our focus on appearance of water in 2016 continued to show benefit in 2017 and the standard of drinking water is still very high. Drinking-water quality in Yorkshire remains excellent with 99.95% of hundreds of thousands of samples meeting tight regulatory standards. But there was a small increase in issues related to taps and fittings within customers' properties, and this led to a minor reduction in the overall compliance figure. Halcrow was satisfied that the plans that we have in place are delivering high quality drinking water over the long term. The assurance process confirmed that our performance was better than the lower guideline value and no financial penalty was applied.

How did we compare last year?

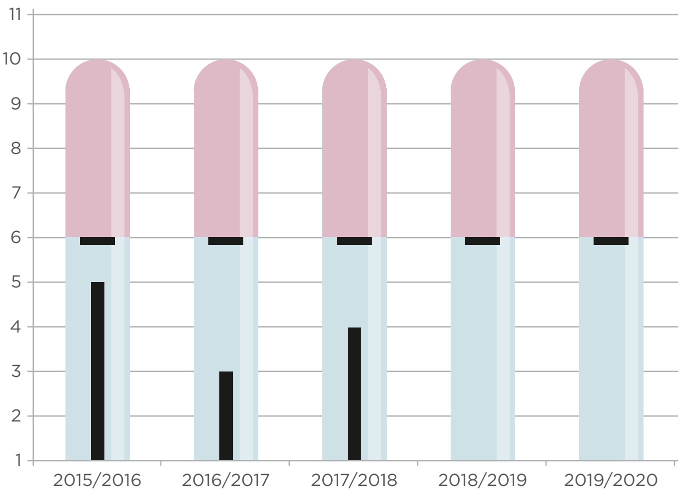
The graph below, taken from the Discover Water website compares our drinking water quality against other water companies. In 2016, our water quality compliance was 99.96%. This is a calendar year measure to 31 December 2016.



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.
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 graph - lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 4

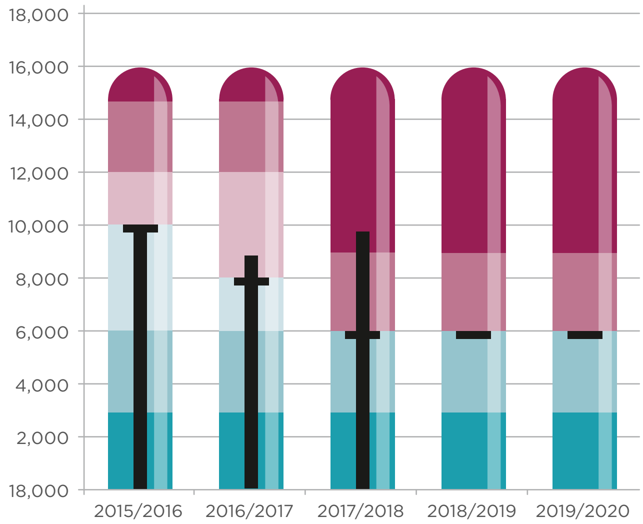
Performance summary

We investigate every instance of suspected deterioration of water quality, and we share the outcome of our investigations with the Drinking Water Inspectorate and health authorities. In 2017 there were four events for which corrective action was needed following the investigation. This outcome was better than the target.

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	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
Target	Financial year measure.
Incentive	Financial incentive.

Performance graph - lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 8,100

Performance summary

In 2017/2018 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 of their drinking water. The improvement wasn't enough to meet the extremely challenging target, but our initiatives continue to reduce the number of contacts we receive. Our performance this year meant that we are in the penalty zone.

Long term stability and reliability factor of water quality	
Measure	Long term 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: • Water treatment works coliforms non-compliance (%) • Service reservoir coliforms non-compliance (%) • Turbidity (number) • Enforcement (incidents number) • Reactive equipment failures (No)
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 (penalty only) – calculated in Year 4. Penalty up to 10% totex for outcome.

Result: Remains stable

Performance summary

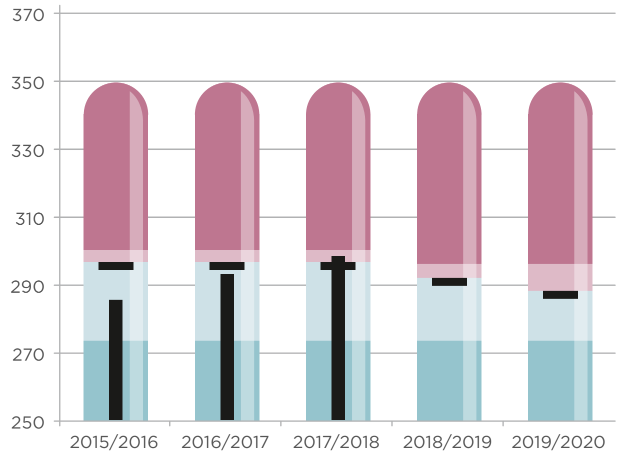
We continue to invest to maintain and improve our treatment and network assets all the way across Yorkshire. The stability and reliability factor is made up of a basket of measures monitoring the water quality of our assets. Our performance in 2017 continued to be at our target level of 'stable'.

We make sure that you always have enough water

There are four performance commitments under this outcome.

Leakage	
Measure	Leakage.
Unit	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.
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
Period	Financial year.
Incentive	Financial incentive.

Performance graph – lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 300.28 Ml/d

Performance summary

We actively measure, monitor and reduce leaks as the main source of water waste. We have almost halved leaks since 1995 and this year we narrowly missed our performance commitment to make sure leaks are no higher than an average of 297.1 million litres a day (Ml/d) throughout the year. We aim to keep below this target so that we have some extra ability to meet unexpected demands.

In mid-December we saw a 58 Ml/d increase in leaks within a month due to an unusual cycle of cold nights with warmer days, which is the largest increase we have seen since the severe winter freeze-thaw event in 2010/2011. We responded to this with a significant increase in our activity to reduce leaks over the Christmas period and beyond to the point where we were back on track to achieve our performance commitment by the end of February. This increased activity to reduce leaks meant we were better able to deal with the effects of the 'Beast from the East' at the beginning of March so we only saw a 41Ml/d increase and were able to maintain supplies.

In early December 2017 we announced an ambitious package to reduce leaks by over 40 % by 2025 and become one of the leaders in the water industry. Putting the plan into practice has started, following industry regulator Ofwat setting new targets for water companies to reduce water lost by billions of litres a year.

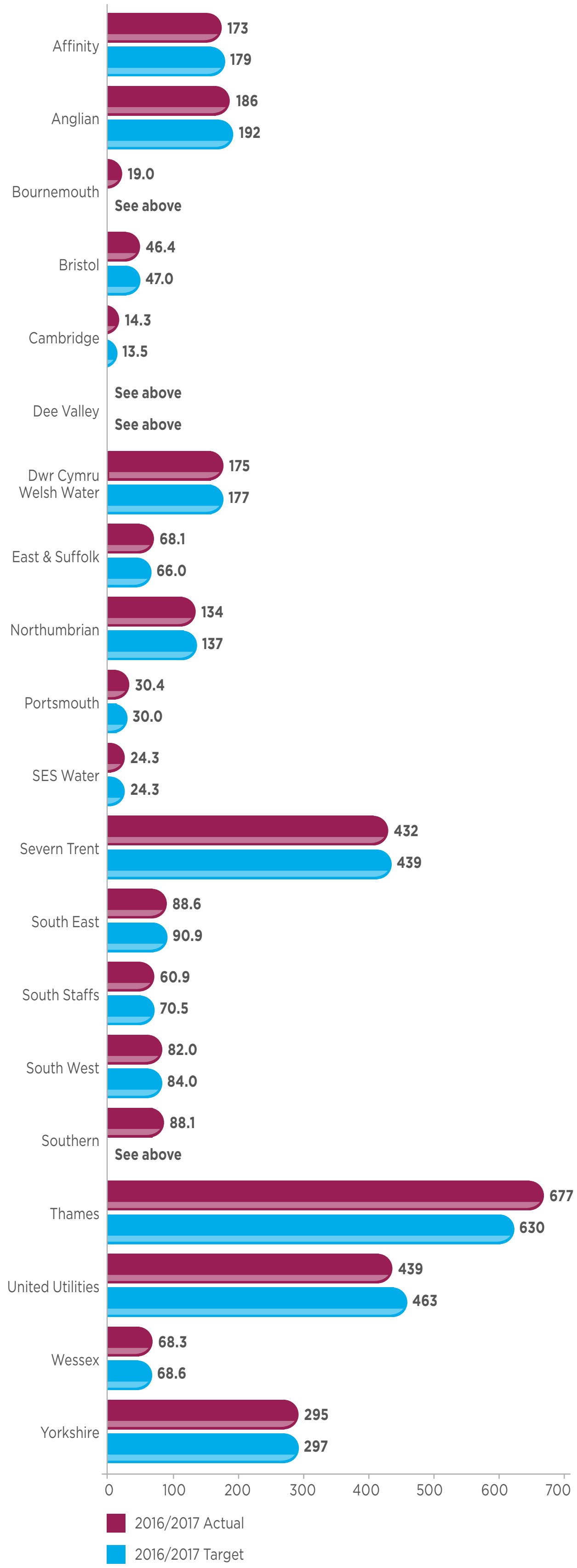
We have already started to put our plans in place to achieve this with significant recruitment of front-line leak inspectors already started, with numbers growing by over 100 from our pre-winter numbers already and further increases planned. We have also brought forward some of the new detection technologies in our plan, including using satellite technology to find leaks in Halifax, Keighley and Shipley where over 120 leaks have been investigated with a 55% success rate, early deployment of the first 600 loggers which listen for sound in Huddersfield finding nearly a million litres per day of leaks and using drones on the York to Selby trunk main.

To reach the target, further significant and investment will be committed over the next two years. Given the disappointing failure to achieve the target this year and our ambitious plans for significant reduction in future years, we plan to elevate the risk of leakage failure within our Risks, Strengths and Weaknesses Statement later this year.

How did we compare last year?

The graph opposite, taken from the Discover Water website shows the actual leakage of water companies versus their targets. This is the 2016/2017 leakage performance. We beat our target for leakage last year.

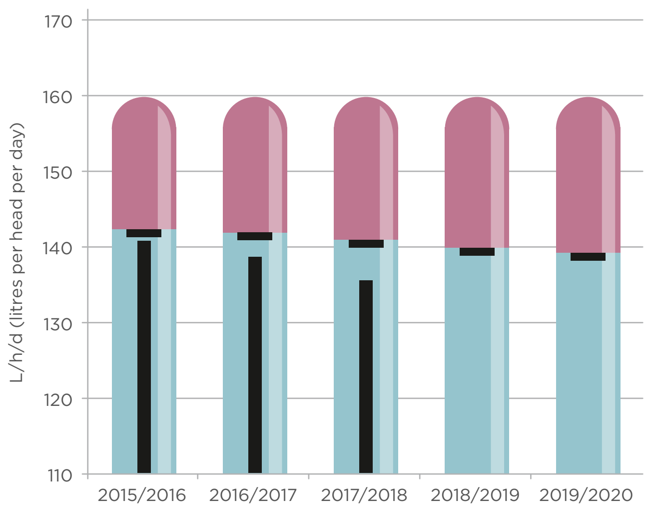
Million litres of water leaked (per day)



Million litres of water leaked (per day) shown to three significant figures
Source: Water UL

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).					
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
Period	Financial year.					
Incentive	Reputational incentive.					

Performance graph - lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

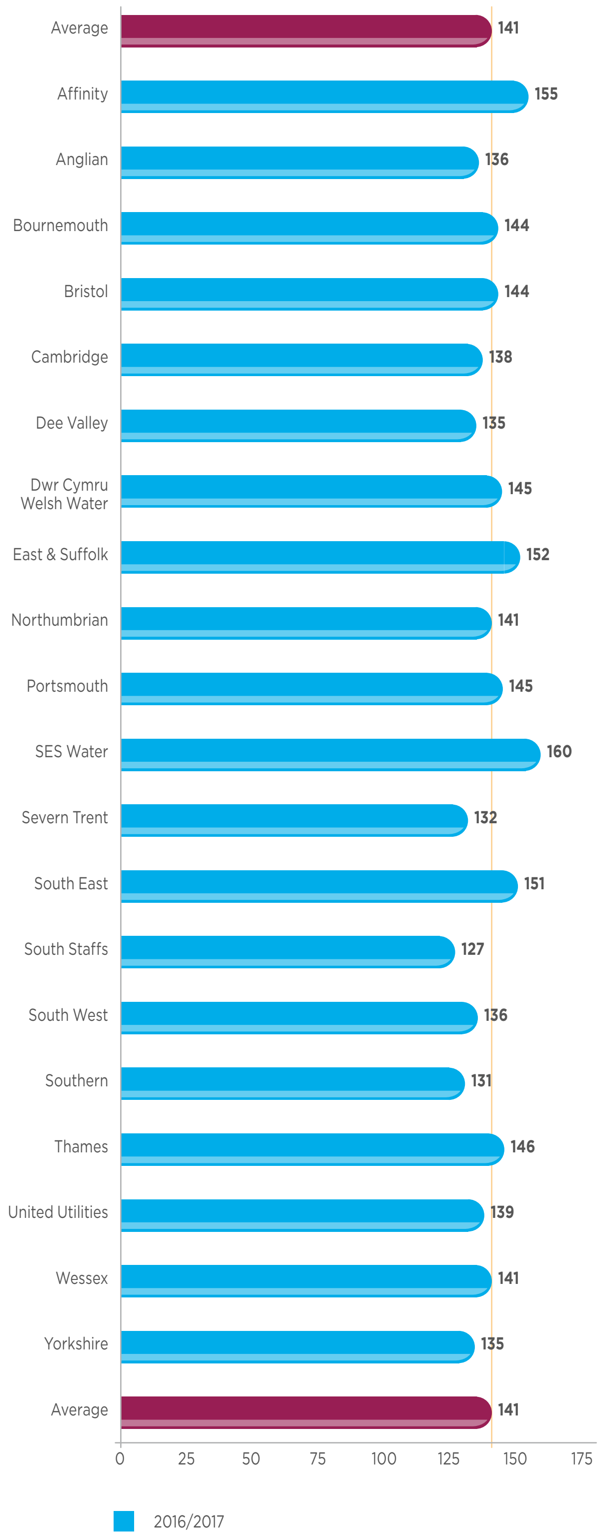
Result: 135.85l/h/d

Performance summary

It is more important than ever that we all take care of water and consider how we use it. An increasing population means extra demand for water each day, while more extreme weather patterns due to climate change increase the risk of droughts happening. In 2017/2018 the average water use by a person in Yorkshire was 133.0 litres per person per day (compared to a UK average of 139 litres per person per day). For our performance commitment we increase this value to represent what the use per a person would have been had we experienced a dry year, which for 2017/2018 was 135.85l/h/d. We continue to encourage all of our customers to save water. Throughout the year we offer free water-saving devices and a range of advice and support services, including information and tips on saving water. Our website includes advice on switching to a water meter and a water-saving calculator for you to see if you can save water in your home. The potential savings from water-saving devices and advice we provided in 2017/2018 is up to 1.46Ml/day. Saving water helps reduce your bills, the volume of water we have to take from the environment and our investment in new assets to supply water to you. You can find more information on the water-efficiency section of our website at **www.yorkshirewater.com/save**

How did we compare last year?

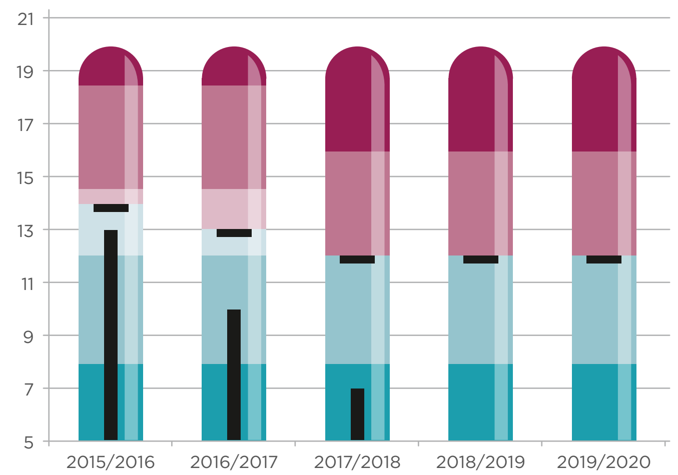
The graph below, taken from the Discover Water website shows daily water usage, in litres, for each company's customers in 2016/2017. Last year, we were joint fourth.



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.
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
Period	Financial year.
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. Rewards and penalties are calculated annually.

Performance graph - lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

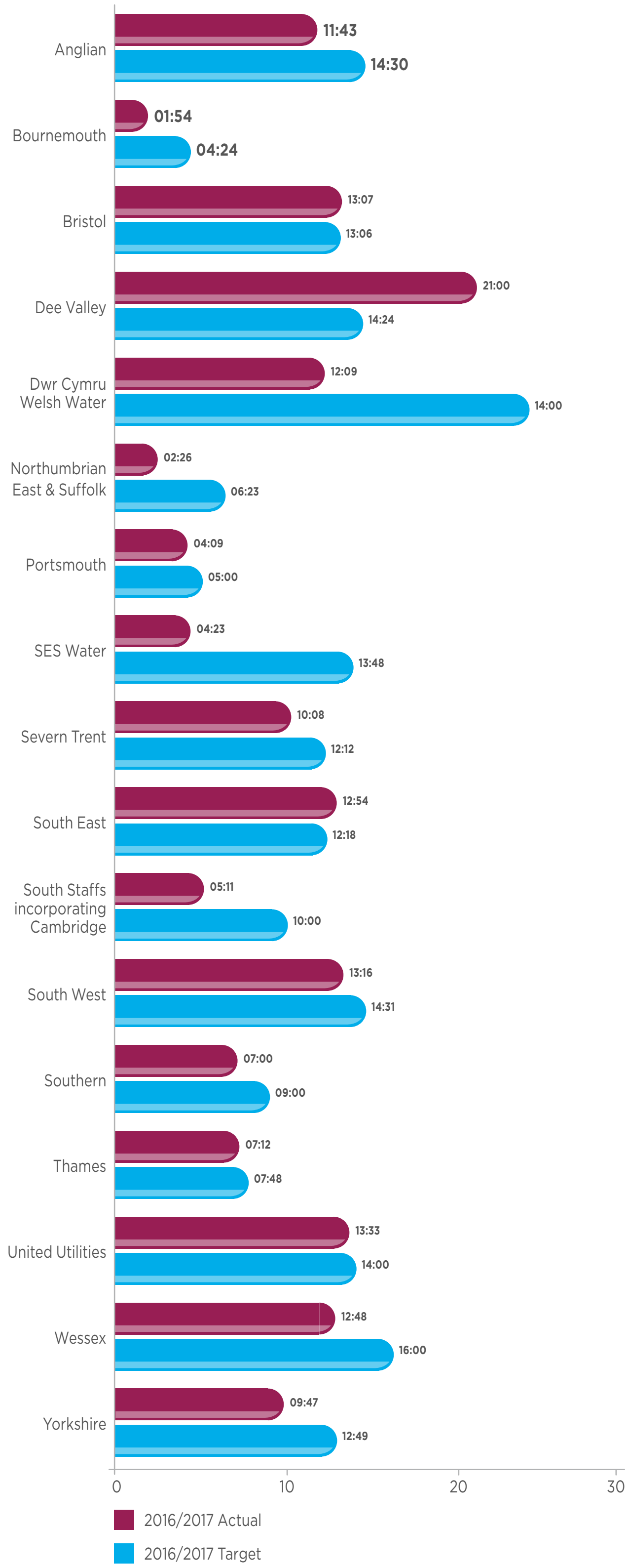
Result: 6 minutes and 58 seconds

Performance summary

Interrupting the water supply to customers may be essential for emergency, planned maintenance work or significant asset failure, but it is something we aim to reduce as far as possible. Our performance commitment for water-supply interruptions is measured by the average number of minutes that are lost due to interruptions to the water supply lasting three hours or more for each property we serve. At just under 7 minutes in 2017/2018, we have performed well ahead of the performance commitment of 12 minutes and improved further on the 2016/2017 performance of nearly 10 minutes. We continue to develop our response to incidents and aim to plan our maintenance work more efficiently to drive this performance down even further in the future.

How did we compare last year?

The graph below, taken from the Discover Water website shows whether water companies have met their targets for water supply interruptions in 2016/2017. If the actual loss of supply is less than the target, the company has beaten the target. The figures in this graph are presented as minutes and seconds. Last year, we beat our target by nearly 3 minutes.



Long term stability and reliability of water networks	
Measure	Long term stability and reliability factor: Water networks.
Unit	Classification: Deteriorating / Stable / Improving.
Definition	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.
Target	Stable in Year 4 for Year 5 outturn. Assessment subject to independent external and Yorkshire Forum for Waters Customers assurance.
Incentive	Financial incentive (penalty only). Penalty assessed in Year 4 for Year 5 outturn.

Result: Remains stable

Performance summary

We treat and supply around 1.3 billion litres of drinking water each day, delivered by operating and maintaining over 50 water treatment works and a network of 31,000km of water mains. Yorkshire has had no service restrictions such as hosepipe bans since 1995/1996. We have maintained 'stable' status in our Performance Commitment for the Stability and Reliability of our network. This needs effective long term planning and asset management to make sure the resilience and sustainability of our service. In particular, climate change presents a growing threat to maintain the balance between how much we can supply and how much you need, but we are well placed to manage this threat. Our water resources management is one of our most mature areas of resilience planning. We are able to take water from rivers, boreholes and reservoirs and move it around the region to where it is needed. Water shortages and interruptions to supply are a constant priority for us because of the impact on customers. We carry out a range of activities to ensure a secure and reliable water supply. This includes increasing water storage, managing pressure within our networks and installing data loggers to allow us to keep an eye on the network at all times.

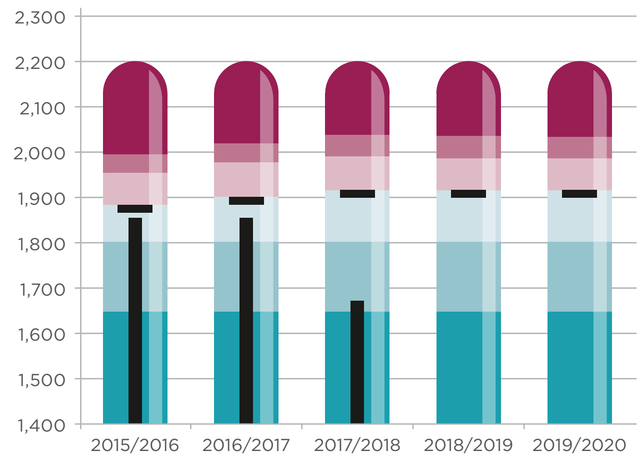
Customer Outcome: We take care of your waste water and protect you and the environment from sewer flooding

There are four performance commitments under this outcome

Internal flooding

Measure	Internal flooding incidents.
Unit	Number per year.
Definition	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 included 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 assets transferred to Yorkshire Water in October 2011.
Target	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.
Period	Financial year.
Incentive	Financial incentive. Rewards and penalties calculated revenues annually.

Performance graph – lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 1,682

Performance summary

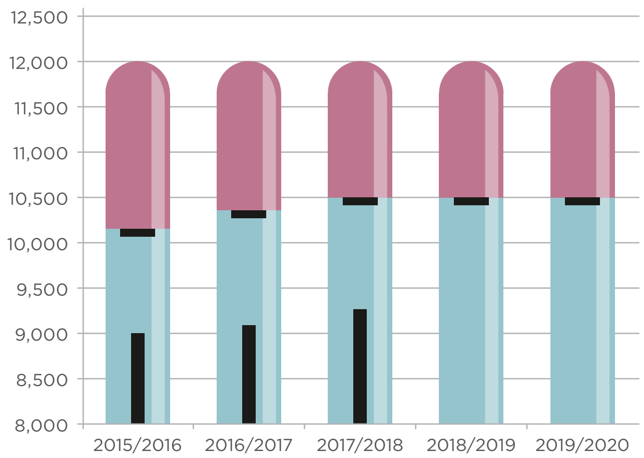
Each day we collect, treat and return one billion litres of waste water safely back into the environment and the way in which we do this enhances river water quality and biodiversity in our region. We also play our part in managing flood risk in our region by improving the public drainage network and working with other flood management agencies to manage short term incidents and long-term plans.

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 included 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.
Target	Starting Level 10,125 in 2014-15.
Period	Financial year.
Incentive	Reputational incentive.

	Y1	Y2	Y3	Y4	Y5
Performance commitments - (No)	10,125	10,363	10,487	10,487	10,487

Performance graph – lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 9,296

Performance summary

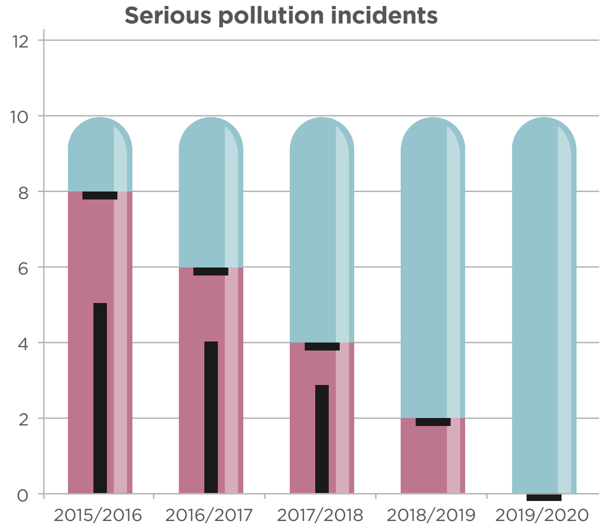
We know that internal and external sewer flooding of homes is one of the worst things customers can experience from our activities and we continue to work hard to prevent this happening. In 2017/2018 we met and exceeded our commitments for both internal and external sewer flooding. The number of internal sewer flooding incidents reduced on the previous year however, the number of external sewer flooding incidents increased slightly.

We continue to manage increasing pressure on the sewer network from fluctuating weather conditions, increased development across the region and coping with the things that customers put down drains, for example fats, oils, greases, wet wipes and nappies – all of which cause significant blockages. We are running initiatives to inform customers of sewer network misuse in order to reduce the disposal of inappropriate materials into the sewers.

Minor and serious pollution incidents

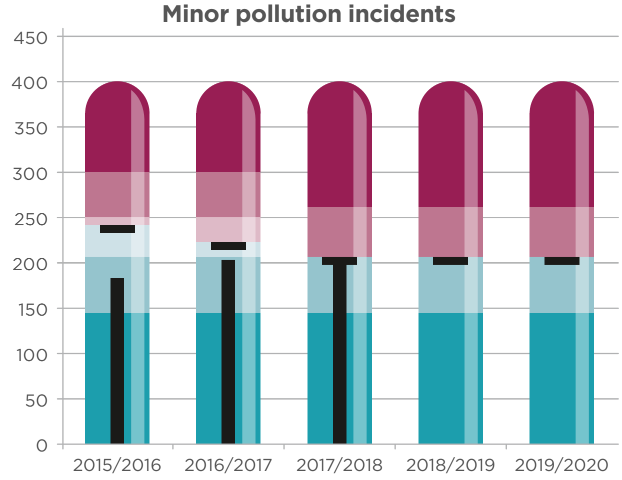
Measure	Pollution incidents.
Unit	Number per year.
Definition	Total number of category 1-3 pollution incidents caused by a discharge or escape from any Yorkshire Water waste water asset each year (this covers all consented and non- consented intermittent events, but not continuous discharges). This measure includes all waste water assets, that is surface water assets are included, and excludes impacts from private pumping stations that transferred in 2015.
Target	Category 1-2: 4 Category 3: 211
Period	Calendar year measure (reported in the following year).
Incentive	Financial Incentive – only applies to category 3 incidents. Rewards and penalties are calculated annually. There is also a reputational incentive. The Environment Agency can take enforcement action and pursue penalty through courts.

Performance graph - lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Performance graph - lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 3 serious, 202 minor

Performance summary

Sewer performance is affected by the weather and so will always vary. However, we are working hard to reduce the number of times each year that these changes result in pollution events. Serious pollution incidents are classed as category 1 or 2 by the Environment Agency. Other (or minor) pollution incidents are classed as category 3. While we have continued to reduce the numbers of both serious and minor incidents during 2017, we have a responsibility to the environment and so a desire to cut these numbers further in 2018. During 2017, we were prosecuted for two incidents that happened in previous years, at Doncaster (at our Sandy Lane Pumping Station) and Scarborough (at our Hinderwell waste-water treatment works). We were fined a total of £645,000. Substantial fines like this serve to remind us of our role in protecting the environment and the need for good operational management at all times. We continue to focus on proactive network maintenance, targeting hotspots, customer awareness and improving our response times and service.

Long term stability and reliability of waste water networks	
Measure	Long term stability and reliability factor: Waste water networks.
Unit	Classification: Deteriorating / Stable / Improving.
Definition	An overall assessment of long term stability and reliability for the waste water networks, 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 waste water networks contains: • 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.
Target	Stable at Year 4 for Year 5 outturn. Assessment subject to independent external and Yorkshire Forum for Waters Customers assurance.
Period	Financial year.
Incentive	Financial incentive (penalty only). Up to 10% totex for outcome calculated for Year 5 outturn.

Result: Remains stable

Performance summary

Stability and reliability of the sewer network is still stable. This is assessed against a number of indicators; most of these continue to show stable or improving performance apart from one, internal flooding due to blockages and collapses. This is a focus for the coming year to bring this indicator back in line with expectations.

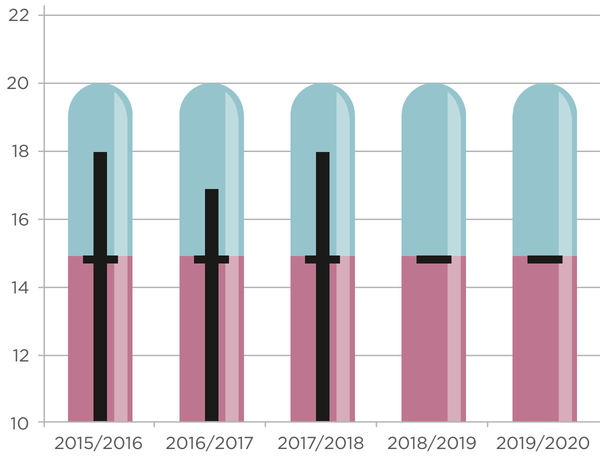
Customer Outcome: We protect and improve the water environment

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	
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).
Target	Annual commitment of 15 per bathing season.
Period	Reported by Bathing Season in following year.
Incentive	Reputational incentive.

Performance graph – higher is better



See page 40 of this report for an explanation of what this graph shows and the key.

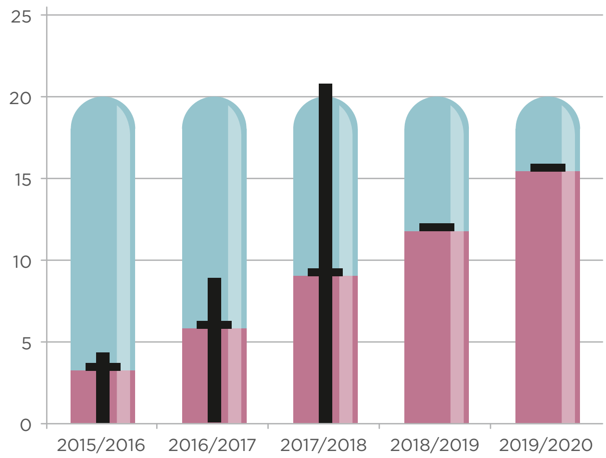
Result: 18

Performance summary

We achieved our commitment to maintain at least 15 beaches at the 'Excellent' or 'Good' standard. In 2017/2018, of Yorkshire's bathing beaches met the standard.

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 R&D activity or any delivery by / with Yorkshire Water contractors, including ADU, R&M or other framework contracts. The intervention can be delivered through various arrangements to count for this measure, e.g. joint funding, partnership and shared resources
Target	Numeric commitment of 3 per year and 4 in the final year of the AMP (2014/5).
Period	Financial year.
Incentive	Financial - reward only calculated annually.

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



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 12

Performance summary

We have a long history of working in partnership to achieve our aims, especially in how we manage our land and work with our tenant farmers and other land owners. We want to do more of this across other areas of the business particularly in terms of how we manage flood risk. In light of this, we have set ourselves a target and a small reward incentive to work more closely with others and deliver more projects in partnership than ever before. The reward is set at 5%

of the average Yorkshire Water contribution to qualifying partnership projects and is only earned on projects delivered over and above the target. We have delivered 12 projects this year, exceeding our target of three by some way. This reflects the ground work carried out in previous years to identify potential partners, build relationships, undertake feasibility studies, and identify funding streams. We are very proud of the partnership working we have done this year, and have contributed £2.4 million towards partnership projects to improve drinking water quality, reduce flood risk, restore natural habitats, and reduce the amount of waste sent to landfill. These contributions have helped partner organisations secure additional funding through Flood Defence Grant in Aid funds and Heritage Lottery funding bids, as well as directly contributing to pooled funds to sort out long standing problems for our customers. This years' reward of £90,000 will be used as funding for future partnership projects and we are currently exploring exactly how this will work with the Forum.

Runswick Bay coastal defence scheme – the sea wall protecting the village of Runswick Bay in North Yorkshire needed repairing and upgrading after being damaged in a storm in 2013. We have worked with Scarborough Council to move our sewer which ran underneath the proposed line of the new sea wall. We have also shared the information from our investigations with the council so they could use it in their designs, and we worked with the Yorkshire Wildlife Trust to hold a 'Wild about Rock Pools' event for people to learn more about the local ecology.

Rotherham lead replacement trial – over the last few decades, we have invested significant amounts in managing the risk from lead through a plumbosolvency control programme, and by replacing or lining our mains and communication pipes. Despite this work, customers were still potentially exposed to lead from the supply pipes and from fixtures and fittings within their homes, which are the responsibility of the home owner. To tackle this problem, we carried out a trial with Rotherham Council to reline or renew both our communication pipe and the customer supply pipes. The project was ultimately successful though with samples now revealing significantly lower levels of lead.

Nidd aqueduct – Our aqueduct in Nidderdale had become partially blocked by gravelly debris washing into the aqueduct during storms. Normally, we would have to pay for this debris to be hauled away. However, after checking with the council and Natural England, we reached an agreement with local land owners to place piles of the debris at specific locations so that it could be used to improve paths and tracks in the area. This gave land owners a locally suitable material for repairing and improving their tracks.

Nidderdale Upper Landscape Partnership – we are partners in this four-year project which brings together a wide range of partners across Nidderdale to improve the area's businesses, recreational offer and natural environment.

Working in partnership to reduce flood risk – Our Flood Steering Group has continued to identify opportunities to work in partnership to reduce the risk of flooding for our customers and the environment. We have worked with five local authorities on nine schemes this year, reducing the risk of internal and external flooding to 37 properties, and protecting vital local road and rail infrastructure.

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).
Commitment	No target. Qualitative survey results to be obtained and published each year.
Period	Reported annually by financial year.
Incentive	Reputational incentive.

Result: 96%

Performance summary

We own approximately 28,000 hectares of land and manage this to protect water quality while also improving biodiversity and providing recreation opportunities. Lots of our land is open to the public and we provide visitor facilities at many of our reservoirs. Visitors continue to report high levels of satisfaction (96% in 2017/2018) when surveyed. During 2017/2018 we have continued to add to the visitor experience by:

- Promoting a new reception hide at our Tophill Low nature reserve near Driffield where visitors and children can enjoy viewing wildlife, an education centre for primary school children and wheelchair-accessible routes around the reserve
- Upgrading routes at certain reservoirs, for example, More Hall, Underbank and Fewston
- Working with Experience Community to develop a national standard to describe and promote routes to those with physical disabilities
- Working with others, for example, national parks and wildlife trusts to better understand visitors and their needs

We also reviewed safety at our education centres and, as a result, closed our education centre at our Esholt works. This was due to concerns to do with transporting children around a large and spread-out operational site. However, we took the opportunity to open two new centres in different areas of Yorkshire – at Ewden (Sheffield) and Tophill Low (Driffield). These are both sites where the educational visits can include a safe walking tour to view an operational area.

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.
Target	11,689* 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. * Note: We reduced the value by 47 Ha to reflect that we have removed SSSI land as we no longer own it.
Period	Cumulative total to the end of AMP6 - Reported annually by financial year.
Incentive	Reputational incentive. Financial Incentive – Penalty/Reward. Calculated in Year 4 for Year 5 outturn. Reward by 2020-25 Year 1 revenues.

Result: On track to conserve and enhance 11,689Ha of land by 2020. Currently, 11,479 Ha.

Performance summary

We have a number of programmes in place to conserve and improve our land to protect biodiversity. As of April 2018, we have enhanced and conserved 99.97% of our sites of special scientific interest (SSSI's), that were in an unfavourable recovering condition. This is exceeding the Government target of 95%. Much of this area is peatland habitat that stores carbon, protects rare upland birds, and provides our drinking water. With our 'Beyond Nature' programme, we now have over 3,500 hectares of land signed up to Beyond Nature Management plans. This is a partnership approach to managing the farm tenancies on our land. The programme aims to deliver farming in a way which not only supports agriculture but also improves water quality, biodiversity and carbon storage. Read more about this here on our website: **www.yorkshirewater.com/about-us/newsroom-media/high-woodale-farm-nidderdale-beyond-nature-2017**

We have worked with a variety of stakeholders to support our conservation aims, including working with:

- The Wild Trout Trust to train local angling groups across Yorkshire on river restoration techniques
- The Yorkshire Dales Rivers Trust on creating wetland and natural flood-management interventions in Wharfdale
- The Yorkshire Wildlife Trust in protecting West Beck site of special scientific interest (SSSI) on the River Hull

We continue to work with groups such as the Yorkshire Invasive Species Forum and the North York Moors National Park Authority on helping sustainably manage and control invasive plants along our rivers, to reduce river-bank erosion and protect biodiversity.

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.
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 waste water service component.
Period	Total by end of AMP6 (progress reported annually).
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.

Result: On track. A small number of projects have been completed in 2017/2018 and these delivered a river length of 16.79km.

Performance summary

Our commitment to improve 440km of river by 2020 remains on track and will be delivered through the successful completion of the national environment programme by March 2020.

Long term stability and reliability of waste water treatment	
Measure	Long term stability and reliability factor: Waste water quality.
Unit	Classification: Deteriorating / Stable / Improving.
Definition	An overall assessment of long term stability and reliability for the waste 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 waste water quality contains: • Sewage treatment works non-compliance • Population equivalent % non-compliance • Reactive equipment failures
Target	Stable at Year 4. The assessment will be subject to external independent and Yorkshire Forum for Waters Customers assurance.
Incentive	Financial incentive (penalty only). Up to 10% totex for outcome.

Result: Remains stable

Performance summary

We have continued to deliver our programme of environmental investment and investigation needs to 2020. This programme focuses on the investment we need to make to improve our waste-water treatment capabilities and protect the environment. The programme also includes investigations to understand and inform future investment needs. The outcomes of these contribute to the commitment to improve 440km of river by 2020, which is still on track, and to continue to maintain a ‘stable’ rating in the overall assessment for waste-water treatment stability and reliability. This needs effective long-term planning and asset management to make sure our service is resilient and sustainable. In particular, we continue to manage the growing challenges faced by population growth and more extreme and prolonged rainfall events.

Five of our more than 600 waste-water treatment works did not meet their discharge permit conditions in 2017, meaning we kept to requirements by 98.3%. This was an improved performance compared with 2016 when we had seven failing waste-water works or 97.6%.

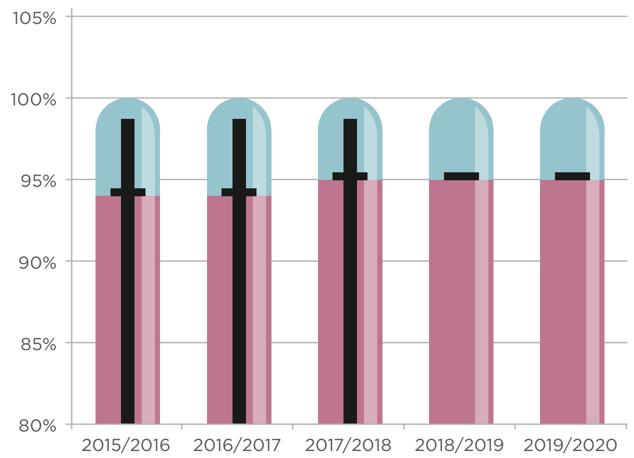
Customer Outcome: We understand our impact on the wider environment and act responsibly

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.
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%
Period	Reported annually by financial year.
Incentive	Reputational incentive.

Performance graph – higher is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 99.4%

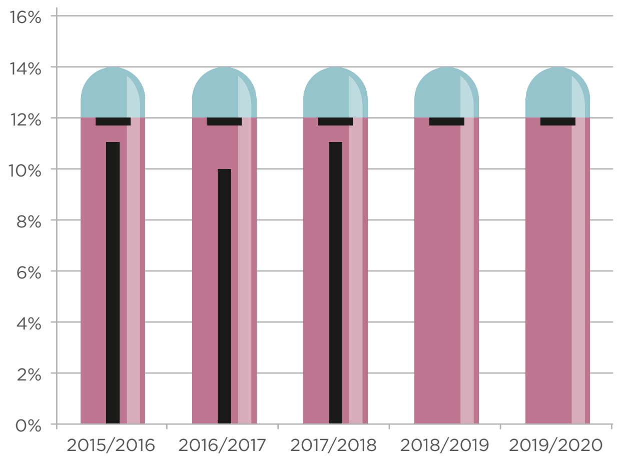
Performance summary

We know that it's important to reduce waste to keep bills low for customers, reduce our effect on the environment and stay efficient. During 2017/2018, we have been successful maintaining the high rates of recycling from our offices, construction sites and operational sites at 99.4%, which is better than our performance commitment to divert at least 95% of our waste. We continue to work on a range of projects which not only divert waste from landfill but then also aim to use this waste as a resource elsewhere (known as circular economy principles). For example, this year we put into practice a grit-washing process. Grit is captured and removed from waste water as it enters the treatment works. Previously this dirty grit was put into skips and sent to landfill. Following a trial in 2016/2017, we have started collecting and washing the grit as standard, so this clean grit can be reused rather than sent to landfill.

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.
Target	The total performance commitment for Yorkshire Water is to generate 12% of its total energy use, annually.
Period	Reported annually by financial year.
Incentive	Reputational incentive.

Performance graph – higher is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 11.4%

Performance summary

Electricity accounts for approximately 64% of our operational emissions and is one of our largest operating costs. We work to reduce our electricity consumption as far as possible and make the most of our self-generation of renewable energy.

The electricity we used increased in 2017/2018, from 570GWh to 598GWh from the previous year. We work hard to reduce this and to make the most of energy we generate. In 2017/2018, we supplied 11.4% of our needs through self-generated energy. This was a two-year high compared with 2015/2016 where it was 11.3% and 2016/2017 where it was 10.4%. However, this falls short in achieving our performance commitment of generating 12% of our energy needs from renewables'.

Despite the highly improved performance, there were a number of factors resulting in the energy generation not being as much as we wanted, most of which was due to a delay in capital refurbishment or faults associated with digester schemes. As an example, the delay to our Dewsbury project accounted for 0.4% of self-generation.

Esholt (our largest facility) has seen a significant improvement, seeing a 200% increase when compared with 2016/2017 from 5.1GWh to 15.4GWh.

Generation performance was steadily increasing at the end of quarter 3 with large site CHPs beating their target. Unfortunately, performance was then negatively affected due to the cold weather at the end of February affecting digester health, particularly at Blackburn Meadows and Aldwarke, with a temporary planned shutdown of the advanced digestion facility at Esholt also being necessary.

With a strong improvement in generation performance on the previous year, we expect that we will achieve the 12% target in 2018/2019 as long as our capital projects meet their expected delivery dates. We continue to increase our long-term energy generation capacity towards our aim of 17% by 2020.

- We have begun delivering our £72m sludge-treatment and anaerobic digestion facility at our Knostrop treatment works in Leeds. We expect this to be completed in 2019
- We are also developing a framework contract to supply solar power to a number of Yorkshire Water sites

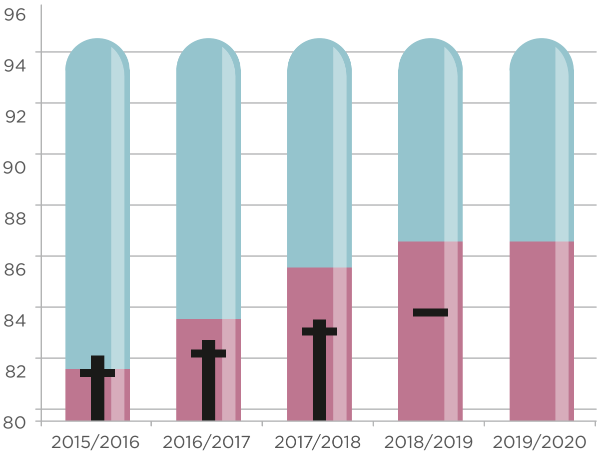
Our Board has also approved further substantial investment in a new anaerobic digestion facility at our Huddersfield treatment works, allowing us to permanently close our remaining sludge incinerators. This does depend on us achieving a competitive market price.

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

There are three performance commitments under this outcome.

Measure of customer service	
Measure	Service Incentive Mechanism (SIM) – 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 40 of this report for an explanation of what this graph shows and the key.

Result: 84.3

Performance summary

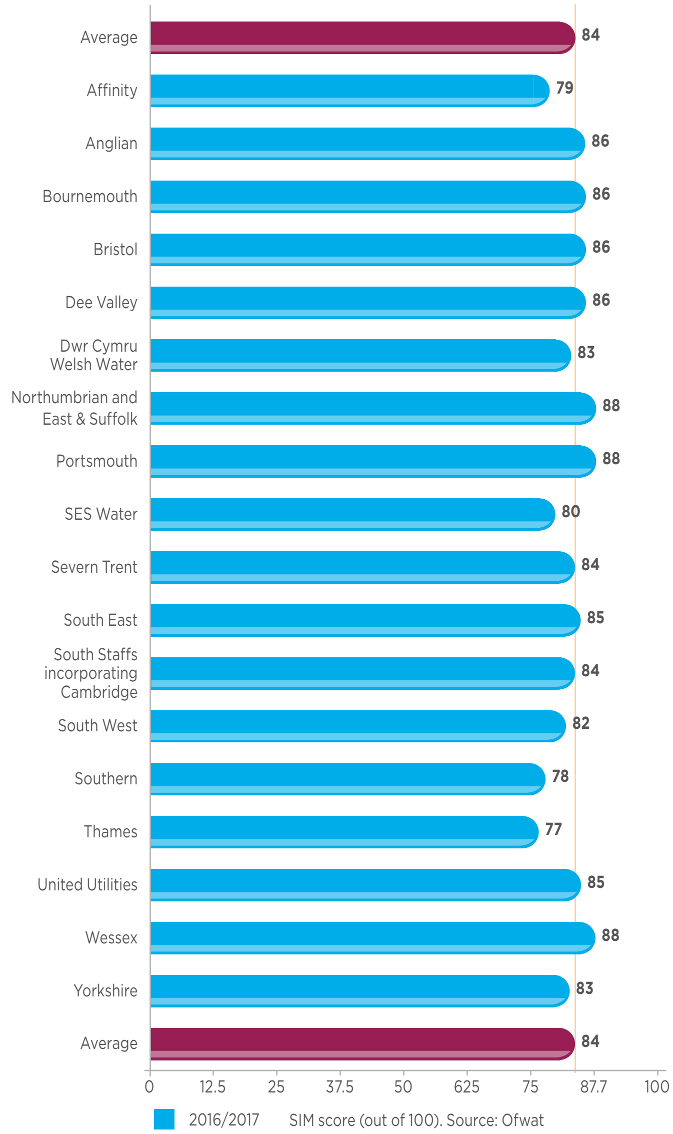
Customer service is measured by Ofwat using an independent assessment. The measure gives us, and other water companies, a score out of 100 worked out using two measures. The first is out of 25 and based on the number of phone calls about service failures and complaints received in writing. The second is based on a satisfaction score out of 75 collected through surveys with customers every three months about the way we handled any contact with them. We were pleased to have improved our performance from 83.4 points in 2016/2017 to 84.3 points in 2017/2018.

Our overall position for the whole basket of measures (the service incentive mechanism) compared with others will be available when all companies publish their annual performance reports. Taken as a stand-alone measure, customer satisfaction is measured out of 5. This score was above the industry average at 4.42 helped by the billing score which is industry-leading. Water and waste were 8th and 10th respectively when compared with the 10 water and sewerage companies. Our overall improved score confirms we have achieved our performance commitment and follows our continued work to put our ongoing service improvement plan into practice. Compared with 2016/2017, unwanted calls were 9% lower, written complaints 32% lower, and complaints we had to take further 45% lower.

Our focus in 2018/2019 will be to improve satisfaction by dealing with issues faster.

How did we compare last year?

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 graph below, taken from the Discover Water website compares our SIM score against other water companies. This year we have improved our performance from 83.4 to 84.3. When we compare this with all companies for last year 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.



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.

Result: 94% (Water), 89% (Waste Water)

Performance summary

The independent Consumer Council for Water (CC Water) survey water-industry customers about customer satisfaction with their water and waste-water services. The latest results will be published in July 2018. The results showed that 94% of customers said they were satisfied with our water services and 89% with our waste-water services. The scores are broadly similar to last year and remain better than the industry average and are still well on track to achieving our commitment to improve performance on average between 2015 and 2020.

Our customer promise is to be easy to deal with, helpful and friendly, and get it right first time. The way customers report and manage queries has developed. We have opened new improved channels of communication which makes it easier for customers to sort out issues quickly and the first time. For those that still choose to phone us, they receive a great service thanks to new training and coaching of our staff. When surveyed, 92% of customers reported their billing query to be sorted out. This is industry best and well above the average of 85%.

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.
Period	Financial year.
Incentive	Reputational incentive.

Result: 12,203, on track

Performance summary

By law, we have to meet specific minimum standards for customer service, such as meeting appointment times. This is called the guaranteed standards of service (GSS).

The number of failures this year is 12,203 which is higher than last year but is still on track to meet this performance commitment (for our average 2015 to 2020 performance to be less than the average of the last three years of 2010 to 2015).

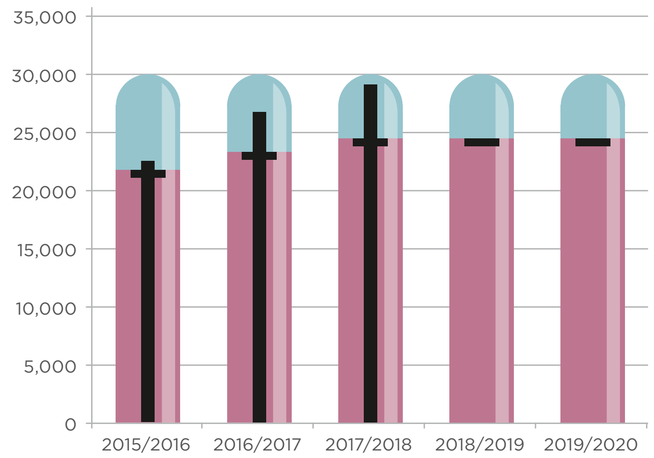
Of note, appointment failures significantly increased, up by 77%. This was mainly due to several severe weather events. The number of external flooding events increased by approximately 12%.

Customer Outcome: We keep your bills as low as possible

There are three performance commitments under this outcome.

Helping you pay	
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).
Target	≥26,902 Reported annually, performance commitment to be assessed at Year 5. Average of 2015-2020 performance to be less than average of 2010-2015 performance.
Period	April to March.
Incentive	Reputational incentive.

Performance graph – higher is better



See page 40 of this report for an explanation of what this graph shows and the key.

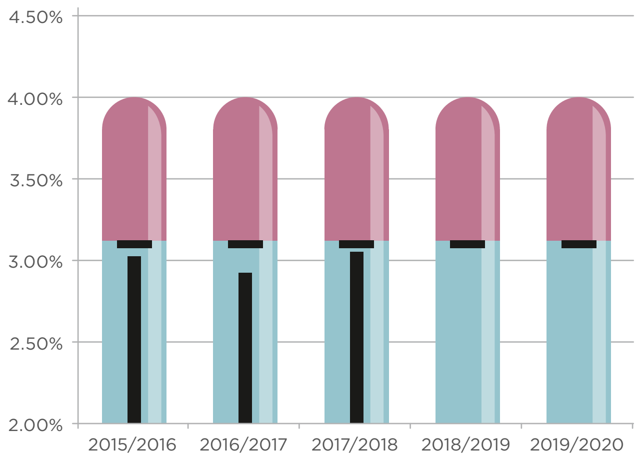
Result: 28,853

Performance summary

We recognise that many customers are struggling with the cost of living. Our customer bills are some of the lowest in the country and we are committed to keeping them low. We have capped our bill price rises to the Retail Price Index each year until 2020. Our average joint water and waste-water bill in 2017/2018 was £373 – the second lowest in the UK. We increased average bills by less than the rate of inflation compared with the previous year and we will continue to make sure any rises in our average joint water and waste-water bill are no more than the value of the Retail Price Index (RPI). Our support to customers who struggle with the cost of living includes a 'social tariff' support scheme, Water Support. Water Support is aimed at customers whose household income is assessed as being 'low' and have a bill that is greater than a set threshold (£420 in 2016/2017). Under the scheme, we can then cap the bill at the cost of the average Yorkshire Water bill. We have increased the number of customers we help through this and other schemes year on year, from 22,735 in 2015/2016 to 28,853 in 2017/2018.

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.
Target	Annual target maintained at 3.16%.
Period	Financial year.
Incentive	Reputational incentive.

Performance graph – lower is better



See page 40 of this report for an explanation of what this graph shows and the key.

Result: 3.10%

Performance summary

We run a range of schemes to help customers who genuinely cannot afford to pay their bills and we have strong processes in place for managing debt for those who choose not to pay their bills. In 2017/2018 we met our performance commitment (to make sure that the cost to customers of bad debt was kept below 3.16% of the average bill). We maintained our leading approach to managing debt – the cost of debt was 3.10% of the average bill (approximately £11).

Value for money	
Measure	Value for money.
Unit	Percentage.
Definition	The reported value for Value for money determined by the Annual CCWater Tracking Survey.
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.
Period	April to March.
Incentive	Reputational incentive.

Result: 76% (water), 79% (waste water)

Performance summary

The independent Consumer Council for Water (CC Water) survey water-industry customers about value for money. The latest results will be published in July 2018. The results show that 76% of customers agreed that our water service is value for money and 79% that our waste-water service is value for money. Although this is a slight reduction from last year, we are still better than the industry average and are still well on track to achieving our commitment to improve performance on average between 2015 and 2020.

4.
Our process to provide trusted information

In this section

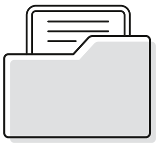
We want to provide our customers with information that they are able to trust.

We've spoken with our customers and with our key stakeholders to understand the risks, strengths and weaknesses with our reporting. We have used the results from these discussions to develop and publish our assurance plan. We hope that our assurance plan will help our customers have confidence that the information we publish is accurate, accessible and easy to understand.

In this section of the Annual Performance Report, we will explain:

- What we mean by assurance
- Summarise the assurance activities we have completed
- The areas that we have targeted, why we are targeting this area, the assurance that we have completed and activities we have done to mitigate the risk
- Summary of the financial audit and findings
- Summary of the technical audit and findings

We have also published a Data Assurance Summary, which covers all assurance activities completed over the past year (2017/2018).



What is assurance?

Assurance is a process aimed at giving confidence in the information we publish.

Assurance is how we review information and processes 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.

To do this in Yorkshire Water, we have an assurance plan.

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 have trust and confidence in us and how well we are doing in delivering the promises we made to you.

Assurance for the Annual Performance Report

Our Board is accountable for the quality of the information that we publish.

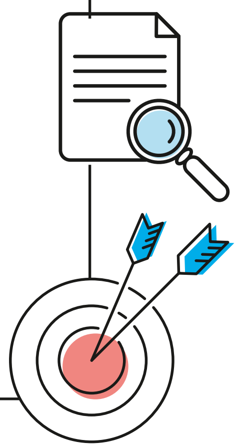
Our assurance uses a method called ‘three levels of assurance’ and is risk based. This makes sure that our assurance activities are proportionate to the level of risk of error associated with the information or with the publication. This is best practice for assurance.

Our assurance processes are detailed further within our assurance plan. We can confirm that we have followed these processes for the Annual Performance Report. Our annual reporting processes are accredited to the ISO 9001:2015 Quality Management System standard. This is best practice and externally verified.

Our Assurance Processes

We have two assurance processes:

1. A data assurance process is in place to ensure that the data we produce is accurate.
2. A wider assurance process ensures that the overall publication meets any guidance and that the publication is accessible and easy to understand.



These are the three levels of assurance we carry out for data assurance of the information within the Annual Performance Report

Our assurance processes are in place to make sure that the information we produce is accurate.

Level 1

Providers and Data Managers

Our data providers and Data Managers record the steps we follow to gather, analyse, process and report our information. They then provide the information and make sure it matches our reporting requirements and guidelines. Data Managers check that the information produced has followed the guidance and is accurate.

Level 2

Senior Manager review and self-certification

A Senior Manager and Director will review and sign off the information. They will review for compliance against set criteria and whether the information matches the understanding of the business.

Peer review

This is provided by oversight teams. They will review the overall information provided to make sure it keeps to the guidance and that the information matches the understanding of our business.

Level 3

Independent audit

The information within the Annual Performance Report has been reviewed by Deloitte and Halcrow Management Sciences Limited (Halcrow). The data assurance process for this annual performance report is certified to the ISO9001:2015 quality management system (QMS) standard.

Audit Committee and Board

Review by the Board Audit Committee and customer forum

The committee will receive the assurance findings and will check that processes and controls are in place to provide accurate information. The customer forum will review our overall performance.

Board approval

Final approval is given by the Board after all of the assurance steps have been carried out.

APPROVED

The results of our performance are presented to the Yorkshire Forum for Water Customers (the Forum). Our technical assurance providers, Halcrow, has attended a Forum meeting to present their views on our performance. The Forum has had an opportunity to challenge us on our performance and how we are delivering against our commitments.

These are the three levels of assurance we carry out for the wider assurance of the Annual Performance Report

Level 1

Providers and Data Managers

Review the guidance and make sure all roles are assigned, for example, Data Providers and Data Managers. Following the wider assurance process, they will make sure the publication is delivered on time and that it meets the reporting requirements and guidelines.

Level 2

Senior Manager review and self-certification

This is provided by oversight teams. They will review for compliance against set criteria and whether the information matches the understanding of the business. They make sure that the overall publication meets the requirements and is easy to read.

Peer review

The publication will be signed off by an accountable Senior Manager and Director. They will review for compliance and whether the publication summarises business understanding.

Level 3

Independent audit

Level 3 assurance is provided through independent external assurance. The overall information within the Annual Performance Report has been reviewed by Deloitte and Halcrow. They will review for consistency with the data-assurance findings and review against the reporting requirements.

The Forum and Board

Review by the Forum

This group will review the publication to make sure it covers areas of most importance to our customers and that the document is easy to read.

Board approval

The overall Annual Performance Report is presented to the Board Audit Committee (a sub committee of the Board) and the Board for review and approval.

APPROVED

The overall Annual Performance Report and the customer summary report have been presented to the Forum. The Forum has had an opportunity to review whether the publication is accessible and easy to read as well as challenging us on our current performance.

Annual Performance Report assurance findings

Our targeted assurance

Through consultations with our customers and stakeholders on the risks, strengths and weaknesses around our reporting, we identified a number of areas for more targeted assurance during 2017/2018. Table below shows the areas that we have targeted, why we are targeting these areas and a description of the risk, what we are doing to deal with the risks, the assurance that we have completed and the main findings from the assurance reviews.

Information published is what customers and stakeholders want and need	
Reason for targeted status	• If we do not get involved enough to understand what our customers and stakeholders want and need, we will lose their trust in the quality of the services we provide. • The information we publish includes information on our performance against the promises we have made in our performance commitments. • This information should reflect what our customers want to see and we should provide assurance on our approach to delivering of information to our customers and stakeholders.
Dealing with risk	• We have taken part in a more comprehensive programme of customer involvement to increase awareness of the reports we publish and to understand how they deliver compared with what our customers want and need. • We have compared our reporting with other companies and used the feedback we received and the lessons we have applied from the results of our Company Monitoring Framework (CMF) score in November 2017.
Ongoing activities and targeted assurance	• To understand what our customers want we have set up a new bespoke online research community called Your Water. This is a community with 1,000 of our customers representing the voice of our customers. We also involve 7,000 customers who we communicate with by email. • Our customer platforms allow us to continuously get involved with our customers, allowing us to tailor our service aims and communications to meet their needs. Our customer platforms are part of our wider research programme which makes sure customers are at the heart of what we do. • We sent a draft version of this Annual Performance Report to our online community and a number of customer focus groups. Their feedback is included in this report. • We have continued to work with the Yorkshire Forum for Water Customers to make sure that the style, format and content of our reporting is tailored to their feedback. • Our assurance has included a comparison across the industry of the detail from the CMF assessments in November 2017. These results have been used to improve our reporting.

Information is always accurate and reliable	
Reason for targeted status	• The information we publish must be an accurate and reliable summary of our performance and must measure our performance correctly. • We achieved this by publishing information that is always accurate and reliable. If our information is not accurate and reliable, we risk losing trust in the services we provide.
Dealing with risk	• We have continued to strengthen our assurance approach in 2017/2018. • Our assurance is based on an integrated 'three levels of assurance' model which is recognised as assurance best practice from professional bodies including the Institute for Internal Auditors (IIA). • Our assurance is proportionate and we deliver more assurance on the information with the highest risk of mistakes. This includes external technical assurance on our risk assessed information.
Ongoing activities and targeted assurance	• We have applied our assurance model using the 'three levels of assurance' consistently when delivering our information. • Our model has applied an integrated approach so our assurance matches the most important risks associated with our published information. • This has meant our assurance has been delivered on a proportionate basis with more assurance on the numerical and written content with the highest risk of mistakes. • We may increase the level of risk given to some information because we missed our performance target in previous years, the information is linked to a monetary reward or penalty or our Auditors have challenged our method of reporting. • The targeted assurance areas we have described in this part of our report describe the detailed assurance we have use in high risk areas to make sure our information is always accurate and reliable.

Annual Performance Report assurance findings

Continued

Information is easy to find	
Reason for targeted status	• If customers and stakeholders cannot find our information, they cannot rely on us. Our information should be available in a place which is convenient and easy to find. • Customers who cannot find our information will lose confidence in our ability to act as a transparent company.
Dealing with risk	• To deal with this risk we have tried to understand our customers' and stakeholders' views and their priorities to identify the information they want to find. • We have achieved this through a programme of customer involvement which has included the Yorkshire Forum for Water customers and customer focus groups.
Ongoing activities and targeted assurance	• Our communication activities continue to look at the ways we involve our customers. This is though our website, social media, bloggers, traditional media, e-mails and customer involvement events. • Our research has continued to listen to our customers and stakeholders to make sure we provide information using the right channels at the right time. • Our digital improvement activity has continued to review and improve our website to make sure published information is easy to find and read. • This has improved our website and we have grouped our reports on a single landing page to make them easier to find. • We have carried out a survey with our customers and they responded positively on questions about how easy our information was to find. • We will continue to ask the Yorkshire Forum for Water Customers to challenge us on progress with this priority.

Information is easy to read and understand	
Reason for targeted status	• Information we publish to our customers and stakeholder should be easy to read and understand. • If our customers and stakeholders cannot understand the information we publish they will not be able to rely on us or trust us to deliver the services we are expected to provide.
Dealing with risk	• The staff members we have identified as contributors and authors of our published information have been trained in plain English. • Using plain English makes our publications easier to read and understand. • Our aim is to achieve Crystal Mark certification from Plain English Campaign for many of our publications to make sure they are easy to read and understand.
Ongoing activities and targeted assurance	• There are clear roles in delivering our published information and one of the most important roles is the Publication Manager. • Our Publication Managers review the guidance to deliver our information and make sure it is delivered to a quality that meets the specific reporting guidelines and is easy to read. • We are aware that some of our activities are complicated. The Publication Manager will make sure that the information contained in our publications is clear and easy to read. • The staff who deliver our written information have been on a plain English course and we apply what we have learnt from this training. • Plain English Campaign reviewed our final assurance report and our report achieved a Crystal Mark. • This has given us confidence that the information we are publishing is clear and easy to read. • We will continue to ask the Yorkshire Forum for Water Customers to challenge us on progress with this priority.

Annual Performance Report assurance findings

Continued

Drinking water quality contacts – we missed our performance commitment target in the previous year	
Reason for targeted status	• Our promise to deliver a quality supply of drinking water is a target which is important to us. • The information we publish must be an accurate reflection of our performance. • We missed our performance target in 2016/2017 and we have not met it in 2017/2018. • This is an area of targeted assurance because we want to be sure that we are reporting correctly and accurately, especially where there has been a financial penalty.
Dealing with risk	• If we do not report the number of drinking water complaints correctly, we risk losing the trust of our customers and stakeholders. • We have used our integrated assurance model for reporting on this performance measure including assurance from our independent provider Halcrow.
Ongoing activities and targeted assurance	• We have strengthened our assurance approach by using our 'three levels of assurance' model and we have applied this approach to the reported information on this performance. • We continue to monitor our performance in terms of drinking water complaints and the Asset Delivery Assurance Group have agreed action plans. • This group has monitored our operational activities to improve our performance including extensive flushing activity across our network as part of an industry leading programme. • We collect information through website content and self-diagnosis tools to help us to categorise our customer contacts. • Internal Audit reviewed our drinking water quality contact performance in an audit of 'Water Network Management'. They identified good practice around specific practices and no action was raised on water quality contacts. • Halcrow have reviewed our results for 2017/2018. They reviewed our reporting method and process, assumptions, material trends, governance, and sample checked our information. • They checked the quality of our reporting of information and there were no issues found.

Energy self-generation – our performance commitment target where we missed the target in the previous year	
Reason for targeted status	• Our performance should reflect the issues that are important to our customers and our ability to meet out energy self-generation target is an important measure of our environmental performance. • Our target was to generate 12% of our own electricity in 2016/2017 and 13.2% in 2017/2018. We have not met this target for the last two years. • Our ability to generate electricity was reduced in 2015 when the plant we were building to deliver a significant amount of our energy was damaged by floods. • Generating energy is included as a targeted area for assurance because we want to be sure we are reporting our performance correctly. There is a risk that customers and stakeholders do not understand our performance or do not feel that we are taking our performance seriously and required improvement in this area. • Our responsibilities as a trusted company include meeting the environmental targets we have set ourselves. One of the measures we apply to prove our commitment to our environmental responsibilities is our progress to achieve an energy self-generation target. • We have not met our target for generating energy over the last two years and we want to make sure that we are reporting correctly on our performance.
Dealing with risk	• Our environmental performance is important to our customers and stakeholders. There is a risk that the trust and confidence placed in us will be damaged if customers do not feel we are taking our performance in this area seriously. • We have tackled the risk of not meeting our energy generation target by creating plans to increase the capacity of our 11 energy generating sites to meet our 2020 performance commitment, and we measure and monitor the amount of energy we deliver every day. • All our energy generating sites are metered to the required standards with measurements taken every half hour. The assurance on measuring generated energy has been delivered using our 'three levels of assurance' model. This has given assurance for the processes we use to collect and measure our information. • Our assurance has also checked the design and operation of the strategy to deliver our self-generated electricity target. This provides assurance that we are taking our performance and required improvements seriously.
Ongoing activities and targeted assurance	• Our technical auditors Halcrow have assured our 2017/2018 energy consumption and energy generation information. • They say we use clear methods and processes to measure the energy we use in our water and wastewater activities. They are happy that we split the energy used into the correct cost brackets or cost allocations which is needed for our regulatory reporting. • They reviewed parts of our process on energy consumption that had changed compared with 2016/2017 in greatest detail. Any changes we needed to make have been included in our reported information. • There has been an internal audit in 2018 on electricity consumption information and there was no action on the accuracy of the information we report. • We continue to monitor our performance on generating energy. Action plans are agreed or amended at the Asset Delivery Assurance Group. • We carried out an internal audit on Sludge Strategy and Energy Generation in 2017. It gave us significant assurance on the design and operation of the controls to measure and monitor energy generation. • Our performance for energy generation in 2017/2018 is slightly below target but factors affecting performance have been identified, understood and confirmed through our reporting. • Halcrow have confirmed our reporting process is well managed. They have said our source data is clearly identified, complete and well managed from the systems we use to record the information.

Annual Performance Report assurance findings

Continued

Waste diverted from landfill - performance commitment where our external auditor provided further challenge	
Reason for targeted status	• Our performance should accurately reflect the issues that are important to our customers, and our environmental performance is one of these issues. We must show that we are acting in a way which respects our environment and our performance commitment on waste diverted from landfill must be an accurate reflection of our performance. • We achieved our performance commitment in the last two years. We have included clean water sludges within this performance measure. Our external independent assurance providers Halcrow have challenged this measurement. • We believe that we have included clean water sludges into this commitment correctly and we want to make sure that we have explained this clearly. If we do not explain this decision well enough, we risk losing the trust of our customers and stakeholders.
Dealing with risk	• We have achieved our performance target for waste diverted to landfill in the last two years. In 2016/2017 we diverted 99.3% of waste from our activities away from landfill which was better than our target of 94%. In 2017/2018 we achieved 99.4%. • To assure this performance we have followed our integrated data and assurance process. We have received technical assurance from our external assurance provider Halcrow. • This means our calculation using clean water sludges has received the right level of scrutiny. • The action we have taken has included dialogue with Ofwat and our customers to explain our decision to include clean water sludges in our method of calculation.
Ongoing activities and targeted assurance	• We completed a detailed review of the breakdown of waste included in our measurement of waste diverted to landfill in 2017/2018. • We looked back at how we worked out the target as part of the Price Review 2014 and we are confident that clean water sludges are included in this performance commitment. • Halcrow, our Technical Auditors were given the findings from our internal review and they recommended that an action was needed to explain this position to our customers to make sure that they were satisfied with our approach. • Halcrow have audited our 2017/2018 information. They found our collection of information has been well managed by the Delivery Assurance Group (DAG). The group has managed the processes to meet this performance target and to collect the information. • Their audit confirmed our source information for waste diverted to landfill is clear, complete and well managed. • Halcrow have said we have been clear in the way we report our performance and we have checked that this is acceptable to the Yorkshire Forum for Water Customers and Ofwat.

Reliability factor (sewer network) performance commitment where our auditors provided further challenge	
Reason for targeted status	• There are 20 supporting measures that make up this commitment and although we are still stable in our performance some of the supporting measure are not meeting their targets. • We want to make sure we maintain our service levels and our reporting is accurate. • This performance commitment has a financial incentive attached to it. If we do not report accurately we risk losing the trust of our customers and stakeholders.
Dealing with risk	• We have used our integrated assurance approach on all our reported information including the results for this performance commitment. • Our assurance has delivered more assurance on the parts of the measure that are failing the target.
Ongoing activities and targeted assurance	• We have used our integrated assurance approach on the information and processes used to report this performance measure. • Our external independent assurance providers, Halcrow, have completed a review of all the supporting measures we include in our stability and reliability service measures. Their review on reliability factors for the sewer network was completed as part of this work. • They found the reporting methods and systems that we have used this year are the same, except for our reports on reactive maintenance which use a new reporting system. Halcrow confirmed the new system reports identical information to 2016/2017. • Sub-measure audits also took place with no material concerns with our information. Halcrow found all sub-measures were stable except the 'flooding other causes' sub-measure which is getting worse. These results are included in the information we have reported.

Annual Performance Report assurance findings

Continued

Drinking Water Quality Compliance - Performance commitment where we are forecasting a financial incentive penalty (as at September 2017)	
Reason for targeted status	• In 2016/2017 we achieved a compliance score of 99.962% beating our target which was 99.960%. However, this year we achieved a compliance score of 99.953% against a target of 100% compliance. • This is a targeted area for our assurance because we want to make sure that we are reporting our performance accurately. • If we do not report accurately, we risk losing the trust of our customers and stakeholders.
Dealing with risk	• If we do not report our water quality compliance performance correctly, we risk losing the trust of our customers and stakeholders. • We have used our integrated assurance model to the reporting on this performance measure including assurance from our independent provider Halcrow.
Ongoing activities and targeted assurance	• We have continued to review and strengthen our assurance approach in 2017/2018. We will follow our improved data and wider assurance processes. • We regularly monitor drinking water quality compliance and action plans agreed or amended by the Delivery Assurance Group. • Our external independent assurance providers, Halcrow have reviewed our water quality reporting as part of their annual audit in May 2018. • They found there have been no changes to our methods and process to collect our information. Our quality sampling is a planned process and the results are recorded on our Thermo Sample Manager system. • Halcrow found the source data from our systems is clear and well managed. They found our reporting is more accurate on one line of information 'Table YKS 5'. • There is high confidence in our reporting and no actions we need to deal with.

Pollution Incidents - Performance commitment where we are forecasting a financial incentive penalty (as at September 2017)	
Reason for targeted status	• Our environmental performance is an area which is of great importance to our customers and we must act in a way which respects our natural environment. • To meet our promise, our reporting of pollution incidents must be an accurate reflection of our performance. Our aim is to make sure the way we report on this remains one of the most accurate in the industry. • The number of pollution incidents (Category 3) is near to our target. This performance commitment has a financial incentive attached to it. • If we do not report accurately, we risk losing the trust of our customers and stakeholders.
Dealing with risk	• The way we report our pollution incidents must be as accurate as possible. The method we use for assurance must support this and provide confidence in the information we are sharing in our publications. • We have used our integrated assurance model in the reporting on this performance measure including assurance from our independent provider Halcrow.
Ongoing activities and targeted assurance	• We regularly monitor our pollution performance and action plans which are agreed and amended by a monthly Delivery Assurance Group. • There are existing monitoring methods for pollution incidents which are continually refined. • We track progress on performance through weekly pollution reporting and hub meetings. There are also operational improvements to improve the monitoring of information from our network, pumping stations and waste water treatment works. • Our external independent assurance providers, Halcrow, completed a detailed review of the reported numbers as part of their annual audits in May 2018. • They found excellent evidence that we are following company procedures, working closely with the Environment Agency, and checking pollution incidents. • They confirmed the numbers we are reporting are robust. There are also clear responsibilities to check the reliability of the information we report.

Annual Performance Report assurance findings

Continued

Water Supply Interruptions - Performance commitment where we are forecasting a financial incentive reward (as at September 2017)	
Reason for targeted status	• At just under 7 minutes in 2017/2018, we have performed ahead of the performance commitment target of 12 minutes and improved on the 2016/2017 performance of nearly 10 minutes. • This performance commitment has a financial incentive attached to it.
Dealing with risk	• If we do not report our water supply interruptions performance correctly, we risk losing the trust of our customers and stakeholders. • We have used our integrated assurance model has been applied for reporting on this performance measure including assurance from our independent provider Halcrow.
Ongoing activities and targeted assurance	• We have continued to review and strengthen our assurance approach in 2017/2018. We have followed our improved data and wider assurance processes. We regularly monitor performance and action plans are agreed or amended by the Delivery Assurance Group. • We have a regular meeting on planned activity that will interrupt supplies from our network. The meeting looks at our performance and makes sure we follow our processes. This has improved our performance and we have a greater level of confidence in our supply interruption information. • Our assurance on this information is also improving by using a new review process including hydraulic analysis to measure the effect and length of time supply interruptions. • Our external independent assurance providers, Halcrow also reviewed our delivery plans in 2017. Our technical auditor Halcrow, completed a shadow reporting audit in August 17 on our data and adherence to the AMP7 Supply Interruption guidance notes. This was an audit set up by Water UK on behalf of Ofwat to prepare our reporting practices for AMP7. • Water supply interruptions were also subject to an external audit to achieve upper quartile and frontier performance by the end of Year 1 of AMP7.

Cost allocation in the Kelda Group	
Reason for targeted status	• The Kelda Group is currently selling a number of its other non-regulated companies that operate as Kelda Water Services.
Dealing with risk	• We want to make sure that our customers do not have to pay the costs of selling these companies.
Ongoing activities and targeted assurance	• We continue to follow our improved data, and wider assurance processes to check that the costs of selling our non-regulated business do not affect us. • Our assurance processes monitor our cost allocations and we carry out reconciliations every three months. We record the assumptions made when allocating our costs and we clearly record any manual adjustments and calculations that we make related to selling these businesses. • Our financial auditors Deloitte review our cost allocations every year. The financial auditors' opinion is published within Appendix 1.

Annual Performance Report assurance findings

Continued

Price control cost allocation	
Reason for targeted status	• Our customers cannot choose their supplier and one way that our regulator provides protection is to decide the price and service package ('price controls') that we deliver. • Price controls affect the price customers pay for their water and the level of water and sewerage services our customers receive. It is important to all our customers. • By setting price controls there must be enough money to pay for the functions that protect our customers' interests. Delivering the service package, we have promised means we must spend our customers money in the right place. • Under the current Asset Management Period (AMP6, 2014 to 2019) we use four price controls and we need to make sure we are allocating our costs correctly. • If we fail to do this our customers and stakeholders will lose confidence in our charges and the delivery of our services and investments in the current AMP6 period.
Dealing with risk	• Our AMP6 price review made sure our price controls balanced our customers interests with the right amount of finance provided to deliver our water and sewerage services. • We also designed our price controls to make sure we could meet our other legal obligations, including our environmental and social obligations. • Our assurance and risk mitigation checks make sure that we are spending our customers money the way that we agreed to when the price controls were set up.
Ongoing activities and targeted assurance	• Each year we carry out cost assessments to make sure the money we have spent has met the price control cost allocation rules we agreed to in our AMP6 business plan. • We use our three levels of assurance process to check the detailed cost information we publish each year. • Our assurance includes level 1 checks by our staff who are responsible for the information in our financial systems. Our level 2 assurance providers (managers in the business) review our cost assessments to make sure they are accounted for correctly. This allows us to identify and explain any variances. • Our financial processes record the assumptions made when allocating our costs and we clearly record any manual adjustments and calculations that we make. This is shown in our cost allocation methodology statement. • Our independent level 3 financial auditors, Deloitte review our cost allocations every year.

Periodic review 2019 (PR19)	
Reason for targeted status	• The information we produce now supports our business plan over the coming years. We need to know that our information is complete and accurate.
Dealing with risk	• Our assurance on the PR19 business plan must be effective and deliver assurance to a standard which meets the specific tests in the guidance for the plan issued by Ofwat. • Our assurance must secure a high level of confidence and assurance. The programme of assurance will show that our full board has been given comprehensive assurance of our business plan and accompanying information.
Ongoing activities and targeted assurance	• We have taken the information we will use in our PR19 business plan from the results on our performance from the last three years of our current price review period (AMP6). Our PR19 business plan also includes forecast results on our future performance up to 2025. • To assure all the information in our PR19 business plan we will follow our three levels of assurance data and wider assurance processes. • There has been a detailed programme of assurance designed to check our approach to developing the business plan and to assure the information it contains. • The delivery of our PR19 business plan has used a new system as part of our delivery and there has been an internal audit to provide assurance on its delivery. • Our programme of assurance also includes detailed work from our independent assurance providers Halcrow and Deloitte on our investment programme and performance commitments as financial and operational delivery targets. • Our independent assurance providers give us assurance on our plans, calculations and commentaries to make sure our business plan is accurate and can be approved by our Board of Directors. • This will deliver an effective platform to give assurance to you, our customers, that our plan will meet and deliver the level of service you will expect from us in the five year period to 2025. • Our full business plan for 2020 to 2025 will be available on our website in September 2018.

Summary of the financial audit and 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 Annual Performance Report. As per Appendix 1, Deloitte have issued an unmodified opinion on:

- 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) and the related notes.

Please see Appendix 1 for their audit opinion.

Summary of the technical audit and findings

We prepare our non-financial data in line with the definitions of our performance commitments and in accordance with any relevant guidance from Ofwat. We have instructed Halcrow to carry out the audits of our performance commitments and supporting information as well as other non-financial information contained within the Annual Performance Report.

At the time of this report, out of 308 key audit tests, Halcrow has identified:

- 271 (88.0%) as being without concern.
- 36 (11.7%) where observations were made where they were content with reported information but there were opportunities to make improvements in the future.
- 1 (0.3%) in two areas where observations were made where there was concern over the potential for material error in the reported information.
- 0 (0%) observations where there was evidence of material error or mis-statement.

The areas for improvement have been put into an action tracker with identified action owners. Progress against the completion of these actions will be reviewed by senior management and reviewed by Halcrow at a future audit. These areas will be factored into our risks, strengths and weaknesses assessment and our assurance plan for 2018/2019.

Halcrow made 1 observation where they considered the information may be materially mis-stated. The details are given in the table below along with our management response.

Criteria	Halcrow observation
Table 4P – Non-financial data for Water Resources, Water Treatment, Water Distribution (1 observation)	General concerns were raised over the quality of some of the source data supporting information reported in this table, which requires assumptions to be made about asset capacities and allocations to price controls. Halcrow has found our assumptions to be appropriate, however, in some cases they are based on limited source data, so the degree of extrapolation may create material errors in the reported figures. These issues are particularly compounded in the calculation of average pumping head. The reporting guidance has changed for 2017/2018 requiring a more granular allocation of assets and their performance between price controls.

Criteria	Our management response
Table 4P – Non-financial data for Water Resources, Water Treatment, Water Distribution (1 observation)	Our regulatory financial team has reviewed the allocation of assets to price controls and has not identified any material concerns. With the allocation of power costs according to the most recent Ofwat guidance, accounting for pumping head etc, has only a £250k impact, i.e. less than 0.1% of opex. As a result any material error in the APH figure would therefore generate a similarly small error in any relationship between activity and cost. The procedure and analysis has been subject to senior manager review and sign-off. It has been signed-off as fit for purpose as it has been considered acceptable in previous years, and given the subsequent review by our regulatory finance teams we consider it to remain within the confidence limits quoted. The methodology for these lines remains consistent with previous years. A similar level of concern has not previously been made, however we acknowledge the limitations in the approach and reflect this by the correct use of confidence grading, i.e. B3 and B4. We acknowledge there is an opportunity to improve the confidence in the reported numbers. We will complete a thorough review of this area, consider whether it is sufficiently material to include within our annual Risks, Strengths and Weaknesses Statement. The review will consider where the accountability for these reported figures should reside so that the correct level of technical input can be applied to make improvements in confidence.

In all other respects, Halcrow has concluded that we provide a fair, balanced and understandable summary of our performance and that we were compliant with the reporting requirements.

5.

Our engagement with our customers and stakeholders

Securing stakeholder trust

We always want to provide customers with information that they are able to trust.

When we don't get it right, we risk losing trust and confidence.

Ofwat annually complete an assessment on the quality of the information published by water companies called the company monitoring framework. Ofwat place water companies into one of three categories: self-assured; targeted; or prescribed. In the November 2017 assessment, we improved our position from the 'prescribed' category to the 'targeted' category.

We exceeded Ofwat's expectations in three areas; board leadership, transparency and governance and, the assurance plan and data assurance summary. We were the only water company to exceed Ofwat's expectations on the 'board leadership, transparency and governance' area.

We met expectations on all remaining areas except for Financial Monitoring Framework where minor concerns were raised. We have taken steps to make sure that the minor concerns raised have been resolved.

We will continue to challenge ourselves to make sure that information we publish can be trusted by customers. We will continue to exceed Ofwat's expectations on 'board leadership, transparency and governance'. To meet our ambition to achieve 'self-assurance' in the next Ofwat assessment we have identified opportunities and implemented an improvement plan.

The improvement steps which have been completed to work towards the self-assured category are summarised below:

- Evidence has been published to support the Board assurance statement in the developer charges and wholesale charges publications.
- We published our Assurance Plan in March 2018, which explains the process we have in place to give confidence that the information we publish is accurate, accessible and easy to understand. We received a Crystal Mark for this publication. Our Assurance Plan is available on our website here: **www.yorkshirewater.com/reports**.
- We have been working with Plain English Campaign to make sure our publications are easy to read. We have received a Crystal Mark for our Performance Summary and Data Assurance Summary reports.
- We continue to work closely with the Yorkshire Forum for Water Customers to make sure that our performance reporting meets customers and stakeholders needs. The Forum has published a statement reflecting on our performance for the year 2017/2018. The report is available here: **www.yorkshirewater.com/customerforum**
- We have improved navigation to our reports page by adding a banner on our homepage. This makes it much easier for customers to find our reports. The ‘Our reports’ web page on our website has been redesigned to make it easier to find our current reports as well as our reports from earlier years.

- We have provided additional narrative to increase the transparency of our financial structure and clarity of the financial resilience in this report. We have also improved the diagram of our company structure to make it clearer. This can be found in Appendix 4.
- We have published two videos to explain our financial and corporate structure. Here is the link to the videos. **www.yorkshirewater.com/tax**
- We are adopting an open data approach, which will see all operational data published by 2020 in partnership with the Open Data Institute and Data Mill North.
- We have created a landing page on our website of all our charges (household charges, wholesale charges and new connection charges) to make it easier to find them in a single place – here is the link: **www.yorkshirewater.com/node/1822**.
- To enable our drive towards greater transparency, we have produced our first report prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core Option. We worked with the GRI to improve the content of our report and ensure that we were covering the requirements outlined in the GRI Sustainability Reporting Standards. We successfully addressed 100% of the information requests from this GRI Disclosure Review Service. You can find out more about the GRI Standards here: **www.globalreporting.org/standards/**

Engaging our customers

As part of our ongoing customer engagement and participation activity, we regularly consult with our customers on our performance reporting. This insight highlights what is important to our customers and whether the information published in the reports is clear, understandable and relevant.

Over the past two years we have created an online research community consisting of a representative sample of more than 1,000 Yorkshire Water customers from across the region. The online community allows us to continuously test and tailor our service aspirations and communications with our customers. The community is part of a wider research programme to ensure that customers are at the heart of what we do.

This Annual Performance Report has been developed to reflect customer feedback. To test this year's report, we presented a draft version to our online community, and asked for feedback on the content of the report.

Feedback from the online community is summarised as follows:

- The language used in the report was accessible.
- The report was easy to read and understand.
- The design of the report was attractive.

Our customers also told us they would like to see a summary of our Annual Performance Report. We listened to our customers and produced a Performance Summary report, and have been working with our customers through a series of focus groups to make sure it meets their needs and expectations. Here is a link to our performance summary:
www.yorkshirewater.com/reports

We welcome this feedback and have amended the report to reflect the feedback provided. 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 September 2018. 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.

Yorkshire Forum for Water Customers

The Yorkshire Forum for Water Customers (the Forum) was established in 2012 and is made up of key groups in Yorkshire who collectively represent Yorkshire Water's customers.

The Forum provides constructive challenge to the objectives and proposed delivery of Yorkshire Water's business plans. Progress against the performance commitments are presented to the Forum. Our Technical Auditor, Halcrow, also attends a Forum meeting to provide their report on Yorkshire Water's performance and reporting. This allows the Forum to challenge the level of performance achieved and to understand the delivery plans for the coming year. The draft Annual Performance Report, Performance Summary report and data assurance summary were all shared with the Forum, allowing them an opportunity to review and provide feedback on the information being published.

The Forum has challenged us over the past year regarding our use of plain English. We have been working with the Plain English Campaign to make sure our publications are easy to read. We have received a Crystal Mark for three of our publications:

- Assurance plan.
- Data assurance summary.
- Performance summary.

They are available on our website here: **www.yorkshirewater.com/reports**

The Forum has published a statement reflecting on our performance for the year 2017/2018. The report is available here:

www.yorkshirewater.com/customerforum

Yorkshire Forum for Water Customers

Engaging our 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:

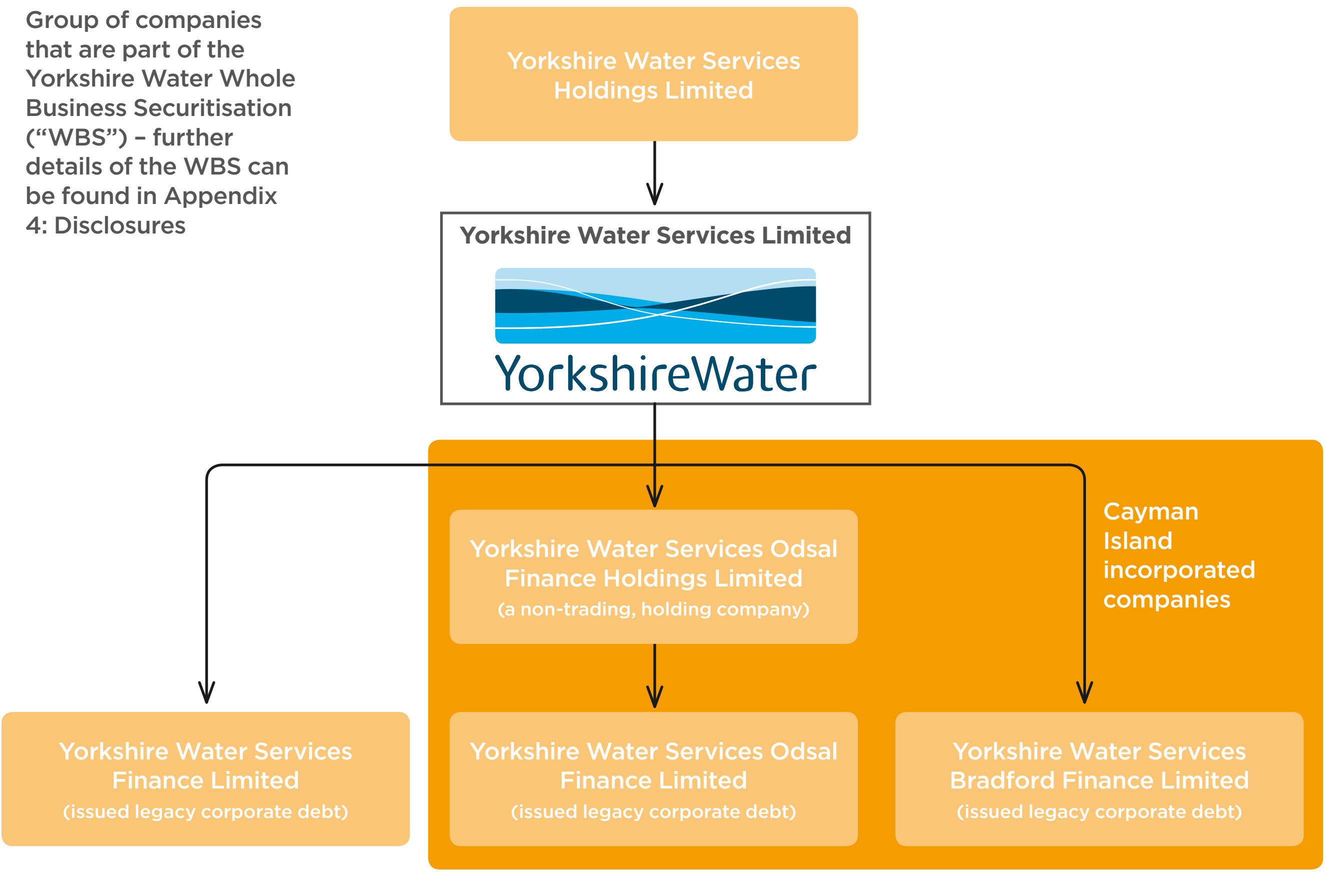
www.yorkshirewater.com/about-us/newsroom-media/public-affairs

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 2017/2018 target for at least 65% of coverage to be positive in nature.

Simplifying our financing structure

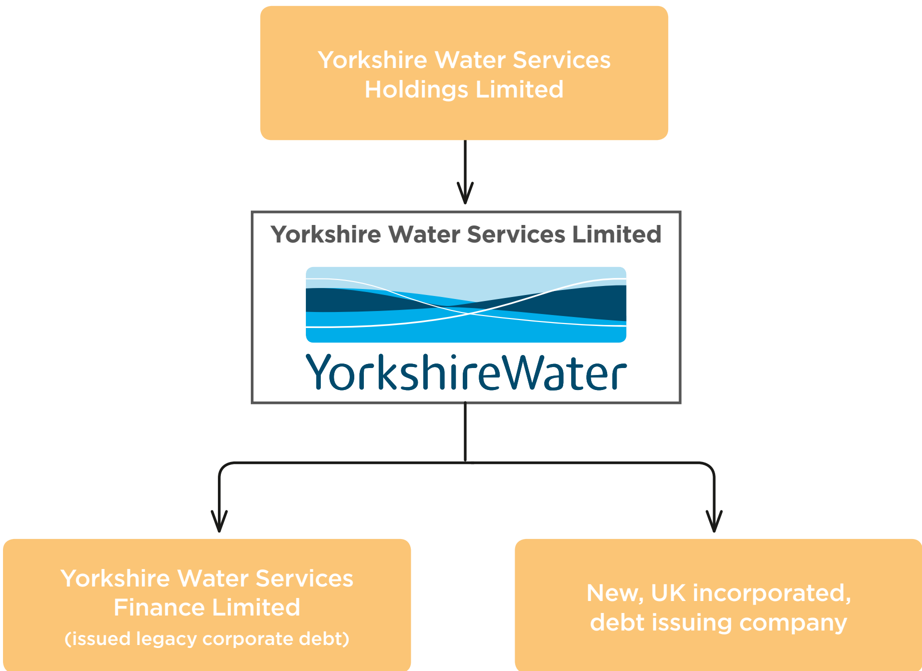
Our existing financing structure was put in place in 2009 as part of the refinancing of Yorkshire Water. It contains three companies incorporated in the Cayman Islands which were necessary at that time to set up the financing structure, however, the historical technical corporate law requirements for using the Cayman companies are no longer relevant. These Cayman Island companies have always been directly managed by Yorkshire Water and have always been subject to UK tax.

The diagram below shows our current structure in summary.



We realise a complex financial structure may not be easily understood by our customers and accept that the perception of these companies may not be positive. To increase transparency of our financing and simplify our structure, our intention is to remove our current debt issuing companies that are incorporated in the Cayman Islands and to replace them with one company that will hold both legacy corporate debt and raise future debt. The new company will be incorporated and tax resident in the UK. This will simplify our company structure as shown in the diagram below.

This diagram is our proposed company structure.

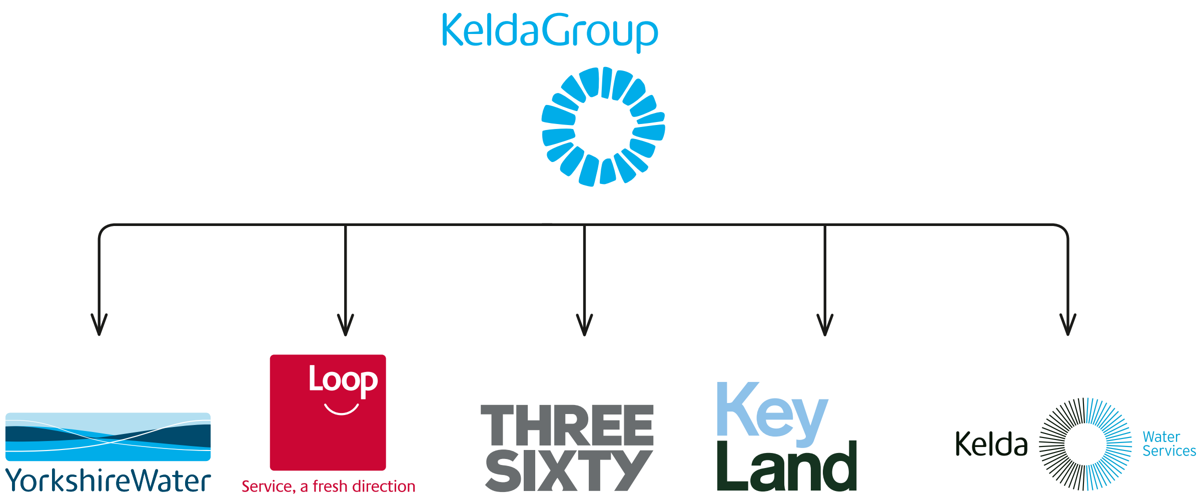


6.
Our governance

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 Ltd (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 be found in Appendix 4: Disclosures of this report.



Yorkshire Water Services Ltd. provides water and sewerage services to customers in Yorkshire and is regulated by Ofwat.

Loop Customer Management Ltd. provides customer related services such as billing, customer services and debt management to Yorkshire Water.

Three Sixty Water Services Ltd was created in 2016 and looks after the billing and other retail services for non-household (business) customers.

Keyland Developments Ltd is a property trading and development business to which Yorkshire Water sells non-operational land when it is no longer required.

Kelda Water Services Ltd provides water and waste water services in the UK, outside of the area licensed by Ofwat. These companies are currently being disposed of and are expected to no longer form part of the group in the future.

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 in the group.

Our Board of Directors

The primary focus for the Board is to lead the development and delivery of the strategy needed to meet the service and performance expectations of our customers and stakeholders.

Our Board consists of an independent Chairman, four Executive Directors, four independent Non-Executive Directors and three investor Non-Executive Directors. 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.

A biography of all our Board members, further information on the composition of the Board and its committees, and information on the recruitment of Non-Executive Directors is available in our Annual Report and Financial Statements 2018 this can be found on our reports page: **www.yorkshirewater.com/reports**

The composition of the Board at 31 March 2018 was as follows:

Independent Non-Executive Chairman
Anthony Rabin

Independent Non-Executive Directors

Ray O'Toole

Teresa Robson-Capps

Julia Unwin

Andrew Wyllie
(appointed 01/09/2017)

Executive Directors

Richard Flint,
Chief Executive

Liz Barber,
Director of Finance, Regulation and Markets

Pamela Doherty,
Director of Service Delivery (appointed 13/09/2017)

Nevil Muncaster,
Director of Asset Management

Investor Non-Executive Directors

Scott Auty
(appointed 13/09/2017)

Andrew Dench
(appointed 13/09/2017)

Michael Osborne
(appointed 13/09/2017)

Our investor Non-Executive Directors are the smallest group on the Board and represent our larger shareholders.

Investor Non-Executive Directors

Scott Auty (appointed 13/09/2017), Andrew Dench (appointed 13/09/2017), Michael Osborne (appointed 13/09/2017).

Good corporate governance

Our Board of Directors is committed to achieving the highest standards of corporate governance in order to be open and accountable to all of its stakeholders, including our customers. To do this it follows company law, best practice and the following requirements:

- **The UK Corporate Governance Code (the Code)**. This is published by the Financial Reporting Council and sets out standards of good practice for companies listed on the stock exchange. We are required by Ofwat to conduct and report on our business as if we were a publicly listed company (PLC). We therefore report against the Code in our Annual Report and Financial Statements. The Code covers Board leadership and effectiveness, remuneration, accountability and relationships with shareholders.
- **The Ofwat 'Board Leadership, Transparency and Governance Principles' (the Ofwat Principles)**. These were published in 2014 by Ofwat and set out the principles it expects regulated water companies to follow.
- **'The Yorkshire Water Board Leadership, Transparency and Governance Code'**. This sets out how the Company has complied with the Ofwat Principles. This is available on our website at **www.yorkshirewater.com/about-us/what-we-do/corporate-governance-and-structure**

Our full governance report is available in our Annual Report and Financial Statements 2018, setting out how we comply with the Code or explaining where we do not comply. The corporate governance statement in Appendix 4: Disclosures, explains where we have not complied at any point in the year. In the following paragraphs, however, we have included a description of compliance with the main principles of both the Code and the Ofwat Principles.

Our Annual Report and Financial Statements 2018 includes, the full detailed description of our compliance, information on the work of our Nomination Committee in leading a search for a new independent Non-Executive Director and the appointment of our three new Non-Executive Directors in the spirit of the Ofwat Principles and the Code.

Board leadership

The Board is accountable to Yorkshire Water's customers and other stakeholders for its activities. It is responsible for the control of Yorkshire Water's business, its strategy, its values and its decisions. It is focussed on the development and delivery of the strategy needed to meet the service and performance expectations of Yorkshire Water's customers and all its various stakeholders.

The composition of our Board and our decision making framework allows for well-informed and high-quality decisions in the best interests of Yorkshire Water. The composition of the Board is subject to the requirements of the Code and appointments are made following a rigorous process to make sure that it is well equipped to carry out long-term strategic and sustainable decision-making in the interests of customers.

The Yorkshire Water Board has a schedule of matters reserved for its decision. This was revised in June 2017 to make it clear that business strategy and strategic plans are for the Board to determine, without any requirement to seek the prior approval of the Board of Kelda Holdings Ltd. The schedule is published on our website at **www.yorkshirewater.com.**

The Board is content that it has always been able to make well-informed and high quality strategic and sustainable decisions in the best interests of the Company for the long-term.

Previously the matters reserved had been structured so that the Yorkshire Water Board had to seek the prior approval of the Board of Kelda Holdings Ltd before deciding its business strategy (though strategic plans did not need to be approved, as long as they were in line with overall group strategic plans). In practice, our shareholders have not in the past required Yorkshire Water business strategy to be approved by the Kelda Holdings Board and for that reason, the Board considered it appropriate that the matters reserved be amended. The matters reserved will be reviewed annually having regard to the overall group strategic plans.

The Boards of Kelda Holdings and Yorkshire Water work independently of each other, although there is good collaboration between them.

The Board decides its key policies, and approves the annual business plans for the Company, financial statements, recommendations of dividends, major investment and business proposals, as well as important organisational matters and corporate governance arrangements. There are clear levels of authority delegated by the Board to management, to allow management to take decisions in the normal course of business. The Board, in turn, holds the management team to account for its day to day operations and performance of the Company.

During the year, the Board received detailed monthly reports prepared by management on Yorkshire Water's operations. In addition, important matters were considered by the Board in accordance with its principles of good governance and in view of their impact on stakeholders. Examples of these include corporate objectives, with the additional focus on customer measures, business continuity measures, preparations for compliance with new Data Protection regulations, the establishment of a Social Value Committee and decisions on large capital projects.

The Corporate Governance report within our Annual Report and Financial Statements 2018 meets the requirements of the Disclosure and Transparency Rules of the UK Listing Authority. It includes discussion on the group structure, company performance, key risks to the business and a Remuneration Committee report (describing the remuneration of Directors in the same way as a listed company).

Board structure and committees

The Board has five principal committees and five other committees, all of which operate within Yorkshire Water. Each of these committees has written terms of reference which can be viewed on the corporate governance section of our website at: www.yorkshirewater.com. Other committees are formed as and when needed to deal with specific issues.

The terms of reference set out the purpose of the committee, what decisions they can take and which matters must be referred to the Yorkshire Water Board for a decision.

The five principal committees are the Audit, Remuneration and Nomination Committees (all required by the Code), the Safety, Health and Environment (SHE) committee and the Social Value committee. Membership of the Audit, Remuneration and Nomination Committees includes a majority of independent Non-Executive Directors as required by the Code.

The Social Value Committee was established by the Board in January 2018. Its overarching intention is to help the Company think differently about Yorkshire Water's position in society and to protect and enhance its integrity and social value.

The other committees are the Kelda Management Team, Board Investment Committee, Regulation Committee, Legal Committee and the Non-Household Retail Committee. These committees typically comprise Executive Directors and other Senior Managers within the business with limited authority delegated to them by the Board, as set out in their terms of reference. These committees are mostly focused on operational day to day matters and report on their activity to the Board. The Kelda Management Team is the principal committee charged with overseeing the day to day operations of the Company and meets on a weekly basis. As is the case with most publicly listed companies, it is not attended by a majority of independent Directors, and attendance by a majority of independent Directors would present an unnecessary additional time commitment.

Further information on all of the Board's committees, their structure, duties, purpose and attendance, and the reports of the Audit, Nomination and Remuneration Committees which are required by the Code, are contained in our Annual Report and Financial Statements 2018.

Chairman of the Board

Anthony Rabin was appointed as our independent Non-Executive Chairman on 9 September 2016. Anthony is also the independent Chairman of Kelda Holdings Limited and Kelda Eurobond Co Limited.

In accordance with the Code, the Board considered Anthony Rabin to be independent on his appointment. This is because Anthony has no relationship, nor has he ever had any relationship with any of the investment companies owning Kelda Holdings except for his Chairmanship of Kelda Holdings Limited and Kelda Eurobond Co Limited. The Code does not prohibit Chairmanship of other companies in the Group. On appointment as Chairman, the Board considered him to be independent in judgement and character, taking into account the existence of his other directorships. The Board considers Anthony Rabin's position as independent Chairman of the Company, Kelda Eurobond Co Limited and Kelda Holdings Limited to be an important link in ensuring visibility and accountability between the Boards and maintaining good governance.

On 12 July 2017, the Chairman's independence at the time of his appointment was considered in further detail. It was concluded that the Chairman was independent at this time since the Code does not preclude other directorships in other Group companies, and they were known to the Board at the time of his appointment. This will be reviewed again in 2018.

Meetings of the various Boards are separate, and as with all the Directors, Anthony, as Chairman, is required to disclose any conflict of interests arising at each meeting.

The appraisal of the Chairman's performance during 2017/2018 was carried out by the Board with the support of the Company Secretary.

Appointments to the Board

The Chairman reviews the composition, skills and diversity of the Board periodically, as well as evaluating the performance of individual Directors, to ensure that it remains effective. Succession planning has been identified as an area of focus following this year's Board evaluation.

During the year, the Board, led by its Nomination Committee as required by the Code, completed an extensive and rigorous recruitment process which resulted in the appointment of Andrew Wyllie on 1 September 2017. The process was supported by Odgers Berndtson, an independent recruitment agency with no other connections to Yorkshire Water.

Further details of the appointment process are described, as required by the Code, in the Nomination Committee report contained in our Annual Report and Financial Statements 2018.

On 13 September 2017, the Board was pleased to announce the appointment of Scott Auty, Andrew Dench and Michael Osborne to the Board as Non-Executive Directors, representing three of our group's investor shareholders. Their appointments, which align with the spirit of the Ofwat principles and the Code, give our investors not only a clear line of sight into the business but enhance the Board's strategic decision-making and allow investors to actively serve the Company in its best interests. Independent Directors remain the largest group on the Board.

Director independence and effectiveness

The Board is satisfied that it acts independently and that both the Board and its committees have the appropriate balance of skills, experience, independence and knowledge of Yorkshire Water to enable them to effectively carry out their duties and responsibilities. At the end of March 2018, the Board structure complied with the Ofwat's requirement that the number of independent Non-Executive Directors (including the independent chairman) be greater than the number of executive directors.

The appointment of our new Non-Executive Directors representing investors means that the Board no longer complies with the Code's requirement that at least half of the Board, excluding the Chairman, comprise Non-Executive Directors determined by the Board to be independent. However as described above, the appointments have been made in the spirit of the Code which is to make sure that there is an appropriate combination of executive and Non-Executive Directors such that no individual or small group of individuals can dominate the board's decision taking. We explain this further in our Annual Report and Financial Statements 2018 and in our Corporate Governance Statement contained in Appendix 4: Disclosures.

Anthony Rabin, Ray O'Toole, Kath Pinnock, Teresa Robson-Capps, Julia Unwin and Andrew Wyllie, who all served during 2017/2018 were considered by the Board to be independent (as defined by the Code). They had no relationship with management or shareholders and were free from any business or other relationship which could materially interfere with them making independent decisions.

It is a requirement of the Code that the Board should explain the independence and reasons for directors serving on the Board for more than nine years. Kath Pinnock retired from the Board on 31 August 2017, having served nine years and five months since her appointment.

The Board is satisfied that Kath Pinnock remained independent in character and judgement throughout her time on the Board. It determined that the minimal extensions to her time as a Director has been valuable to the Board during the short period leading to the appointment of Andrew Wyllie.

In accordance with our licence to operate clean and waste water services, our Board also contains at least three independent Non-Executive Directors who in accordance with the wording in our licence are 'persons of standing with relevant experience' and who 'collectively have connections with and knowledge' of the area within which the Company operates its licensed activities, and 'an understanding of the interests of the customers of the Company and how these can be respected and protected'.

Senior Independent Director

The Code requires the appointment of a 'Senior Independent Director' who acts as an intermediary for the other Directors, acts as a sounding board for the Chairman and leads the appraisal of the Chairman's performance each year.

Ray O'Toole was appointed by the Board as Senior Independent Director on 12 July 2017. The role was previously held by Anthony Rabin until his appointment as Chairman in September 2016. For the period from September 2016 until the appointment of new independent Directors to the Board, the appointment remained open, and the Board considered that it remained effective and comfortable maintaining this position in the interim. The appraisal of the Chairman's performance was carried out by the Board as a whole in the financial year 2016/2017, supported by the Company Secretary.

Directors' training and development

All new Directors receive an induction on joining the Board. This includes information about Yorkshire Water, their responsibilities, meetings with key Managers and visits to our operations. They also receive information about our operations, the regulatory regime and the water industry in general.

Briefings are provided to Directors throughout the year on relevant issues, including legislative, regulatory and financial reporting matters. Training is available to Directors on, and after, their appointment as they require. Directors have been trained during the year on subjects such as GDPR and Data Protection awareness, Corporate Governance and Information Security during the year.

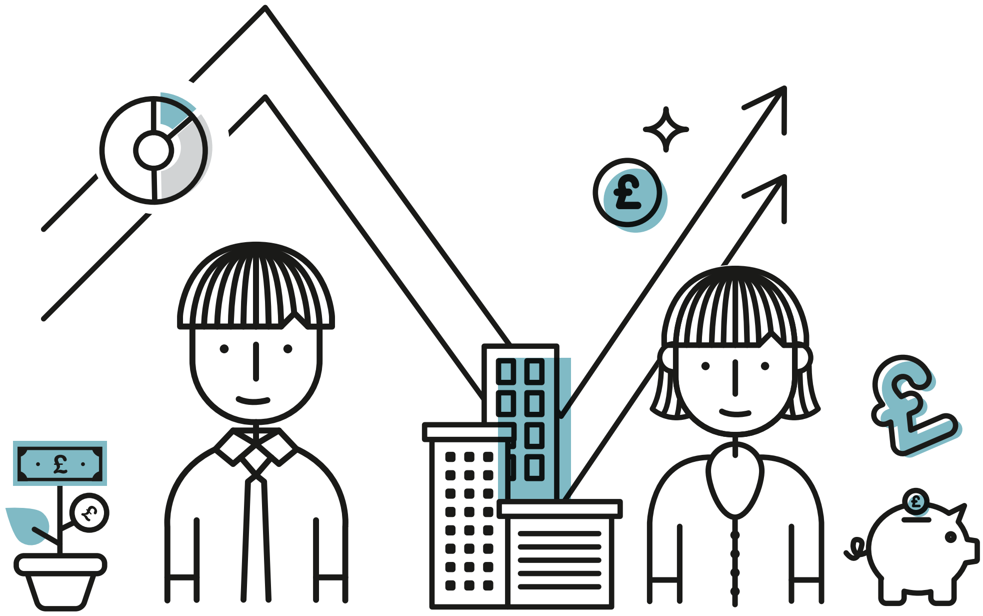
The Company Secretary is responsible for ensuring that board procedures are followed and for facilitating communication between senior management and Non-Executive Directors. Directors can liaise with the Company Secretary at any time. Directors also have full and timely access to all relevant information, including a monthly board pack of operational and financial reports. They are also encouraged to liaise with key Executives directly.

Board evaluation

The Code requires that the Board carries out an annual evaluation of the performance of the Board, its committees and Directors. Every three years this is carried out with the help of a specialist external company.

As a result of the last year's evaluation, issues raised regarding committee size, clarity of purpose and length of meetings were successfully addressed through a review in November 2017 of committee membership and terms of reference. The latest evaluation in March 2018 has resulted in actions for development in considering strategic options, trends and technology, succession planning and management of meetings. These matters will be progressed by the Chairman and the Board intends to carry out its next external effectiveness survey during Autumn 2018.

7.
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 Companies Act requirements, translates to the income, costs, assets, liabilities and cashflows of the appointed water and waste water 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.

i. 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.

ii. Price control and additional segmental reporting financial information, which sets out financial information by price control and underlying operational processes.

iii. Performance summary for our performance commitments.

iv. Additional regulatory information as required by Ofwat.

Where further explanation of specific information is required, technical notes are included as appropriate.

Summary of our overall financial performance

The information on this page is as per the Annual Report and Financial Statements. Click here for a link **www.yorkshirewater.com/reports**

Our revenue (the income we receive for the services we provide) has increased to £1,026.7m (2016/2017: £1,003.1m). This is largely due to the inflationary annual price increase.

Revenue

This is the income received for services provided

2017/2018 £1,026.7m
(2016/2017 £1,003.1)

Operating costs

These are the payments for the day to day operations of our business, such as operating and maintaining our network and treatment works, paying our staff and energy bills. These costs exclude exceptional items.

2017/2018 £745.6m
(2016/2017 £717.3m)

Operating costs are tightly managed. Total costs (excluding exceptional items) of £745.6m (2016/2017: £717.3m) are in line with plan except for increased operating costs relating to the dry summer in 2017, and the severe weather conditions in March 2018; investment as part of our plan to achieve a step change in operational and customer service performance; and professional fees relating to the removal of the Cayman companies from our company structure (see our corporate structure section in Appendix 4 for more detail).

Exceptional costs of £8.1m are associated with operational mitigation for assets damaged in the 2015 flood for which insurance payments were received in 2016/2017.

Operating profit

Profit, excluding exceptional items, before interest and tax.

2017/2018 £281.1m
(2016/17 £285.8m)

Adjusted EBITDA

This is an accounting term and is our earnings before interest, tax, depreciation, amortisation, and exceptional items

2017/2018 £577.1m
(2016/2017 £563.2m)

Capital expenditure

The amount spent to acquire, maintain and enhance assets and infrastructure to provide services to our customers.

2017/2018 £426.7m
(2016/2017 £378.6m)

The above movements in revenue and operating costs result in a decrease in operating profit excluding exceptional items to £281.1m (2016/2017: £285.8m). EBITDA for 2017/2018 is £577.1m (2016/2017: £563.2m). The increase since 2016/2017 is due to the movement in revenue and operating costs as noted above.

We have continued to effectively and efficiently deliver our investment programmes, enhancing our approach by better integrating our management of operational expenditure (opex) and capital expenditure (capex) to move towards a total expenditure (totex) approach. Capital expenditure for 2017/2018 is £426.7m (2016/2017: £378.6m). Year three of the current five-year Asset Management Period (AMP) reports an underspend against the business plan programme of £23.4m due largely to rephasing of projects. A further £18.4m (2016/2017: £8.0m) of additional capital expenditure related to the 2015 flood remediation.

i. 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

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 2018

Line description		Units	DPs	Statutory	Adjustments			Total appointed activities
					Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
1A.1	Revenue	£m	3	1026.707	-9.877	15.507	-25.384	1001.323
1A.2	Operating costs	£m	3	-757.422	9.577	-12.978	22.555	-734.867
1A.3	Other operating income	£m	3	1.859	0.000	0.000	0.000	1.859
1A.4	Operating profit	£m	3	271.144	-0.300	2.529	-2.829	268.315
1A.5	Other income	£m	3	1.835	9.877	0.000	9.877	11.712
1A.6	Interest income	£m	3	97.204	0.000	0.000	0.000	97.204
1A.7	Interest expense	£m	3	-314.113	-14.270	0.000	-14.270	-328.383
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	56.070	-4.693	2.529	-7.222	48.848

Key

Input cell | Calculation cell

Table 1A – Income statement (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Statutory	Adjustments: Differences between statutory and RAG definitions	Adjustments: Non-appointed	Adjustments: Total adjustments	Total appointed activities
1A.10	Fair value gains/(losses) on financial instruments	£m	3	41.464	0.000	0.000	0.000	41.464
1A.11	Profit before tax	£m	3	97.534	-4.693	2.529	-7.222	90.312
1A.12	UK Corporation tax	£m	3	-15.047	0.000	-0.472	0.472	-14.575
1A.13	Deferred tax	£m	3	-8.149	0.797	0.000	0.797	-7.352
1A.14	Profit for the year	£m	3	74.338	-3.896	2.057	-5.953	68.385
1A.15	Dividends	£m	3	-88.856	0.000	0.000	0.000	-88.856
A - Tax analysis								
1A.16	Current year	£m	3	15.047	0.000	0.472	-0.472	14.575
1A.17	Adjustments in respect of prior years	£m	3	0.000	0.000	0.000	0.000	0.000
1A.18	UK Corporation tax	£m	3	15.047	0.000	0.472	-0.472	14.575

B - Analysis of non-appointed revenue				Non-appointed
1A.19	Imported sludge	£m	3	0.000
1A.20	Tankered waste	£m	3	-4.244
1A.21	Other non-appointed revenue	£m	3	-11.263
1A.22	Revenue	£m	3	-15.507

Key

Input cell | Calculation cell

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 below.

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).

The 2017/2018 waste water income statement includes the residual financial impact of the December 2015 floods across Yorkshire, which significantly impacted the waste water operational asset base. Operating costs include £8.1m (2016/2017 £17.8m) associated with flood mitigation activity, depreciation includes an adjustment of £nil (2016/2017 £3.4m charge) for assets damaged and written off as a result of the flooding, and other operating income includes an insurance receipt of £nil (2016/2017 £46.0m).

While we have delivered operating cost efficiencies, in addition to flood mitigation operating costs, operating expenditure pressures arising from external factors include:

- Changes in employment costs driven by increases in employers' national insurance rates.
- Changes in contracting out provisions for state pensions.
- Higher than forecast costs associated with implementing Water Act changes associated with competition in the non-household retail market.
- Non-commodity electricity prices escalating at rates greater than RPI allowed in the AMP6 determination, despite increases in electricity wholesale prices being mitigated through hedging.
- Increased insurance premiums due the significant claim resulting from the exceptional flooding event in December 2015.
- Increased imported commodity cost pressures, such as chemicals. 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.
- A dry summer in 2017 and severe weather conditions in March 2018

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).

The reduction in market expectations of future LIBOR has occurred without a compensating reduction in the market expectations of 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 lower than that assumed last year. This in turn is largely responsible for the £41.5m increase to the fair value on financial instruments shown in Line 10.

A dividend of £88.9m was paid in the year to our parent company (2016/2017: £139.1m), broken down as follows:

	2018 £m	2017 £m
Gross dividends	**88.9**	139.1
Dividends used to make inter-company interest payments	**(60.3)**	(69.3)
Dividends used to pay head office costs and Kelda Finance interest	**(28.6)**	(24.4)
Dividends paid to the ultimate shareholders	**-**	45.4

Dividends used to make inter-company interest payments of £60.3m (2016/2017: £69.3m) were paid to Kelda Eurobond Co. Limited (a Kelda Group company) to enable Kelda Eurobond Co. Limited to pay Yorkshire Water interest (plus a small element of capital) on two loans that Yorkshire Water has previously made to Kelda Eurobond Co. Ltd.

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.

Non-appointed revenue of £15.5m and is primarily made up of £4.7m from Safemove (provides drainage and water searches for property buyers), £4.2m from Kelda Non-Regulated companies, £4.2m from imported tankered waste and £1.5m from our largest trade customer, Syngenta.

Technical notes

There has been a marginal under recovery of wholesale revenue of £1.596m (0.2%). This will be adjusted as part of the 2018/2019 wholesale revenue allowance to reflect this using the wholesale revenue forecasting incentive mechanism (WRFIM).

The table below 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 £3.9m is of a similar magnitude to the net adjustment of £4.2m in 2016/2017.

Line description		Units	Grants & Contribution Income	IFRIC 18 Adopted Sewers	Capitalisation of Interest and Related Depreciation	Total
1. Revenue	£m	3	-8.186	-1.691		-9.877
2. Operating Costs	£m	3			9.577	9.577
3. Other Income	£m	3	8.186	1.691		9.877
4. Interest expense	£m	3			-14.270	-14.270
5. Deferred tax	£m	3			0.797	0.797
6. Total	£m	3	0.000	0.00	-3.896	-3.896

The most significant differences between statutory financial reporting in accordance with FRS 102 and regulatory financial reporting are:

- Grants and contribution income totalling £8.2m 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 £1.7m 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 £14.3m, reduce related asset depreciation by £9.6m and reduces the associated deferred tax debit by £0.8m. The net effect of this adjustment is a £3.9m decrease to the regulatory profit for the year.

Table 1B – Statement of comprehensive income

For the 12 months ended 31 March 2018

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	74.338	-3.896	2.057	-5.953	68.385
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	177.755	0.000	0.000	0.000	177.755
1B.4	Total comprehensive income for the year	£m	3	252.093	-3.896	2.057	-5.953	246.140

Key

Input cell Calculation cell

The statement of comprehensive income sets out all items which result in a change to our balance sheet reserves. The statutory profit for the year of £74.3m is adjusted for other comprehensive income of £177.8m. This principally comprises a revaluation of fixed assets of £200m less related deferred tax on the revaluation of £34m and the net effect of cash flow hedges amounting to £12m.

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 an uplift in fair value of £200m. The valuation amount was established by reviewing the discounted cashflows of Yorkshire Water to establish the assets' value in use and 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. The fair value of the properties and rural estates was deemed to be materially consistent with the carrying value and therefore a valuation across these categories was not performed.

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 cashflow hedge and the change in the fair value of the energy price swap of £12m has been recognised directly in reserves through the statement of comprehensive income.

There are no actuarial movements on the pension scheme within Yorkshire Water. The defined benefit plan is a multi-employer scheme, and the sponsoring employer is Kelda Group Limited.

Table 1C – Statement of financial position

For the 12 months ended 31 March 2018

Line description		Units	DPs	Statutory	Adjustments: Differences between statutory and RAG definitions	Adjustments: Non-appointed	Adjustments: Total adjustments	Total appointed activities
A - Non-current assets								
1C.1	Fixed assets	£m	3	7603.917	-104.400	3.552	-107.952	7495.965
1C.2	Intangible assets	£m	3	55.303	0.000	0.000	0.000	55.303
1C.3	Investments - loans to group companies	£m	3	1006.877	0.000	0.000	0.000	1006.877
1C.4	Investments - other	£m	3	0.050	0.000	0.000	0.000	0.050
1C.5	Financial instruments	£m	3	88.228	0.000	0.000	0.000	88.228
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	8754.375	-104.400	3.552	-107.952	8646.423
B - Current assets								
1C.8	Inventories	£m	3	3.033	0.000	0.000	0.000	3.033
1C.9	Trade & other receivables	£m	3	208.680	0.000	1.731	-1.731	206.949
1C.10	Financial instruments	£m	3	0.000	0.000	0.000	0.000	0.000
1C.11	Cash & cash equivalents	£m	3	38.503	0.000	0.000	0.000	38.503
1C.12	Total current assets	£m	3	250.216	0.000	1.731	-1.731	248.485
C - Current liabilities								
1C.13	Trade & other payables	£m	3	-237.793	0.000	-0.816	0.816	-236.977
1C.14	Capex creditor	£m	3	-95.504	0.000	0.000	0.000	-95.504
1C.15	Borrowings	£m	3	-59.943	0.000	0.000	0.000	-59.943
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	-10.019	0.000	0.000	0.000	-10.019
1C.19	Total current liabilities	£m	3	-403.259	0.000	-0.816	0.816	-402.443
1C.20	Net current assets / (liabilities)	£m	3	-153.043	0.000	0.915	-0.915	-153.958

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	-2.753	0.000	0.000	0.000	-2.753
1C.22	Borrowings	£m	3	-4849.311	0.000	0.000	0.000	-4849.311
1C.23	Financial instruments	£m	3	-1779.671	0.000	0.000	0.000	-1779.671
1C.24	Retirement benefit obligations	£m	3	0.000	0.000	0.000	0.000	0.000
1C.25	Provisions	£m	3	-0.400	0.000	0.000	0.000	-0.400
1C.26	Deferred income - G&C's	£m	3	-274.839	-1.663	-2.169	0.506	-274.333
1C.27	Deferred income - adopted assets	£m	3	-158.679	4.525	0.000	4.525	-154.154
1C.28	Preference share capital	£m	3	0.000	0.000	0.000	0.000	0.000
1C.29	Deferred tax	£m	3	-387.932	17.748	0.000	17.748	-370.184
1C.30	Total non-current liabilities	£m	3	-7453.585	20.610	-2.169	22.779	-7430.806
1C.31	Net assets	£m	3	1147.747	-83.790	2.298	-86.088	1061.659
E - Equity								
1C.32	Called up share capital	£m	3	10.000	0.000	0.000	0.000	10.000
1C.33	Retained earnings & other reserves	£m	3	1137.747	-83.790	2.298	-86.088	1051.659
1C.34	Total Equity	£m	3	1147.747	-83.790	2.298	-86.088	1061.659

Key

Input cell | Calculation cell

Table 1C adjusts the Balance Sheet as at 31 March 2018 detailed in the statutory Annual Report and Financial Statements 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 £83.8m 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	Grants & Contribution Income	IFRIC 18 Adopted Sewers	Capitalisation of Interest and Related Depreciation	Total
Fixed assets	£m	3			-104.400	-104.400
Deferred income - G&C's	£m	3	-1.663			-1.663
Deferred income - adopted assets	£m	3		4.525		4.525
Deferred tax	£m	3			17.748	17.748
Retained earnings & other reserves	£m	3	1.663	-4.525	86.652	83.790
Total	£m	3	0.000	0.000	0.000	0.00

Technical notes

As detailed in Table 1B and the statutory accounts, we hold infrastructure assets (networks), residential properties, non-specialised properties and rural estates under a revaluation model rather than historical cost. Regulatory accounting guidance refers only to historical cost, but given that UK GAAP FRS102 offers the choice between historical cost and valuation, and the 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 2016/2017.

Table 1D – Statement of cash flows

For the 12 months ended 31 March 2018

Line description		Units	DPs	Statutory	Adjustments			Total appointed activities
					Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
A - Statement of cashflows								
1D.1	Operating profit	£m	3	271.144	-0.300	2.529	-2.829	268.315
1D.2	Other income	£m	3	1.835	9.877	0.000	9.877	11.712
1D.3	Depreciation	£m	3	296.053	-9.577	0.096	-9.673	286.380
1D.4	Amortisation - G&C's	£m	3	0.000	0.000	-0.140	0.140	0.140
1D.5	Changes in working capital	£m	3	21.135	0.000	-0.273	0.273	21.408
1D.6	Pension contributions	£m	3	0.000	0.000	0.000	0.000	0.000
1D.7	Movement in provisions	£m	3	-0.176	0.000	-2.212	2.212	2.036
1D.8	Profit on sale of fixed assets	£m	3	-1.859	0.000	0.000	0.000	-1.859
1D.9	Cash generated from operations	£m	3	588.132	0.000	0.000	0.000	588.132
1D.10	Net interest paid	£m	3	-137.370	0.000	0.000	0.000	-137.370
1D.11	Tax paid	£m	3	0.000	0.000	0.000	0.000	0.000
1D.12	Net cash generated from operating activities	£m	3	450.762	0.000	0.000	0.000	450.762
C - Investing activities								
1D.13	Capital expenditure	£m	3	-432.139	0.000	0.000	0.000	-432.139
1D.14	Grants & contributions	£m	3	23.636	0.000	0.000	0.000	23.636
1D.15	Disposal of fixed assets	£m	3	2.956	0.000	0.000	0.000	2.956
1D.16	Other	£m	3	-13.958	0.000	0.000	0.000	-13.958
1D.17	Net cash used in investing activities	£m	3	-419.505	0.000	0.000	0.000	-419.505
1D.18	Net cash generated before financing activities	£m	3	31.257	0.000	0.000	0.000	31.257

Key

Input cell Calculation cell

Table 1D – Statement of cash flows

For the 12 months ended 31 March 2018

Line description		Units	DPs	Statutory	Adjustments: Differences between statutory and RAG definitions	Adjustments: Non-appointed	Adjustments: Total adjustments	Total appointed activities
D - Cashflows from financing activities								
1D.19	Equity dividends paid	£m	3	-88.856	0.000	0.000	0.000	-88.856
1D.20	Net loans received	£m	3	0.000	0.000	0.000	0.000	0.000
1D.21	Cash inflow from equity financing	£m	3	-134.194	0.000	0.000	0.000	-134.194
1D.22	Net cash generated from financing activities	£m	3	-223.050	0.000	0.000	0.000	-223.050
1D.23	Increase (decrease) in net cash	£m	3	-191.793	0.000	0.000	0.000	-191.793

Key

Input cell Calculation cell

We are not required to publish a cashflow statement in our statutory accounts. The cashflow 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 cashflows to determine the cashflow statement for the appointed business.

Overall, there was a net cash decrease of £191.8m for 2017/2018. Cash generated from operations of £588.1m was primarily offset by:

- Cash investment in fixed assets of £432.1m.
- Interest paid of £137.4m 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 £88.9m as detailed in Table 1A commentary.

Table 1E – Net debt analysis at 31 March 2018

For the 12 months ended 31 March 2018

Line description		Units	DPs	Interest rate risk profile			
				Fixed rate	Floating rate	Index linked	Total
1E.1	Borrowings (excluding preference shares)	£m	3	1915.461	1300.260	1613.400	4829.121
1E.2	Preference share capital	£m	3				0.000
1E.3	Total borrowings	£m	3				4829.121
1E.4	Cash	£m	3				-6.961
1E.5	Short term deposits	£m	3				-31.542
1E.6	Net debt	£m	3				4790.618
1E.7	Gearing	%	2				74.32%
1E.8	Adjusted gearing	%	2				75.58%
1E.9	Full year equivalent nominal interest cost	£m	3	78.440	17.600	177.320	273.360
1E.10	Full year equivalent cash interest payment	£m	3	78.440	17.600	71.830	167.870
A - Indicative interest rates							
1E.11	Indicative weighted average nominal interest rate	%	2	4.10%	1.35%	10.99%	5.66%
1E.12	Indicative weighted average cash interest rate	%	2	4.10%	1.35%	4.45%	3.48%
1E.13	Weighted average years to maturity	nr	2	11.09	8.20	26.30	15.40

Key

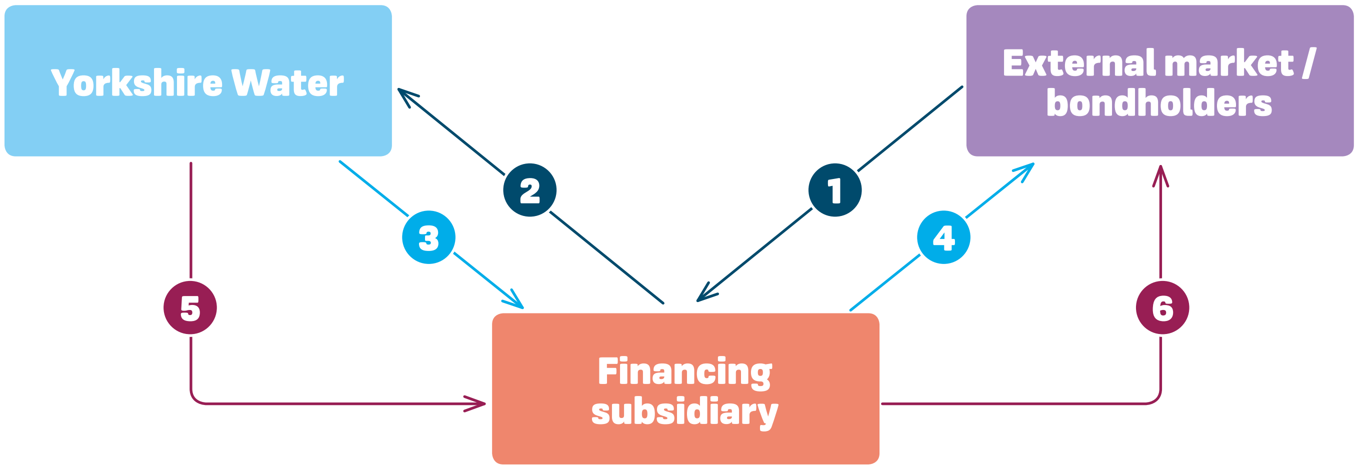
Input cell Calculation cell

Table 1E contains information about our financing structure and the associated interest costs of that financing.

Our borrowings at 31 March 2018 were £4,829.1m. After offsetting cash and short-term deposits, net debt was £4,790.6m at 31 March 2018.

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:



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.

We manage the issuance of new debt to make sure that the company'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 life of approximately 15 years to maturity, which is consistent with the planned approach to company financing. Interest payable on our borrowings is on either a fixed rate, floating rate or index-linked basis.

The borrowings figures in Table 1E are not equal to those in Table 1C in order to meet Ofwat guidance. The table below explains the differences between the two tables.

Reconciliation of borrowings between Table 1E and Table 1C	£m
Table 1C.15 - Current Liabilities Borrowings	(59.943)
Table 1C.22 – Non - Current Liabilities Borrowings	(4,849.311)
Subtotal	(4,909.254)
Remove Fair Value of Bonds	80.133
Total borrowings excluding fair value of bonds	(4,829.121)
Total 1E borrowings (excluding preference shares)	(4,829.121)

Table 1E row 7 contains Yorkshire Water's regulatory gearing, the calculation of which is "Net Debt" as provided in Table 1E row 6, divided by the company's RCV as provided in Table 4C row 5. However, Yorkshire Water also uses different measures of net debt to calculate gearing for the purposes of its financial covenants as contained within Yorkshire Water's Whole Business Securitisation financing structure (see "Appendix 4: Disclosures – Corporate structure" for an explanation of Yorkshire Water's Whole Business Securitisation structure) which are used by the financial community. Table 1E row 8 - Adjusted gearing, contains a restated measure of gearing (known as the 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 **www.keldagroup.com**

Table 1F – Financial flows

For the 12 months ended 31 March 2018 (Price Base - 2012-13 RPI Average)

Line description		Units	DPs	%		
				Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity
A						
1	Return on regulatory equity	%	2	5.65%	3.79%	5.65%
1a	Actual performance adjustment 2010-2015	%	2	1.67%	1.12%	1.67%
1b	Adjusted Return on regulatory equity	%	2	7.32%	4.91%	7.32%
2	Regulatory equity base	£	0	2,109	2,109	1,415
B - Financing						
3	Gearing	%	2	0.00%	1.56%	2.32%
4	Variance in corporation tax	%	2	0.00%	-0.39%	-0.59%
5	Group relief	%	2	0.00%	0.00%	0.00%
6	Cost of debt	%	2	0.00%	2.08%	3.71%
7	Hedging instruments	%	2	0.00%	-1.63%	-2.91%
8	Sub total	%	2	7.32%	6.52%	9.85%
C - Operational Performance						
9	Totex out / (under) performance	%	2	0.00%	-1.09%	-1.63%
10	ODI out / (under) performance	%	2	0.00%	0.60%	0.89%
11	Retail out / (under) performance	%	2	0.00%	-0.41%	-0.61%
12	Sub Total	%	2	0.00%	-0.90%	-1.34%
13	Total earnings	%	2	7.32%	5.62%	8.51%
14	RCV growth	%	2	3.74%	3.74%	3.74%
15	Total shareholder return	%	2	11.06%	9.36%	12.25%
16	Net dividend	%	2	4.00%	1.20%	1.79%
17	Retained Value	%	2	7.06%	8.16%	10.45%
D - Dividends reconciliation						
18	Gross Dividend	%	2	4.00%	3.75%	5.59%
19	Interest Receivable on Intercompany loans	%	2	0.00%	2.55%	3.80%
20	Net dividend	%	2	4.00%	1.20%	1.79%

£		
Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity
119.2	80.0	80.0
35.2	23.6	23.6
154.4	103.6	103.6
0.0	32.8	32.8
0.0	-8.3	-8.3
0.0	0.0	0.0
0.0	43.8	52.5
0.0	-34.4	-41.2
154.4	137.6	139.4
0.0	-23.0	-23.0
0.0	12.6	12.6
0.0	-8.6	-8.6
0.0	-19.0	-19.0
154.4	118.6	120.5
78.8	78.8	52.9
233.2	197.4	173.3
84.4	25.4	25.4
148.8	172.0	147.9
84.4	79.1	79.1
0.0	53.7	53.7
84.4	25.4	25.4

Key

Input cell | Calculated cell using the data in the ‘RPI Indices tab | Linked or self calculating cells | Totals

Line 1 – Regulatory return on equity

This value has been taken from the final determination weighted average cost of capital, this is 5.65% for the period 2015-2020.

Line 1A – 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.

Line 2 – Regulatory equity base

Notional

This has been calculated as 62.5% of the average RCV value which was published within our final determination, this value was given in 2012-2013 average prices and therefore no conversion was required.

Actual

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.

Line 3 – Gearing

This has been calculated in line with the Ofwat guidance, 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 has been multiplied by the variance in the cost of equity to debt.

Line 4 – 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
Taxation	2012/2013 avg	1.4	6.8	5.1
Tax payable on profit/loss	2012/2013 avg	(12.2)	(18.1)	(6.5)
Prior year adjustments - HMRC	2012/2013 avg	2.4	-	-
Accelerated CA	2012/2013 avg	-	-	-
Deferred CA	2012/2013 avg	(24.2)	(6.9)	(6.9)
Average equity RCV		2,022.0	2,071.5	2,109.2
Variance in corporation tax	2012/2013 avg	**(32.7)**	**(18.2)**	**(8.3)**

We have included within the calculation the amount of tax that would have been payable on our appointed activities prior to the adjustments made to capital allowances and the utilisation of group relief.

After the impact of group relief and capital allowances the amount within the accounts for 2015-16 was shown as a receipt of £2.5m for prior years adjustments, 2016-17 showed a nil tax payment and 2017-18 showed a payment of £15m which was for group relief.

Line 5 – Group relief

This has been calculated in line with Ofwat guidance, the calculation is shown below:

		Price base	2015/2016	2016/2017	2017/2018
	Group relief utilised	2012/2013 avg	36.4	25.0	13
	Group relief paid	2012/2013 avg	-	-	(13)
Line 1F.5	**Group Relief**	**2012/2013 avg**	**36.4**	**25.0**	**-**

Up until a change in our accounting policy in 2017-18 we did not show a payment for group relief within our accounts, the above table reflects this position.

Line 6 - Cost of debt

The total cost of debt impact 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.

Average RPI within the year has then been deducted from the actual nominal cost of debt to calculate the actual real cost of debt. (A simple deduction has been applied in line with Ofwat's guidance, rather than using the Fischer equation).

The difference between the actual real cost of debt and the 2.59% that was included within the PR14 WACC is then calculated.

Notional
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 7.

Actual
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 7.

Line 7 – Hedging instruments

We have assessed the impact of our hedging instruments on our overall cost of debt. In the current year this impact has been assessed as 1.21%.

Line 9 – totex out/(under) performance

This is taken from the APR calculation for table 4H.5 RORE.

Line 10 – ODI out/(under) performance

This is taken from the APR calculation for table 4H.5 RORE.

Line 11 – Retail out/(under) performance

This is taken from the APR calculation for table 4H.5 RORE.

Line 18 - Gross Dividend

We have included the gross dividend that was paid from the appointed company within the relevant years.

This has been deflated to 2012-13 average prices.

Line 19 - Interest Receivable 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 2012-13 average prices.

ii. Price control and additional 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: Further analysis of the income statement by business segment

Table 2B: Analysis of totex (operating and capital expenditure) costs

Table 2C: Retail operating cost analysis

Table 2D: Historical cost analysis of fixed assets - wholesale and retail

Table 2E: Analysis of capital contributions and land sales - wholesale

Table 2F, 2G & 2H: Analysis of the household and non-household revenue by customer type

Table 2I: Revenue analysis and wholesale control reconciliation

Table 2J: Analysis of new connections – network reinforcement

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 2018

Line description		Units	DPs	Retail		Wholesale	
				Household	Non-household	Water resources	Water network plus
2A.1	Revenue - price control	£m	3	63.514	11.631		414.395
2A.2	Revenue - non price control	£m	3	0.000	0.000		2.135
2A.3	Operating expenditure	£m	3	-55.050	-11.487	-26.125	-173.570
2A.4	Depreciation - tangible fixed assets	£m	3	-2.802	-1.381	-6.859	-100.360
2A.5	Amortisation - intangible fixed assets	£m	3	0.000	0.000	0.000	-0.943
2A.6	Other operating income	£m	3	0.000	0.000	0.287	0.041
2A.7	Operating profit before recharges	£m	3	5.662	-1.237		
A - Recharge in respect of 'principal' use assets							
2A.8	Recharges from other segments	£m	3	-3.193	-0.477	-0.637	-11.121
2A.9	Recharges to other segments	£m	3	2.005	0.000	0.000	0.000
2A.10	Operating profit	£m	3	4.474	-1.714		
2A.11	Surface water drainage rebates	£m	3				

Key

Input cell | Calculation cell

Wholesale				Total
Water total	Waste water network plus	Sludge	Waste water total	
414.395	508.575		508.575	998.115
2.135	1.073		1.073	3.208
-199.695	-136.503	-45.755	-182.258	-448.490
-107.219	-149.011	-16.051	-165.062	-276.464
-0.943	-8.970	0.000	-8.970	-9.913
0.328	1.531	0.000	1.531	1.859
109.001			154.889	268.315
-11.758	-10.913	-3.187	-14.100	-29.528
0.000	27.523	0.000	27.523	29.528
97.243			168.312	268.315
				0.368

Table 2B – Totex analysis – wholesale water and wastewater

For the 12 months ended 31 March 2018

Line description		Units	DPs	Water Resources
A - Operating expenditure				
2B.1	Power	£m	3	2.315
2B.2	Income treated as negative expenditure	£m	3	-0.159
2B.3	Abstraction charges/ discharge consents	£m	3	5.492
2B.4	Bulk supply/ Bulk discharge	£m	3	3.797
2B.5	Other operating expenditure - renewals expensed in year (Infrastructure)	£m	3	0.000
2B.6	Other operating expenditure - renewals expensed in year (Non-Infrastructure)	£m	3	0.000
2B.7	Other operating expenditure - excluding renewals	£m	3	7.754
2B.8	Local authority and Cumulo rates	£m	3	6.926
2B.9	Total operating expenditure excluding third party services	£m	3	26.125
2B.10	Third party services	£m	3	0.000
2B.11	Total operating expenditure	£m	3	26.125
B - Capital Expenditure				
2B.12	Maintaining the long term capability of the assets - infra	£m	3	11.030
2B.13	Maintaining the long term capability of the assets - non- infra	£m	3	1.687
2B.14	Other capital expenditure - infra	£m	3	1.691
2B.15	Other capital expenditure - non-infra	£m	3	0.899
2B.16	Infrastructure network reinforcement	£m	3	0.000
2B.17	Total gross capital expenditure excluding third party services	£m	3	15.307
2B.18	Third party services	£m	3	0.000
2B.19	Total gross capital expenditure	£m	3	15.307
C - Grants and contributions				
2B.20	Grants and contributions	£m	3	0.117
2B.21	Totex	£m	3	41.315
D - Cash Expenditure				
2B.22	Pension deficit recovery payments	£m	3	0.000
2B.23	Other cash items	£m	3	0.000
E - Total				
2B.24	Totex including cash items	£m	3	41.315

Water network plus	Wastewater network plus	Sludge	Total
25.212	26.695	0.630	54.852
-0.305	-0.142	-2.089	-2.695
0.026	4.716	0.319	10.553
0.100	0.000	0.000	3.897
0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000
118.540	85.737	45.551	257.582
27.496	19.497	1.344	55.263
171.069	136.503	45.755	379.452
2.501	0.000	0.000	2.501
173.570	136.503	45.755	381.953
42.675	31.779	0.000	85.484
73.241	91.801	57.888	224.617
22.596	23.767	0.000	48.054
31.533	44.414	1.552	78.398
2.363	0.000	0.000	2.363
172.408	191.761	59.440	438.916
0.000	0.000	0.000	0.000
172.408	191.761	59.440	438.916
17.697	9.599	0.000	27.413
328.281	318.665	105.195	793.456
0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000
328.281	318.665	105.195	793.456

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 have their own commentary. Commentary on capital expenditure is detailed in Table 4B.

Key

Input cell | Calculation cell

Overall totex

Overall totex in 2017/2018 is largely on track with the Final Determination, with the reductions in waste water wholesale totex mostly relating to changes made to the National Environment Programme (NEP) quality programme after Final Determination. This has led to the overall waste water treatment works and sludge (bio resources) quality delivery programmes being realigned to make sure the investments at sites with differing quality drivers are delivered as one project. Most quality regulatory compliance dates are now the end of the AMP period in March 2020.

Operating expenditure

Summary

The 2017/2018 operating expenditure is lower than 2016/2017 operating expenditure. The main year-on-year reductions relate to flooding and a rates refund:

- The increased and ongoing operational costs resulting from the severe floods in December 2015 have reduced by £9.8m from £17.9m in 2016/2017, to £8.1m in 2017/2018.
- A successful Clean water Cumulo 2005 appeal resulted in a one-off £6.3m refund, the majority of which is reflected in Water Distribution.
- A new sewer network R&M contract has been fully bedded in during the year resulting in efficiencies, with a small contractual refund agreed for prior year and start-up cost overruns.

A thorough review of operating cost allocations and SAP processes has been undertaken to strengthen our compliance with Regulatory Accounting Guidelines, with some of the enhancements re-allocating overhead costs to improve our cost categorisation. The main changes have 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. This has involved a new Business Intelligence (BI) tool which has enabled a more detailed view of staff time. As outsourced functions have been encouraged to move onto Yorkshire Water IT platforms, they have become material users of our systems. Many contracted staff have been encouraged to work on Yorkshire premises given the cost efficiencies obtained through co-location. Most outsourced and contracted resources work within water networks, and consequently IT and facilities (where appropriate) have been recharged on the improved basis of cost allocation. As a result, overhead allocations have moved slightly from waste water network plus to water network plus. In addition, inter-price control charges have been introduced for the consumption of water by waste water network plus and sludge, and offsetting this a charge for the treatment of water sludges produced through water treatment. Further details of these enhancements are included within the Accounting Methodology Statement.

Further explanation of significant operating expenditure movements for each of the four price controls (water resources, water networks plus, waste water network plus and sludge) are detailed below, together with a technical note explaining significant changes to methodology in compiling the presented tables in accordance with Ofwat guidance and changes in accounting standards.

Water resources

There is no significant year on year movements in operating expenditure associated with water resources.

Water Network Plus

An annual increase above inflation has been seen, mostly because of increased leakage activity and increased water network costs resulting from the severe weather experienced from March 2018. A further £8m was invested in leakage, with further increases in expenditure as a result of enhancements made to apportioning overhead costs Outsourced leakage find and fix resources now attract relevant overhead cost. These increases have been partially offset due to a successful refund from a historic Cumulo 2005 rates appeal which resulted in a one-off £6.3m credit being received during the year.

Wastewater network plus

There has been a significant reduction in operating costs this year, as many of the waste water treatment assets, pumping stations and effluent screens affected by the floods in December 2015 have been repaired. Insurance recoveries of £56m in (2015/2016: £10m, 2016/2017: £46m) have funded these repairs, rather than customers, with exceptional operating costs incurred during the rectifications process reducing annually from £17.9m to £8.1m in 2017/2018. On the sewer network, a new R&M contract has been fully bedded in during the year resulting in efficiencies, with a small contractual refund agreed for prior year and start-up cost overruns. As with water network plus, the inclusion of outsourced staff and external contractors has resulted in reduced overhead costs being allocated to this price control, resulting in some cost reductions year on year. A new inter price control charge for the use of water has been offset by the charge for treating water sludges.

Bioresources

The bulk of these exceptional operating costs (related to flooding) has been incurred by bioresources, as the unavailability of flood damaged assets has resulted in paying third parties for disposal of bioresources. As with wastewater network plus, a new inter-price control charge for the use of water has been offset by the charge for treating water sludges.

The allocation of overheads has been significantly improved, which has had a significant and positive impact on bioresources costs. Previous Yorkshire Water cost allocations were made on the operating costs of directly employed full time equivalents. The Yorkshire Water bioresources team are almost entirely insourced, with tanker drivers and maintenance staff directly employed. (The only exception is the occasional use of agency tanker drivers). Given that other areas of the business have made significant use of outsourcing, the bioresources strategy of direct employment has resulted in the past in significant overheads being allocated to this area. The improvements to cost allocation made this year take account of different employment strategies between price controls and consequently more accurate and appropriate recharges have been made.

Technical notes

We have not adjusted the operating cost lines in tables to exclude the pension deficit contributions. Under Yorkshire Water's accounting standards (FRS102), defined benefit pension scheme costs are accounted for in the manner of a defined contribution scheme, because the historical deficit cannot be allocated between group entities. This results in all cash contributions, including pension deficit contributions, being recognised as operating expenditure. This treatment contrasts with 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 opex. The unit rate information on tables 4D and 4E use the operating cost line to calculate the unit rates, and so Yorkshire Water's rates appear slightly higher than other companies who exclude these pension contributions. We have confirmed that this approach is in line with Ofwat's expectations.

Table 2C – Operating cost analysis - retail

For the 12 months ended 31 March 2018

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	19.437	8.449	27.886
2C.2	Debt management	£m	3	4.385	0.470	4.855
2C.3	Doubtful debts	£m	3	19.570	1.311	20.881
2C.4	Meter reading	£m	3	2.135	0.338	2.473
2C.5	Services to developers	£m	3		0.637	0.637
2C.6	Other operating expenditure	£m	3	9.523	0.282	9.805
2C.7	Total operating expenditure excluding third party services	£m	3	55.050	11.487	66.537
2C.8	Third party services operating expenditure	£m	3	0.000	0.000	0.000
2C.9	Total operating expenditure	£m	3	55.050	11.487	66.537
2C.10	Depreciation - tangible fixed assets	£m	3	2.802	1.381	4.183
2C.11	Amortisation - intangible fixed assets	£m	3	0.000	0.000	0.000
2C.12	Total operating costs	£m	3	57.852	12.868	70.720
2C.13	Debt written off	£m	3	16.570	1.311	17.881

Key

Input cell | Calculation cell

Household retail operating costs

Household retail operating costs in 2017/2018 have increased to £57.9m from £53.7m in prior year. The majority of the cost increase relates to customer services, which reflects more field and meter reader staff time spent with customers. New reports and allocation methods have improved our understanding of these costs, and this has been reflected an increase in the allocation of costs to retail household.

Non-household retail operating costs

The non-household retail operating costs have increased to £12.9m in 2017/2018, an increase of £3.6m compared to £9.3m for 2016/2017. Of the £3.6m, depreciation has increased by £1.3m to £1.4m, reflecting the full year effect of new IT systems to support the new market and processes, with the remainder reflecting increased customer service charges and business set up costs for the new business.

Table 2D – Historical cost analysis of fixed assets – wholesale & retail

For the 12 months ended 31 March 2018

Line description		Units	DPs	Wholesale		
				Water resources	Water network plus	Wastewater network plus
A - Cost						
2D.1	At 1 April 2017	£m	3	431.169	4652.893	5313.283
2D.2	Disposals	£m	3	-0.775	-0.641	-7.387
2D.3	Additions	£m	3	15.919	147.391	208.537
2D.4	Adjustments	£m	3	0.000	86.489	113.074
2D.5	Assets adopted at nil cost	£m	3	0.000	0.000	6.217
2D.6	At 31 March 2018	£m	3	446.313	4886.132	5633.724
B - Depreciation						
2D.7	At 1 April 2017	£m	3	-136.428	-1784.729	-1662.483
2D.8	Disposals	£m	3	0.000	0.641	7.065
2D.9	Adjustments	£m	3	0.000	0.000	0.000
2D.10	Charge for the year	£m	3	-6.859	-100.360	-149.011
2D.11	At 31 March 2018	£m	3	-143.287	-1884.448	-1804.429
2D.12	Net book amount at 31 March 2018	£m	3	303.026	3001.684	3829.295
2D.13	Net book amount at 1 April 2017	£m	3	294.741	2868.164	3650.800
D - Depreciation charge for year						
2D.14	Principal services	£m	3	-6.859	-100.360	-149.011
2D.15	Third party services	£m	3	0.000	0.000	0.000
2D.16	Total	£m	3	-6.859	-100.360	-149.011

Key

Input cell   Calculation cell

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: **www.yorkshirewater.com/reports**

The table above details that the net book value of fixed assets at 31 March 2018 amounts to £7,496m, an increase of £349m since the start of the year. This movement includes fixed asset additions of £421m less a depreciation charge in the year of £276m.

Wholesale	Retail		Total
Sludge	Household	Non-Household	
531.067	76.583	5.060	11010.055
-1.057	0.000	0.000	-9.860
39.709	0.038	8.930	420.524
0.000	0.000	0.000	199.563
0.000	0.000	0.000	6.217
569.719	76.621	13.990	11626.499
-217.482	-57.622	-4.090	-3862.834
1.057	0.000	0.000	8.763
0.000	0.000	0.000	0.000
-16.051	-2.802	-1.381	-276.464
-232.476	-60.424	-5.471	-4130.535
337.243	16.197	8.519	7495.964
313.585	18.961	0.970	7147.221
-16.051	-2.802	-1.381	-276.464
0.000	0.000	0.000	0.000
-16.051	-2.802	-1.381	-276.464

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. In the year, an upward revaluation of £200m was recognised which is included on line 4 in Table 2D.

Assets adopted at nil cost as detailed in Line 4 of Table 2D contains the value of sewers adopted at nil cost from customers.

Table 2E – Analysis of capital contributions and land sales – wholesale

For the 12 months ended 31 March 2018

Line description		Units	DPs	Current year	
				Full recognised in Income statement	Capitalised and amortised (in Income statement)
A - Grants and contributions - water					
2E.1	Connection charges (s45)	£m	3	0.000	7.566
2E.2	Infrastructure charge receipts (s146)	£m	3	0.000	6.232
2E.3	Requisitioned mains (s43, s55 & s56)	£m	3	0.000	1.619
2E.4	Other contributions (price control)	£m	3	0.000	0.122
2E.5	Diversions (s185)	£m	3	0.000	0.000
2E.6	Other contributions (non-price control)	£m	3	0.000	0.000
2E.7	Total	£m	3	0.000	15.539
2E.8	Value of adopted assets	£m	3		0.000
B - Grants and contributions - wastewater					
2E.9	Infrastructure charge receipts (s146)	£m	3	0.000	6.177
2E.10	Requisitioned sewers (s100)	£m	3	0.000	0.235
2E.11	Other contributions (price control)	£m	3	0.000	0.223
2E.12	Diversions (s185)	£m	3	0.000	0.000
2E.13	Other contributions (non-price control)	£m	3	0.000	0.000
2E.14	Total	£m	3	0.000	6.635
2E.15	Value of adopted assets	£m	3		6.217
					Current year
					Water
C - Movements in capitalised grants and contributions					
2E.16	Brought forward	£m	3		147.869
2E.17	Capitalised in year	£m	3		15.539
2E.18	Amortisation (in income statement)	£m	3		-5.995
2E.19	Carried forward	£m	3		157.413
D - Land sales					
2E.20	Proceeds from disposals of protected land	£000	3		135.638

Current year	
Fully netted off capex	Total
0.000	7.566
0.000	6.232
0.000	1.619
0.100	0.222
2.006	2.006
0.169	0.169
2.275	17.814
	0.000
0.000	6.177
0.824	1.059
0.645	0.868
1.446	1.446
0.049	0.049
2.964	9.599
	6.217

Current year	
Wastewater	Total
266.629	414.498
6.635	22.174
-2.192	-8.187
271.072	428.485
110.977	246.615

Capital contributions on the water programme in the current year are higher than those allowed in the Final Determination even though requests for mains diversions and new domestic connections are lower than the number defined in the Final Determination. The increased income which offsets this reduction is due to the inclusion of Section 45 new water connections which were not included within capital expenditure in the Final Determination.

Capital contributions on the waste water programme in the current year are lower than that allowed in the FD as requests for sewer diversions and new domestic waste water connections are at a lower level than that allowed in the FD.

We have updated our processes and procedures to allow reporting of Other contributions (non-price control) (2E.6 & 13). Expenditure within the year is minimal and reflects a number of schemes supporting work on the New Roads and Street Works Act 1991.

Technical notes

A change in the allocation of Table 2E income between ‘Capitalised and amortised in accounts’ and ‘Fully netted off capex’ has been completed in this year’s APR. The change means that the income which is transferred to Deferred Income in the statutory accounts is included in the column ‘Capitalised and amortised in accounts’, and the income which is retained within fixed assets is included in the column ‘Fully netted off capex’. The largest recategorisation relates to diversions, where given that the payment is in relation to a discrete and specific service rather than the provision of ongoing access to a supply of goods or services, the capital income is accounted for within fixed assets in the statutory accounts. Further details are included in the methodology statement.

Key

Input cell | Calculation cell

Table 2F – Household – revenues by customer type

For the 12 months ended 31 March 2018

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	12.630	0.753	13.383	56.875	13
2F.2	Unmeasured wastewater only customer	15.485	0.930	16.415	61.195	15
2F.3	Unmeasured water and wastewater customer	370.854	25.700	396.554	911.177	28
2F.4	Measured water only customer	7.193	0.738	7.931	50.618	15
2F.5	Measured wastewater only customer	8.300	0.766	9.066	49.462	15
2F.6	Measured water and wastewater customer	290.105	34.626	324.732	1035.429	33
2F.7	Total	704.567	63.514	768.081	2164.756	29

Key

Input cell   Calculation cell

Table 2F contains analysis of household retail revenues and customer numbers by customer type. The categories are identified in the table shown above.

The total amount of revenue collected from household customers for the year 2017/2018 was £768.1m compared to £751.6m in 2016/2017, an increase of £16.5m (2.20%).

The amount of revenue relating to wholesale for 2017/2018 is £704.6m compared to £690.9m for 2016/2017, an increase of £13.7m (1.98%). Variances to the amount of wholesale revenue allowed at the Final Determination are contained in Table 2I.

The amount of revenue relating to retail for 2017/2018 is £63.5m compared to £60.7m for 2016/2017, an increase of £2.8m (4.61%) in line with the forecasted increase.

The number of household customers in 2017/2018 is 2,164,756 compared to 2,153,064 customers in 2016/2017, an increase of 11,692 (0.54%).

The average household retail revenue per customer for 2017/2018 is £29.34 compared to £28.20 in 2016/2017, an increase of £1.14 (4.04%).

Table 2G – Non-household water – revenues by customer type

For the 12 months ended 31 March 2018

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						
2G.1	Total non-default tariffs	0.119	0.007	0.126	0.102	74
B - Default tariffs						
2G.2	n/a	0.000	0.000	0.000	0.000	0
2G.3	n/a	0.000	0.000	0.000	0.000	0
2G.4	n/a	0.000	0.000	0.000	0.000	0
2G.5	n/a	0.000	0.000	0.000	0.000	0
2G.6	Water unmetered	1.064	0.293	1.358	14.463	20
2G.7	Water 0 - 5 Ml	47.374	4.117	51.491	106.740	39
2G.8	Water supplies 5 to 50 Ml	23.057	0.598	23.655	1.620	369
2G.9	Water supplies 50 Ml and over	26.656	0.581	27.236	0.149	3904
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	98.151	5.589	103.740	122.971	45
2G.22	Total	98.269	5.597	103.866	123.073	45
					Number of customers (000s)	**Average non-household retail revenue per customer £**
2G.23	Total				102.805	54

Table 2G contains an analysis of non-household water revenues and customer numbers by customer type. The categories are identified in the table shown above.

The number of non-household water connections is 123,073 compared to 124,462 customers in 2016/2017, a reduction of 1,389 (1.12%). The total amount of revenue collected from non-household water customers for the year 2017/2018 was £103.9m compared to £107.3m in 2016/2017, a reduction of £3.4m (3.17%). This is due to the reduction in the number of non-household customers.

The amount of revenue relating to wholesale for 2017/2018 is £98.3m compared to £101.7m in 2016/2017, this is a reduction of £3.4m (3.34%). Variances to the amount of wholesale revenue allowed at the Final Determination are contained in table 2I. The amount of revenue relating to retail for 2017/2018 is £5.6m compared to £5.5m for 2016/2017, this is an increase of £0.1m (1.82%).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 customer type
For the 12 months ended 31 March 2018

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	0.089	0.006	0.094	0.034	167
B - Default Tariffs						
2H.2	n/a	0.000	0.000	0.000	0.000	0
2H.3	n/a	0.000	0.000	0.000	0.000	0
2H.4	n/a	0.000	0.000	0.000	0.000	0
2H.5	n/a	0.000	0.000	0.000	0.000	0
2H.6	n/a	0.000	0.000	0.000	0.000	0
2H.7	n/a	0.000	0.000	0.000	0.000	0
2H.8	n/a	0.000	0.000	0.000	0.000	0
2H.9	Sewerage unmetered	2.371	0.379	2.750	18.222	21
2H.10	Wastewater 0 - 5 Ml	52.816	3.697	56.513	84.741	44
2H.11	Trade effluent 0 - 5 Ml	5.214	0.217	5.432	2.236	97
2H.12	Wastewater services 5 to 50 Ml	23.851	0.587	24.438	1.034	567
2H.13	Wastewater services 50 Ml and over	24.073	0.521	24.594	0.052	10016
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	108.326	5.401	113.727	106.285	51
2H.25	Total	108.414	5.407	113.821	106.319	51

Line description		Number of customers (000s)	Average non-household retail revenue per customer £
C - Revenue per customer			
2H.26	Total	86.407	63

Key

Input cell | Calculation cell

Table 2H contains analysis of non-household waste water revenues and customer numbers by customer type. The categories are identified in the table shown above.

The number of non-household waste water connections is 106,319 compared to 109,671 customers in 2016/2017, a reduction of 3,352 (3.06%).

The total amount of revenue collected from non-household waste water customers for the year 2017/2018 was £113.8m compared to £120.9m in 2016/2017, this is a reduction of £7.1m, (5.87%). This is due to the reduction in the number of non-household of customers.

The amount of revenue relating to wholesale for 2017/2018 is £108.4m compared to £115.5m in 2016/2017, this is a reduction of £7.1m (6.15%). Variances to the amount of wholesale revenue allowed at the Final Determination are contained in Table 2I.

The amount of revenue relating to retail for 2017/2018 is £5.4m compared to £5.4m for 2016/2017.

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 & wholesale control reconciliation

For the 12 months ended 31 March 2018

Line description		Units	DPs	Household	Non-household	Total
A - Wholesale charge - water						
2I.1	Unmeasured	£m	3	179.869	1.074	180.944
2I.2	Measured	£m	3	131.598	101.853	233.451
2I.3	Third party revenue	£m	3	0.000	0.000	0.000
2I.4	Total	£m	3	311.467	102.928	414.395
B - Wholesale charge - wastewater						
2I.5	Unmeasured	£m	3	219.099	2.390	221.489
2I.6	Measured	£m	3	174.000	111.287	285.287
2I.7	Third party revenue	£m	3	0.000	1.798	1.798
2I.8	Total	£m	3	393.099	115.476	508.575
2I.9	Wholesale Total	£m	3	704.566	218.403	922.969
C - Retail revenue						
2I.10	Unmeasured	£m	3	27.384	0.686	28.069
2I.11	Measured	£m	3	36.131	10.318	46.448
2I.12	Other third party revenue	£m	3	0.000	0.628	0.628
2I.13	Retail total	£m	3	63.514	11.631	75.146
D - Third party revenue - non-price control						
2I.14	Bulk supplies - water	£m	3			0.107
2I.15	Bulk supplies - wastewater	£m	3			0.000
2I.16	Other third party revenue	£m	3			2.980
E - Principal services - non-price control						
2I.17	Other appointed revenue	£m	3			0.121
2I.18	Total appointed revenue	£m	3			1001.323

Key

Input cell Calculation cell

Line description		Units	DPs	Water	Wastewater	Total
E - Principal services - non-price control						
21.19	Wholesale revenue governed by price control	£m	3	414.395	508.575	922.969
21.20	Grants and contributions	£m	3	15.639	8.104	23.743
21.21	Total revenue governed by wholesale price control	£m	3	430.034	516.679	946.712
21.22	Amount assumed in wholesale determination	£m	3	426.374	520.775	947.149
21.23	Adjustment for in-period ODI revenue	£m	3	0.000	0.000	0.000
21.24	Adjustment for WRFIM	£m	3	-6.894	-1.310	-8.204
21.25	Total assumed revenue	£m	3	419.480	519.465	938.945
21.26	Difference	£m	3	10.554	-2.786	7.767

Wholesale price control adjustments

Table 21 calculates the difference within the wholesale water and waste water price control between actual revenue recovered and revenue assumed at the Final Determination.

However, due to inconsistencies between the categories of revenue and capital contributions which we are asked to report by Ofwat within table 21 and those which were included within our price controls at the Final Determination leads to an incorrect level of variance being reported within line 21.26.

The table below captures the adjustments that we are required to make to allow the actual revenues and capital contribution to be compared against our Final Determination on a consistent basis. This method of disclosure has been agreed with Ofwat.

				Water	Wastewater	Total
21.19	Wholesale revenue governed by price control	£m	3	414.395	508.575	922.969
21.20	Grants and contributions	£m	3	15.639	8.104	23.743
21.21	Total revenue governed by wholesale price control	£m	3	430.034	516.679	946.712
	Less: third party revenue line 21.7 (s104)				-1.798	-1.798
	Less: capital contributions connection charges s45			-7.566		-7.566
	Total revenue governed by wholesale price control - adjusted			422.468	514.881	937.348
21.22	Amount assumed in wholesale determination	£m	3	426.374	520.775	947.149
21.23	Adjustment for the in-period ODI revenue	£m	3	0.000	0.000	0.000
21.24	Adjustment for WRFIM	£m	3	-6.894	-1.310	-8.204
21.25	Total assumed revenue	£m	3	419.480	519.465	938.945
21.26	Difference - adjusted revenue	£m	3	2.988	-4.584	-1.597
	Difference - adjusted revenue	%		0.71%	-0.88%	-0.17%

The adjustment for wholesale water is:

- Reduction of £7.6m of grants and contributions for 'connection charges (s45)', which were not included within the PR14 wholesale water revenue control

The adjustment for wholesale wastewater is:

- Reduction of £1.8m of third party revenue for s104 income, this was a reporting change made by Ofwat in this APR document, this revenue was not included within our final determination.

Wholesale water price control

The actual wholesale water revenue, after the adjustments, recovered for 2017/2018 is £422.5m compared to that assumed at the Final Determination of £419.5m, a difference of £2.9m – 0.71%.

The difference will be taken into account through the wholesale forecasting revenue incentive mechanism (WFRIM).

Wholesale waste water price control

The actual wholesale water revenue, after the adjustments, recovered for 2017/2018 is £514.9m compared to that assumed at the Final Determination of £519.5m, a difference of (£4.6m) – (0.88%)

The difference will be taken into account through the wholesale forecasting revenue incentive mechanism (WFRIM).

Reconciliation of non-household wholesale revenue

The guidance for the APR 2018 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	NHH wholesale wastewater	Total NHH wholesale revenue
2I	102.928	113.678	216.605
2G and 2H	98.269	108.414	206.684
Variance: External retailers	4.658	5.263	9.921

This method of disclosure has been agreed with Ofwat.

Table 2J – Infrastructure network reinforcement costs

For the 12 months ended 31 March 2018

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	0.000	0.000
2J.2	Pumping and storage facilities	£m	3	2.363	0.000
2J.3	Other	£m	3	0.000	0.000
2J.4	Total	£m	3	2.363	0.000
B - Wholesale wastewater network plus (sewage collection)					
2J.5	Foul and combined systems	£m	3	0.000	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	0.000	0.000

Key

Input cell Calculation cell

The total water infrastructure network reinforcement expenditure in 2017/2018 is £2.4m. This expenditure relates to one solution to provide additional capacity at our service reservoir asset at Sneaton Castle, which, because of the incremental new connections and new developments that have been added to the network over the past few years, is now undersized.

The water industry has reviewed the way the wider cost impacts of new developments have been passed onto customers so given the clear direction of Ofwat's charging rules and Defra's associated guidance we have moved immediately (from the start of 2018/2019 financial year) to a suite of fully cost reflective developer charges. This is the most transparent charging arrangement possible and makes sure that developers are charged in full for the local impacts and costs of their new developments. Additionally, the infra connection charge income collected can be shown to be re-invested on the existing asset base to make sure that existing customers are not penalised or burdened with additional costs for these new developments.

Our combined infrastructure charge has now reduced from around £760 per property connected to around £225 per property connected (£150 per property for the sewerage and £75 per property for the water supply).

As these infrastructure charges will only recover costs associated with developer driven network reinforcement activity we will continue to monitor the costs reported in this table over the next 5 years and if needed will adjust the infrastructure connection charge accordingly.

iii. Outcome performance summary

Overview of performance commitment information

Our assurance processes are in place to make sure that the data we produce is accurate.

Our performance commitments are the 26 measures that we report against to determine whether we are meeting the customer outcomes we agreed for the period 2015 to 2020. This section provides information on how well we are doing to deliver these commitments. The information presented in the following section has been shared with the Yorkshire Forum for Water Customers. This is the third year of delivering against the commitments.

There are five tables of information within this section:

- Table 3A provides information on our 7 customer outcomes and 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

Table 3A provides information on the delivery of our 7 customer outcomes and 26 performance commitments. This table provides an overview of this year's performance and a comparison with last year's performance. The table also provides information on whether we have under or over performed against any of the commitments and whether we have incurred a penalty or reward.

Out of our 26 performance commitments, we agreed some would carry a financial as well as a reputational incentive. These incentives are designed to reward performance that beats a stretching target and to penalise us if our performance falls short.

We have 14 performance commitments that have a financial incentive. Penalties are financed by shareholders' dividends rather than revenues from our customers so there is no impact on customer bills. For Yorkshire Water, rewards are considered when setting bills for the next investment period which will be 2020 to 2025.

This year we have met 22 out of 26 of our performance commitments. The four performance commitments that we did not meet were water quality compliance, leakage, energy generation and water quality contacts. We recognise that there is more to do to improve levels to the performance expected by our customers. There are four performance commitments where we have beaten our target, these were category 3 pollution incidents, water supply interruptions, internal flooding incidents and working with others.

When accounting for both the under and over performance in the current year (2017/2018), we earned an indicative net reward of £12.66m. This is made up of good all-round delivery of the performance commitments, with rewards and penalties occurring as follows:

- £1.67m reward for Category 3 Pollution Incidents.
- £10.23m reward for Water Supply Interruptions.
- £7.24m reward for Internal Flooding Incidents.
- £0.09m reward for Working with Others.
- £6.57m penalty for Drinking Water Contacts.

Section 3 provides an overview of our performance against each of the performance commitments. We explain how we work out the financial incentives and penalties attached to our performance commitments.

In this section, we present our performance information as required by our regulator, making sure that information is presented consistently across the industry and supporting comparison between water companies.

Table 3A – Outcome performance table

For the 12 months ended 31 March 2018

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2016/2017 performance level actual (for information)
1	PR14YKYWSW_WA1	WA1: Drinking water quality	%	Mean zonal compliance (%)	3	99.962
2	PR14YKYWSW_WA2	WA2: Significant drinking water events which require corrective action	nr	Number of corrective actions required by DWI with respect to potentially significant events notified	0	3
3	PR14YKYWSW_WA3	WA3: Drinking water contacts	nr	Number of contacts (discolouration, taste & odour and illness) in line with DWI reporting	0	9093
4	PR14YKYWSW_WA4	WA4: Water quality stability and reliability factor	category	Asset health indicator	na	Stable
5	PR14YKYWSW_WB1	WB1: Leakage	nr	Megalitres per day (Ml/d)	1	295.2
6	PR14YKYWSW_WB2	WB2: Water supply interruptions*	time	Minutes lost per property per year	2	9.78
7	PR14YKYWSW_WB3	WB3: Water use	nr	Litres per head per day (l/h/d)	1	137.4
8	PR14YKYWSW_WB4	WB4: Water network stability and reliability factor	category	Asset health indicator	na	Stable
9	PR14YKYWSW_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	0
10	PR14YKYWSW_WC2	WC2: Solutions delivered by working with others (note: PC is part of a total commitment at Appointee level - see also SB3)	nr	Number of solutions delivered by working with others	0	5
11	PR14YKYWSW_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	11492
12	PR14YKYWSW_WC4	WC4: Recreational visitor satisfaction	text	Assessment of customer satisfaction (qualitative survey)	na	Published
13	PR14YKYWSW_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	10

2017/2018 performance level actual	2017/2018 CPL met?	2017/2018 outperformance payment or underperformance penalty - in-period ODis (indictor)	2017/2018 outperformance payment or underperformance penalty - in-period ODis (£m, to 4dp)	2017/2018 outperformance payment or underperformance penalty - ODis is payable at the end of AMP6 (indicator)	2017/2018 outperformance payment or underperformance penalty - ODis payable at the end of AMP6 (£m, to 4dp)	31 March 2020 forecast - total AMP6 outperformace payment or underperformance penalty (indicator)	31 March 2020 forecast - total AMP6 outperformace payment or underperformance penalty (£m, to 4 dp)
99.953	No	-		Underperformance penalty deadband	0.0000	Underperformance penalty deadband	0.0000
4	Yes	-		-		-	
8100	No	-		Underperformance penalty	-6.5736	Underperformance penalty	-14.4408
Stable	-	-		-		-	0.0000
300.3	No	-		Underperformance penalty deadband	0.0000	Outperformance payment	1.9698
6.96	Yes	-		Outperformance payment	10.2268	Outperformance payment	36.4722
135.9	Yes	-		-		-	
Stable	-	-		-		-	0.0000
-	-	-		-	0.0000	Outperformance payment	0.2646
12	Yes	-		Outperformance payment	0.0545	Outperformance payment	0.1270
11,479	-	-		-	0.0000	Underperformance penalty deadband	0.0000
Published	Yes	-		-		-	
11	No	-		-		-	

* Please note we report here in decimal format to comply with the performance commitment. In more customer focused parts of this APR we have reported in minutes: seconds as a more commonly understandable format for this metric.

Table 3A – Outcome performance table

For the 12 months ended 31 March 2018

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2016/2017 performance level actual (for information)
14	PR14YKYWSW_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	99
15	PR14YKYWSWW_SA1	SA1: Internal sewer flooding incidents	nr	Number of internal sewer flooding incidents	0	1769
16	PR14YKYWSWW_SA2	SA2: External sewer flooding incidents	nr	Number of external sewer flooding incidents	0	9145
17	PR14YKYWSWW_SA3a	SA3a: Pollution incidents - category 1 and 2	nr	Number of pollution incidents (cats 1 and 2)	0	4
18	PR14YKYWSWW_SA3b	SA3b: Pollution incidents - category 3	nr	Number of pollution incidents (cat 3)	0	207
19	PR14YKYWSWW_SA4	SA4: Sewer network stability and reliability factor	category	Asset health indicator	na	Stable
20	PR14YKYWSWW_SB1	SB1: Number of Yorkshire's designated bathing waters that exceed the required quality standard	nr	Number of bathing waters exceeding required standard	0	17
21	PR14YKYWSWW_SB2	SB2: Wastewater quality stability and reliability factor	category	Asset health indicator	na	Stable
22	PR14YKYWSWW_SB3	SB3: Solutions delivered by working with others (note: PC is part of a total commitment at Appointee level - see also WC2)	nr	Number of solutions delivered by working with others	0	5
23	PR14YKYWSWW_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
24	PR14YKYWSWW_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	Number of hectares of land conserved & enhanced (cumulative)	0	11492
25	PR14YKYWSWW_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	10

2017/2018 performance level actual	2017/2018 CPL met?	2017/2018 outperformance payment or underperformance penalty - in-period ODis (indictor)	2017/2018 outperformance payment or underperformance penalty - in-period ODis (£m, to 4dp)	2017/2018 outperformance payment or underperformance penalty - ODis is payable at the end of AMP6 (indicator)	2017/2018 outperformance payment or underperformance penalty - ODis payable at the end of AMP6 (£m, to 4dp)	31 March 2020 forecast - total AMP6 outperformace payment or underperformance penalty (indicator)	31 March 2020 forecast - total AMP6 outperformace payment or underperformance penalty (£m, to 4 dp)
99	Yes	-		-		-	
1,682	Yes	-		Outperformance payment	7.2446	Outperformance payment	19.2040
9,296	Yes	-		-		-	
3	Yes	-		-		-	
202	Yes	-		Outperformance payment	1.6662	Outperformance payment	24.2524
Stable	-	-		-		-	0.0000
18	Yes	-		-		-	
Stable	-	-		-		-	0.0000
12	Yes	-		Outperformance payment	0.0365	Outperformance payment	0.0450
0	-	-		-	0.0000	Outperformance payment	0.0767
11,479	-	-		-	0.0000	Underperformance penalty deadband	0.0000
11	No	-		-		-	

Table 3A – Outcome performance table

For the 12 months ended 31 March 2018

Row	Unique ID	Performance commitment	Unit	Unit description	Decimal places	2016/2017 performance level actual (for information)
26	PR14YKYWSWW_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	99
27	PR14YKYHHR_RA1	RA1: Service incentive mechanism (SIM)	score	Service incentive mechanism (SIM) score	1	83.4
28	PR14YKYHHR_RA2	RA2: Service commitment failures	nr	Number of GSS (Guaranteed Standards of Service) events	0	10356
29	PR14YKYHHR_RA3	RA3: Overall customer satisfaction (CCWater annual tracking survey)	%	% overall customer satisfaction (CCWater tracking survey)	0	93% (water), 91% (wastewater)
30	PR14YKYHHR_RB1	RB1: Cost of bad debt to customers (expressed as proportion of bill)	%	Cost of bad debt as % of average annual bill	2	2.94
31	PR14YKYHHR_RB2	RB2: Number of people who we help to pay their bill	nr	Number of customers who are assisted to pay their bill	0	26902
32	PR14YKYHHR_RB3	RB3: Value for money (CCWater annual tracking survey)	%	% customer satisfaction (CCWater tracking survey)	0	79% (water), 82% (wastewater)
33	PR14YKYHHR_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	10
34	PR14YKYHHR_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	99

2017/2018 performance level actual	2017/2018 CPL met?	2017/2018 outperformance payment or underperformance penalty - in-period ODis (indictor)	2017/2018 outperformance payment or underperformance penalty - in-period ODis (£m, to 4dp)	2017/2018 outperformance payment or underperformance penalty - ODis is payable at the end of AMP6 (indicator)	2017/2018 outperformance payment or underperformance penalty - ODis payable at the end of AMP6 (£m, to 4dp)	31 March 2020 forecast - total AMP6 outperformace payment or underperformance penalty (indicator)	31 March 2020 forecast - total AMP6 outperformace payment or underperformance penalty (£m, to 4 dp)
99	Yes	-		-		-	
84.3	Yes	-		-		-	0.0000
12203	-	-		-		-	
94%(water), 89% (wastewater)	-	-		-		-	
3.10	Yes	-		-		-	
28853	-	-		-		-	
76%(Water), 79% (Wastewater)	-	-		-		-	
11	No	-		-		-	
99	Yes	-		-		-	

Technical notes

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

Table 3A Line 1: WA1: Drinking water quality

One of our main priorities is to make sure that the water coming from our customers' tap is the highest possible quality and meets the stringent regulations in place. The Drinking Water Inspectorate (DWI) set us the highest possible target of achieving 100% compliance with our quality target. However, we have narrowly missed our target this year.

Our approach to improving water supply runs from source to tap. We are continuing to deliver long-term catchment management initiatives to improve the quality of the raw water entering our water treatment works. We have also worked closely with landowners and the farming community to reduce the level of pesticides entering the rivers that we use to abstract some of our raw water.

At the end of 2017 we brought into service a fully upgraded treatment process at our Rivelin Water Treatment works, which is improving and securing the drinking water supply to the city of Sheffield. There has been a continuing improvement in the aesthetic quality of our water. Our improvements in water quality have been consolidated by our targeted flushing and mains replacement programmes and the quality of our drinking water has remained very high.

We have been undertaking proactive replacement of lead pipework. The long-term trend in lead sample results has continued to improve. However, there has been an increase in issues related to private pipework in customer's properties which has led to a minor deterioration in our overall compliance figure to 99.953%. To improve our performance, we continue to identify schemes to improve water quality. This has included work with fitted kitchens manufacturers to promote the use of Water Regulation Advisory Scheme (WRAS) approved taps and fittings which do not present a contamination risk to the water supply.

As part of the commitments we put in place to make sure we meet our customer promises we include four measures called Stability and Reliability (S&R) factors. These measures reflect our duty to provide water and waste water services and protect public health over the long and short-term. Our S&R factors include measures to monitor water quality including the presence of coliform bacteria at our water treatment works and service reservoirs and the measure of particles in the water supplied from our sites. Our performance in 2017/2018 continued to be at our target level of "stable".

Table 3A Line 3: WA3: Drinking water quality contacts

For 2017/2018 we committed to ensuring that we received no more than 6,108 contacts from customers. We ended the year on 8,100 contacts. This is an improvement on previous years and represents our best performance to date, but is behind where we promised to be. This has resulted in a £6.57 million penalty.

One of our main priorities is to make sure that our water is of the highest possible quality however sometimes water can come out of the tap with a different taste or smell or not be as clear as you would expect. This would cause you rightly, to contact us. This performance commitment reports the number of times customers contact us regarding the colour, taste, or smell of their water. It also includes any contacts where customers have raised concerns that their water looks milky or they believe it may be impacting on their health.

To improve performance during 2017/2018 we have continued a programme of data informed enhanced flushing on our water network to improve the colour and taste of water and reduce the need for customers to have to go to the trouble of contacting us. This involves proactively flushing water through our mains at a higher than normal speed to remove the sediment that gathers on the inside of the mains. In 2017/2018 we have flushed approximately 900 of our 2,800 Distribution Management Areas across the Yorkshire region which equates to flushing 6,275km of our mains network.

To improve the service, we provide we have made it easier for you to contact us. This has meant we have given customers the option of 'web-chats' or 'web call-backs' (asking us to call you back about an issue by notifying us on the Yorkshire Water website). This may have resulted in more customers contacting us about the quality of your water. This gives us more information about where we can improve water quality in the future.

Table 3A Line 5: WB1: Leakage

Our leakage performance represents the amount of water we lose from our network including the amount of water lost when we transport water between our treatment works, and customer homes and businesses.

Our day to day activities actively measure, monitor and reduce leakage as we recognise this a concern to our customers. Since 1995 we have nearly halved leakage volume. However, in 2017/2018 we have narrowly missed our performance commitment to make sure leakage is no higher than an average of 297.1 mega litres per day (Ml/d) achieving a performance of 300.3 Ml/d. Overall, we have met our 3-year rolling average performance.

This performance was impacted by severe weather in December 2017 when freezing temperatures contributed to a 58 Ml/d increase in our leakage performance. This was addressed by more leakage reduction activities over Christmas and we recovered our performance to meet our leakage target by the end of February. This meant we were better placed to mitigate the impacts of the 'Beast from the East' in March 2018. This second weather event increased our leakage by 41Ml/d but the concentrated leakage activities across our network made sure there were no prolonged supply interruptions for customers. Missing this target is disappointing, especially based on what our customers were telling us about the need to reduce our leakage.

In response to what our customers were telling us, we had already started to take action. In early December 2017, we announced an ambitious package to reduce leakage by over 40% by 2025 and become one of the industry leaders. Our plan is being put into practice and will help to meet the challenge set by Ofwat for water companies to reduce the volume of water lost by billions of litres each year.

Our plan has included recruitment of over 100 new front-line leakage inspectors with further increases planned. We have brought forward some new detection technologies, including use of satellite technology to find leaks in Halifax, Keighley and Shipley where over 120 leaks have been investigated with a 55% success rate. Over 600 acoustic loggers have been deployed in Huddersfield to find nearly a million litres of leakage per day and drones are being used on the York to Selby trunk main.

To reach our target, significant and material investment will be committed to our leakage performance over the next two years. This investment is being funded through money saved in our day to day activities by being even more efficient. This means that we are improving our service at no additional cost to customers.

Table 3A, Lines 13: 25 & 33, WD1, SC1, RC1: Proportion of energy use generated by renewable technology

The total amount of electricity we used this year increased from 570GWh in 2016/2017 to 598GWh in 2017/2018. Our aim is that we generate more of the energy we use by recycling Bioresources. This performance commitment is a measurement of the amount of energy (electricity) we have generated through renewable technologies a percentage of the total energy we have used. In 2017/2018, we supplied 11.4% of our needs through self-generated energy. This was a two-year high compared with 2015/2016 where it was 11.3% and 2016/2017 where it was 10.4%. However, this falls short in achieving our performance commitment of generating 12.0% of our energy needs from renewable sources.

Overall our energy generation performance did increase from December 2017 from improvements in delivery from our large combined heat and power (CHP) sites. Our largest CHP site at Esholt has delivered 200% more energy compared to 2016/2017, from 5.1GWh to 15.4GWh.

There were a number of factors that led to us not meeting our target including a delay in a capital refurbishment programme. The delay to one of our projects in Dewsbury accounted for 0.4% of the self-generation target we did not meet.

Our performance was also affected by the freezing weather in February 2018 which affected digester health, particularly at Blackburn Meadows and Aldwarke in South Yorkshire, and a temporary planned shutdown of our digestion facility at Esholt in Bradford.

We are disappointed to have failed our target for a second year but with a strong improvement in generation performance compared to 2016/2017, we expect that we will achieve our 12.0% target in 2018/2019. We aim to increase our long-term energy generation capacity towards 17.0% by 31 March 2020. To achieve this target, we are:

- Building a £72m sludge-treatment and anaerobic digestion plant at our Knostrop treatment works in Leeds that will be completed in 2019.
- Developing a framework contract to supply solar power to a number of Yorkshire Water sites.

Our Board has also approved further substantial investment in another anaerobic digestion facility at our Huddersfield treatment works (which is being funded through outperformance savings in our capital programme), allowing us to permanently close our remaining sludge incinerators.

Customer outcome: we make sure that you always have enough water.

Table 3A, Line 6: WB2: Water supply interruptions

Our performance commitment is measured by the number of minutes that are lost due to water supply interruptions lasting 3 hours or more as an average for each property we serve. The performance level we committed to achieving this year was 12.00 minutes per customer. Our performance has continued to improve and in 2017/2018 we achieved 6.96 minutes. This has been our best ever performance and has resulted in us generating a reward of £10.23m.

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. Our investments have meant there have been no service restrictions, such as hosepipe bans, in Yorkshire since 1995/1996. Identifying and mitigating any risk of water shortages or supply interruptions is a constant priority for us because of the consequences to our customers. This commitment measures our performance against this goal and the number of times our customers' water supply is interrupted and how long this disruption lasts for.

Our ongoing customer research has helped us understand, at a much more detailed level, the impact on our customers of interruptions to their water supply.

Our aim is to improve this measure even further based on this understanding. A series of initiatives have been developed to further improve the performance and these are listed below:

- Making sure there are no interruptions from any of our planned work.
- Improving the skills and capabilities of our staff.
- Continuing to provide engineering support on a continual basis all day and every day.
- Improving the accuracy of our asset records.
- Enhancing the quality of our reviews and reporting.

It is our intention to become an industry leading water company by 2020/2021.

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 range of measures which quantify the effectiveness of our long-term planning and asset management to make sure the resilience and sustainability of our service and reduce the risk of water shortages or supply.

Outcome: We take care of your waste water and protect you and the environment from sewer flooding.

Table 3A Line 15: SA1: Internal sewer flooding incidents

We fully understand the impact that internal sewer flooding can have on our customers and we are committed to preventing such incidents from happening. This year the number of internal sewer flooding events has reduced. We committed to make sure there would be no more than 1,919 incidents this year and in 2017/2018 there have been 1,682 incidents. The target for SA1 for remainder of AMP is 1,919, is being achieved through the use of money that has been achieved through running our business as efficiently as possible, meaning that we are improving this service commitment at no additional cost to the customer.

Our performance in internal sewer flooding incidents this year has generated a reward of £7.4m.

To improve this performance, we are continuing to manage the increased pressure on our sewer network from changeable weather conditions, increased development across our region and coping with the things that customers put down drains such as fats, oils, greases and items such as wet wipes and nappies. These cause significant blockages to our network which lead to sewer flooding.

We have maintained "stable" status in the performance commitment for the Stability and Reliability of our waste water networks.

Table 3A Line 13: SA3b: Pollution incidents - Category 3

We are committed to ensuring that we improve and protect the natural environment in Yorkshire and we have been working hard to make sure our waste water assets do not overflow and cause pollution to the surrounding land and water.

This year we have succeeded in meeting our commitment by reducing the number of times we have caused pollution incidents which have either a minor or serious impact. Our commitment was to not to exceed 4 serious pollution incidents (Category 1 or Category 2) during the year. There were 3 serious pollution incidents in 2017/2018.

There were 202 Category 3 minor pollution incidents against a committed performance level of 211 in 2017/2018.

Although we have achieved both our pollution performance targets there is more we can do to make sure we continue to prevent incidents from occurring and impacting on the environment where we live and work. We know the impact that pollution incidents have on the environment, so we are challenging ourselves to go beyond our planned performance, improve services at no additional cost to the customer. We will respond to this challenge by:

- Using dedicated management teams focussed on daily pollution performance and flexing our approach to prevention through continuous improvement
- Proactively monitoring our network performance.
- Undertaking pro-active pollution prevention initiatives on our sewer network assets which will benefit our overall pollution performance.
- Making upper quartile investment to improve our pollution performance

Overall, the reduction in pollution incidents resulted in generating a reward of £1.67m.

Outcome: We protect and improve the water environment

Table 3A Lines 10 & 22: WC2 & SB3: Number of solutions we deliver by working with others

This performance commitment measures the number of intervention solutions delivered through working with agencies, organisations or individuals. These solutions may be delivered through joint funding, shared resources, investigations and feasibility studies, but should be separate to our business as usual activities and existing capital investment framework partnerships.

The commitment for 2017/2018 was to deliver a minimum of three new solutions and we have exceeded this target by delivering twelve. This is an increase in the number of partnership projects compared to the previous two years and reflects a typical solution life cycle where a partnership can take several years to establish. Several flood risk mitigation projects had been identified as opportunities in previous years that have now been delivered. Our delivery against this target in 2017/2018 has resulted in a reward of £90,983 which will be reinvested in further projects.

The twelve projects we have delivered this year include:

- Eight flood risk mitigation schemes with five local authorities which have reduced the risk of flooding to 38 individual properties, critical road and rail infrastructure.
- Providing flood protection to the village of Runswick Bay.
- Completing the third year of a multi-year landscape improvement project in Nidderdale.
- Completing a trial to replace 1,000 lead supply pipes in Rotherham.
- Completed a project to re-use debris excavated from our aqueducts to repair farmers tracks instead of sending the waste landfill.

We continue to have ongoing and regular liaison with the Environment Agency and Local Authorities, working together to identify opportunities and strategic ways of working. Additionally, we have shared the outcomes of our work with the Yorkshire Forum for Water Customers.

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

Table 3A Lines 14,16,24: WD2, SC2 & RC2: % of waste diverted from landfill (reused/recycled)

This performance commitment measures how we manage the waste from our day to day activities and challenges us to focus on reducing the amount of waste we send to landfill. Our performance is measured on the amount of waste recycled or reused as a percentage of the total waste we produce. For 2017/2018 we committed to recycling or reusing 95% of our waste. We have achieved this target for the third year in succession and reused or recycled 99.4% of the waste we have produced.

Our operational business has continued to work hard to make sure different kinds of waste are recycled, avoiding sending waste to landfill. We continue to work across our business to make sure we capture and report the information on all our sources of waste. Our initiatives include:

- A new grit washing process at three of our Energy and Recycling sites has significantly reduced the amount of grit we send to landfill. This year we have prevented more than 80% of our grit going to landfill. This process handles road grit which ends up in the sewer system during rainfall events, ultimately entering the sewage works before being screened out prior to primary treatment.
- A detailed investigation to improve the reporting accuracy of the data we receive from our Repair and Maintenance partners, to make sure we are capturing all information on our waste from our contract partners.
- Use of a web based resource sharing and recycling hub to identify landfill avoiding routes for our contract partner's waste and to access the benefits of circular economy of activities to reduce the amount of waste we produce.

After work with our technical auditors, Halcrow, we have engaged with our regulator Ofwat and the Yorkshire Forum for Water Customers to explain as clearly as possible how we calculate and report on our performance. We are satisfied that our reporting is a better reflection of the work we do to avoid material going to landfill and demonstrates our drive to reduce the pressure on landfill wherever we can.

Table 3B Sub measure performance

As part of our commitment to make sure we meet our customer promises we include four measures called stability and reliability (S&R) factors. These measures reflect our duty to provide water and waste water services and protect public health over the long and short term. We report our S&R performance in table 3A. These S&R performance commitments are made up of a number of sub-measures which are described in Table 3B.

Our four S&R factors are split into the following categories with the sub measures split between them to reflect the different delivery and maintenance operations needed to deliver both clean water and waste water services:

- 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 waste water network is performing.
- Waste water quality S&R factor - Monitors how well our waste water treatment works are performing.

These S&R factors enable us to measure how well we are looking after all the buildings, pipes and equipment which enable us to continue to deliver our services.

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 **www.yorkshirewater.com/discoverwater#ls2**

Table 3B – Sub-measure performance table

For the 12 months ended 31 March 2018

Row	Unique ID	PC/sub-measure ID	PC/sub-measure
1	PR14YKYWSW_WA4	00	WA4: Water quality stability and reliability factor
2	PR14YKYWSW_WA4	01	WTW coliform non-compliance
3	PR14YKYWSW_WA4	02	SR coliform non-compliance
4	PR14YKYWSW_WA4	03	Turbidity
5	PR14YKYWSW_WA4	04	Enforcements
6	PR14YKYWSW_WA4	05	Reactive equipment failures
7	PR14YKYWSW_WB4	00	WB4: Water network stability and reliability factor
8	PR14YKYWSW_WB4	01	Total bursts
9	PR14YKYWSW_WB4	02	Interruptions >12 hours
10	PR14YKYWSW_WB4	03	DG2 low pressure
11	PR14YKYWSW_WB4	04	Customer contacts for discolouration (nr per 1,000 population)
12	PR14YKYWSW_WB4	05	Distribution index TIM (100 - mean zonal compliance)
13	PR14YKYWSW_WB4	06	Reactive equipment failures
14	PR14YKYWSWW_SA4	00	SA4: Sewer network stability and reliability factor
15	PR14YKYWSWW_SA4	01	Sewer collapses
16	PR14YKYWSWW_SA4	02	Pollution incidents (CSO, RM, FS and SPS)
17	PR14YKYWSWW_SA4	03	Properties flooded due to other causes
18	PR14YKYWSWW_SA4	04	Properties flooded due to overloaded sewers, excluding severe weather
19	PR14YKYWSWW_SA4	05	Sewer blockages
20	PR14YKYWSWW_SA4	06	Reactive equipment failures
21	PR14YKYWSWW_SB2	00	SB2: Wastewater quality stability and reliability factor
22	PR14YKYWSWW_SB2	01	Sewage treatment works non-compliance
23	PR14YKYWSWW_SB2	02	Population equivalent non-compliance
24	PR14YKYWSWW_SB2	03	Reactive equipment failures

Unit	Decimal places	2016/2017 performance level - actual	2017/2018 performance level - actual	2017/2018 CPL met?
Category	na	Stable	Stable	-
%	3	0.007	0.014	Yes
%	2	0.00	0.00	Yes
nr	0	1	0	Yes
nr	0	0	1	No
nr	0	4386	3744	Yes
Category	na	Stable	Stable	-
nr	0	5724	6,858	No
nr	0	114	320	No
nr	0	8	11	Yes
nr	3	0.965	0.674	Yes
%	3	0.068	0.00	Yes
nr	0	1228	942	Yes
Category	na	Stable	Stable	-
nr	0	243	218	Yes
nr	0	167	172	Yes
nr	0	372	387	No
nr	0	33	12	Yes
nr	0	17398	14,917	Yes
nr	0	3695	3,400	Yes
Category	na	Stable	Stable	-
nr	0	7	5	No
%	1	0.7	0.0	Yes
nr	0	11564	10884	Yes

Overall, we are reporting 'stable' performance for 2017/2018 across all four of our S&R measures.

Our water quality and network measures are consistent and continue to show stable or improving performance. However, there have been some changes to our wastewater assets and network this year which have caused performance of some of our wastewater sub-measure to fall below the levels we would expect. Further detail on these is provided within the technical notes below.

Technical notes

Table 3B: WA4: Line 1: Water quality stability and reliability measures

Our overall assessment for Water Quality S&R is 'stable'. Our performance has been impacted by one sub-measure (Line 5, Enforcements) at the upper reference level relating to the Chellow Heights water treatment works. We have agreed to enter into a legal enforcement agreement with the DWI, which has been applied in response to the site being unable to shut down its processes. This has triggered an early start to the base maintenance component of a planned scheme for AMP7 (2020 to 2025) to divert flows to storage and re-use. The date for completion of our scheme is 31 March 2021. All other sub-measures show acceptable performance.

Table 3B: WA4: Line 8: Water networks stability & reliability factor – total bursts

The number of mains bursts in 2017/2018 has increased compared to 2016/2017. There were 6,858 bursts this year compared to 5,724 in 2016/2017. This result has been impacted by the freezing weather conditions in February and March 2018. Our performance has also been impacted by our commitment to reduce leakage, which has resulted in more leaks being identified, and therefore more repairs, which are included in this measure.

Table 3B: WA4: Line 9: Water networks stability & reliability factor – interruptions >12 hours.

The number of properties that have experienced an interruption to supply of greater than 12 hours in 2017/2018 was 320. This is higher than the reference level of 220, but considerably below the 'high level' of 659. Most of these interruptions occurred during the freezing weather in February and March 2018. The initiatives to improve performance on our customer minutes lost performance commitment (table 3A line 6 WB2) will improve our performance. We expect the number of interruptions to reduce in 2018/2019.

Table 3B: SB2: Wastewater quality S&R and sub measures

There has been an improvement in performance across all three of our wastewater quality sub measures. The number of failing works reduced from seven in 2016 to five in 2017. This performance improvement has been gained from optimising resources, training and process improvements.

In relation to the sewage treatment works non-compliance sub measure, our site at Sherburn failed its lookup table permit and reduced our level of performance.

The number of reactive equipment failures has reduced compared to last year by 680 incidents which is the lowest number we have recorded. To deliver this performance we have invested in planned maintenance activities and increased the capital replacement allowance, leading to more assets being replaced. These activities are expected to reduce the number of reactive failures in the future.

With all three sub measures improving, the overall S&R assessment is "stable".

Table 3B: Line 17: Sewer networks S&R factor sewer flooding – properties flooded due to other causes

The number of properties in this measure is the number of properties that have been flooded internally due to 'other causes' including flooding caused by a blocked sewer, a sewer collapse or a piece of our equipment failing.

Our performance has deteriorated compared to last year with 387 properties flooded in 2017/2018 against to 372 last year and a target level of 302. This is above our upper limit of 379 and the S&R sub-measure assessment is 'deteriorating'.

Properties flooded due to other causes continues to be a challenging performance area for us and we are committed to understanding and improving our performance. Our approach includes a detailed review of our data to identify and target areas that are most vulnerable to this type of flooding and to build the most effective solutions.

Table 3B: Line 19: Sewer networks S&R factor sewer flooding – Sewer blockages

We have seen a reduction in the number of blockages affecting our sewers this year from a total of 17,398 in 2016/2017 to 14,917 in 2017/2018, by implementing improved governance on service partner work which has resulted in a reduction in follow-on work orders raised, deployment of new equipment with a greater capacity and the implementation of a 'Triage' team targeting first time resolution of customer problems. These activities combined with proactive targeting of blockage hotspot areas with sewer refurbishment/replacement and customer communication has helped reduce the number of blockages experienced during the year.

Our technical auditors Halcrow have reported an improvement in our reporting.

Table 3C – AIM table

For the 12 months ended 31 March 2018

Row	Abstraction site	Decimal places	2017/2018 AIM performance (Ml)	2017/2018 normalised AIM performance (nr)	Cumulative AIM performance 2016/2017 onwards (Ml)	Cumulative normalised AIM performance 2016/2017 onwards (nr)	Contextual information relating to AIM performance
1	ZERO SITES IN YWS	0	0.0	0.00	0.0	0.00	NOT APPLICABLE
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

Table 3C provides information on abstraction mechanisms. The Abstraction Incentive Mechanism (AIM) has been introduced by Ofwat to encourage water companies to reduce the environmental impact of abstraction at sensitive sites during periods of low water flows.

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 (EA) provides protection through abstraction licensing. Abstraction licences detail how much water can be abstracted and at what times, often to make sure there is sufficient downstream flow in rivers and streams.

We have applied the guidance issued by Ofwat and the EA to the listed 16 abstraction sites. Investigations carried out by us and the EA has concluded that all potential sites initially identified as potential AIM sites by Ofwat (published in October 2013) do not meet the guidance and therefore should not be reported as part of table 3C. This is because there is either no impact, or AIM will not resolve the issues. We have discussed our approach to AIM with the Environmental Sub Group of our Yorkshire Forum for Water Customers and gained their support in this approach. We will keep the situation under review and should further sites appropriate for the AIM be identified, we will include these in future assessment and reporting.

We have investigated the list of abstraction licences with the EA and it has also carried out more investigations to confirm if damage is occurring. A summary of the results of investigations into all potential AIM sites and application of the Ofwat guidance is shown in the following table:

Abstraction site name	Abstraction type	Impacted waterbody	Site review summary	Aim
Finningley	Groundwater	Riveridle	Reducing abstractions would not benefit the drainage of the River Idle Washlands SSSI. Doncaster Sherwood Sandstones Aquifer impacted by abstraction but slow to respond to changes in abstraction rates therefore not suited for AIM	Removed from AIM under Ofwat Filter 3.10
Armthorpe				
Nutwell				
Hatfield				
Thornham				
Highfield Lane				
Austerfield				
Hatfield Woodhouse				
Kepwick Springs	Groundwater	Broad Beck from source to Cog Beck	Treatment works closed - no spring abstraction	Removed from AIM
Newsham and Crumma Springs	Groundwater	Brough and Scorton Beck	Very small WFD deficit - 0.003Ml/d (0.03% of the surface water body Q95 flow). Changes to abstraction would be within the accuracy of the flow gauge. Water body potentially affected by nearby industrial borehole.	Removed from AIM under Ofwat Filter 3.3
East Ness boreholes	Groundwater	Rye from River Seph to Holbeck	Signed off by EA as WFD compliant	Removed from AIM
Keld Head boreholes	Groundwater	Costa Beck from Source to Pickering Beck	Signed off by EA as WFD compliant	Removed from AIM
Hazel Head springs	Groundwater	Wheeldale Gill and Murk Esk	EA hydrological assessment showed abstraction has no significant impact on stream flow or pH	Removed from AIM under Ofwat Filter 3.3
Carlesmoor Beck	Surface water	Laver and Kex Beck	Abstractions 16km from nearest gauging station at bottom of River Laver. Cannot use this station to manage abstractions due to distance from gauging station and influence of Lumley Moor reservoir and additional tributary Kex Beck. EA preferred solution to any confirmed ecological failure would be an increased compensation flow on site.	Removed from AIM under Ofwat Filter 3.6
Stock Beck	Surface water			
River Laver intakes	Surface water			

Table 3D: Sub-measure performance

For the 12 months ended 31 March 2018

Table 3D provides further information on our customer service measure, the Service Incentive Mechanism (SIM), which is also included in table 3A. SIM is a mechanism introduced by our regulator, Ofwat, to measure how companies perform in delivering customer service and to enable comparisons between companies.

SIM is the water industry regulatory measure of customer service. SIM involves an independent assessment of each company's customer service performance, reporting a score out of a maximum 100 points.

Our SIM score has continued to improve. Our score of 84.3 in 2017/2018 is an increase from 83.4 in 2016/2017. This confirms our performance commitment has been achieved. Our continual customer service improvement programme aims to further improve the score in 2018/2019.

Table 3D – Sim table For the 12 months ended 31 March 2018

Line description		Units	DPs	Score
A - Qualitative performance				
3D.1	1st survey score	nr	2	4.45
3D.2	2nd survey score	nr	2	4.38
3D.3	3rd survey score	nr	2	4.52
3D.4	4th survey score	nr	2	4.32
3D.5	Qualitative SIM score (out of 75)	nr	2	64.13
B - Quantitative performance				
3D.6	Total contact score	nr	2	97.15
3D.7	Quantitative SIM score (out of 25)	nr	2	20.14
C - SIM score				
3D.8	Total annual SIM score (out of 100)	nr	2	84.27

Key

Input cell Calculation cell

Our aim is to not only to be a leader in service in the water sector, but across all customer facing sectors. We have continued to score well in the all-sector comparison of customer service undertaken by the UK Customer Services Institute. In January 2018, we scored 77 out of 100 in this benchmark, ranking third out of all utility companies.

The continual review of our approach to customer service has improved our customer satisfaction scores. Our promise to resolve as many of our queries on a first-time basis has delivered a 32% reduction in the number of written complaints and 10% fewer unwanted telephone calls. Satisfaction in billing contacts has been industry leading in 2017/2018 from our programme of targeted coaching and the support we provide to our colleagues. More of our contacts meet our customer promise, which states we need to be easy to deal with, helpful and friendly and get it right first time.

iv. 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.

- Table 4A: Analysis of measured and unmeasured retail and wholesale non-financial metrics.
- Table 4B: Wholesale totex analysis for water and waste water.
- Table 4C: Projected Regulatory Capital Value (RCV) adjustment expected at the next price review.
- Table 4D: Totex analysis for wholesale water by upstream category.
- Table 4E: Totex analysis for wholesale waste water by upstream category.
- Table 4F: Operating costs associated with running the household retail business.
- Table 4G: Wholesale current cost financial performance.
- Table 4H: Key financial metrics of financial performance and financial position of Yorkshire Water.
- Table 4I: Analysis of Yorkshire Water's portfolio of financial derivatives.
- Table 4J: Atypical expenditure on wholesale water by business unit.
- Table 4K: Atypical expenditure on wholesale wastewater by business unit.
- Table 4L: Enhancement capital expenditure on wholesale water by purpose.
- Table 4M: Enhancement capital expenditure on wholesale wastewater by purpose.
- Table 4N: Operating expenditure on sewage treatment – wholesale wastewater.
- 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.

Table 4A: Non-financial information

For the 12 months ended 31 March 2018

Line description		Units	DPs	Current year	
				Unmeasured	Measured
Retail					
A - Household					
4A.1	Number of void households	000s	3	61.334	45.410
4A.2	Per capita consumption (excluding supply pipe leakage) l/h/d	l/h/d	2	155.68	108.01
				Water	**Wastewater**
Wholesale					
B - Volume (Ml/d)					
4A.3	Bulk supply export	Ml/d	3	0.279	0.000
4A.4	Bulk supply import	Ml/d	3	53.470	0.000
4A.5	Distribution input	Ml/d	3	1,271.890	

Key

Input cell   Calculation cell

This table provides information regarding water consumption, vacant households (voids) and wholesale water and waste water volumes.

Distribution input has increased by 10.57Ml/d from 1,261.32Ml/d in 2016/2017 to 1,271.89Ml/d in 2017/2018. This is due to increased demand for water by commercial customers and increased leakage following particularly cold winter periods previously described.

Table 4B: Wholesale totex analysis

For the 12 months ended 31 March 2018

Line description		Units	DPs	Current year		Cumulative 2015-20	
				Water	Wastewater	Water	Wastewater
A - Actual totex							
4B.1	Actual totex	£m	3	369.596	423.860	978.314	1,162.320
B - Items excluded from the menu							
4B.2	Third party costs	£m	3	2.251	0.000	5.584	0.002
4B.3	Pension deficit recovery payments	£m	3	5.562	6.086	18.249	22.354
4B.4	Other 'Rule book' adjustments	£m	3	1.014	1.389	2.068	2.816
4B.5	Total items excluded from the menu	£m	3	8.827	7.475	25.901	25.172
C - Transition expenditure							
4B.6	Transition expenditure	£m	3	0.000	0.000	10.176	5.025
D - Adjusted Actual totex							
4B.7	Adjusted actual totex	£m	3	360.769	416.385	962.589	1,142.174
4B.8	Adjusted actual totex base year prices	£m	3	321.093	370.593	882.424	1,047.034
E - Allowed totex							
4B.9	Allowed totex based on final menu choice – base year prices	£m	3	277.400	387.600	921.700	1,162.800

Key

Input cell Calculation cell

This table sets out totex expenditure in out-turn prices for wholesale operations analysed by Price Control, both for the 2017/2018 year, and cumulatively for the AMP. Commentary on operating expenditure is detailed in table 2B.

Water service expenditure by purpose

Gross regulated capital expenditure associated with the Wholesale Water (WW) programme in the current reporting year was £187.7m. With the associated income totalling £17.8m the net expenditure in the current reporting year was £169.9m. This is versus net expenditure in the prior year of £143.7m.

In the last year we have seen an acceleration of delivery of activity to meet our drinking water improvements coupled with additional costs to reduce the number of times customers need to contact us about the appearance of their drinking water.

Furthermore, the water Management & General programme has seen increased activity within the year relating, primarily, to two further investment projects that weren't allowed for in the FD. These are to move to an updated SAP platform and provide enhanced system data.

Although there are timing differences in some areas of the WW programme compared to the original FD there continues to be cost pressures to deliver our regulatory water quality improvements at some of our key water treatment works. This has also been impacted by our additional investment to deliver our leakage targets in year.

Our investment to the end of 2017/2018 has supported the successful delivery of our water or cross business performance commitments in the first three years of the current asset investment period. We have achieved, and continue to forecast that we will achieve, acceptable service level performance on all our performance commitments with most agreed targets being met or bettered, except for Drinking Water Contacts.

Capital contributions on the water programme in the current year are higher than that allowed in the FD even though requests for mains diversions and new domestic connections have been lower than was identified in the FD. The increased income which offsets this reduction is due to the inclusion of Section 45 (S45) new water connections, which were not included in the FD.

The capital contributions variance up to the end of 2017/2018, compared to the allowed variance in the FD, is reduced for third party mains diversion requests and water new connections. This has also been offset by additional S45 income leading to more income to date compared to the FD allowance.

Waste water service expenditure by purpose

Gross regulated capital expenditure associated with the Wholesale Waste Water (WWW) programme in the current reporting year was in total £251.2m. With the associated income totalling £9.6m the net outturn in the current reporting year was £241.6m. This is versus net expenditure in the prior year of £211.5m.

Expenditure on our national environmental improvement programme has seen an increase within the year. This is following a significant reprioritisation with the Environment Agency which meant that we had to update our programme with expenditure now occurring in the latter years of 2015 to 2020.

Furthermore, the wastewater Management & General programme has seen increased activity within the year relating, primarily, to two further investment projects that weren't allowed for in the FD. These are to move to an updated SAP platform and provide enhanced system data.

Although there are timing differences in some areas of the WWW programme when compared to the Final Determination (FD) profile, the additional investment over and above the original FD in year is the re-investment associated with two new renewable energy and waste treatment facilities at Knostrop (Leeds) and Calder Valley (Huddersfield).

Our investment to the end of 2017/2018 has supported the successful delivery of our waste water or cross business performance commitments in the first three years of the current period. To date we have achieved and continue to forecast to achieve acceptable service level performance on all our performance commitments with all performance commitment targets being met or bettered to date.

Capital contributions on the waste water programme in the current year are lower than that allowed in the FD as requests for sewer diversions and new domestic waste water connections is at a lower level than that identified in the FD.

When reviewing the income variance to the end of 2017/2018, to that allowed in the FD, the same trend continues with a reduction of 3rd party sewer diversion requests and waste water new connections resulting in less income to date compared to the FD allowance.

Table 4C: Impact of AMP performance to date on RCV

For the 12 months ended 31 March 2018

Line description		Units	DPs	Water	Wastewater
4C.1	Cumulative totex over/underspend so far in the price control period	£m	3	38.769	115.383
4C.2	Customer share of cumulative totex over/underspend	£m	3	8.529	56.387
4C.3	RCV element of customer share of cumulative totex over/underspend	£m	3	-20.221	-75.468
4C.4	Adjustment for ODI rewards or penalties	£m	3	0.000	0.000
4C.5	RCV determined at FD at 31 March	£m	3	2,721.305	3,725.020
4C.6	Projected 'shadow' RCV	£m	3	2,701.084	3,649.552

Key

Input cell Calculation cell

Table 4C looks at projected adjustments to the Regulatory Capital Value (RCV) that are expected at the next price review.

Technical notes

Line 1 has been taken as the variance shown in 4B at 2012/2013 average prices. To calculate the inputs to lines 2 and 3 the published PR14 Totex reconciliation model has been used to complete this table and followed the steps below, - this methodology has been agreed with Ofwat:

- To only take into account the cumulative under/overspend to the end of 2017/2018 we have set the final two years of the price control period to match the allowance and therefore there is no out/under performance in the final two years.
- The output for line 2 is the cumulative totex out/under performance, as reported in table 4B, less the reward/penalty that the model is calculating on the 'calc' tab lines 93 and 94. This line has also been included as at 2012/2013 average prices.
- The output for line 3 has been taken as the forecast RCV adjustment that would occur at PR19 (price base 2012/2013 average inflated to March 2018).
- Line 4 has been inputted as zero as we have no forecast RCV adjustments for our ODI performance.
- Line 5 has been taken from the Ofwat published RCV as at March 2018 prices.

Table 4D: Wholesale totex analysis - water

For the 12 months ended 31 March 2018

Line description		Units	DPs	Water resources	
				Abstraction licences	Raw water abstraction
A - Operating expenditure					
4D.1	Power	£m	3	0.000	2.315
4D.2	Income treated as negative expenditure	£m	3	0.000	-0.159
4D.3	Abstraction charges/ discharge consents	£m	3	4.978	0.514
4D.4	Bulk supply	£m	3	0.000	3.797
4D.5	Other operating expenditure - renewals expensed in year (Infrastructure)	£m	3	0.000	0.000
4D.6	Other operating expenditure - renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000
4D.7	Other operating expenditure - excluding renewals	£m	3	0.016	7.738
4D.8	Local authority and Cumulo rates	£m	3	0.000	6.926
4D.9	Total operating expenditure excluding third party services	£m	3	4.994	21.131
4D.10	Third party services	£m	3	0.000	0.000
4D.11	Total operating expenditure	£m	3	4.994	21.131
B - Capital expenditure					
4D.12	Maintaining the long term capability of the assets - infra	£m	3	0.000	11.030
4D.13	Maintaining the long term capability of the assets - non-infra	£m	3	0.000	1.687
4D.14	Other capital expenditure - infra	£m	3	0.000	1.691
4D.15	Other capital expenditure - non-infra	£m	3	0.000	0.899
4D.16	Infrastructure network reinforcement	£m	3	0.000	0.000
4D.17	Total gross capital expenditure (excluding third party)	£m	3	0.000	15.307
4D.18	Third party services	£m	3	0.000	0.000
4D.19	Total gross capital expenditure	£m	3	0.000	15.307
C - Grants and contributions					
4D.20	Grants and contributions	£m	3	0.000	0.117
4D.21	Totex	£m	3	4.994	36.321
D - Cash expenditure					
4D.22	Pension deficit recovery payments	£m	3	0.000	0.000
4D.23	Other cash items	£m	3	0.000	0.000
4D.24	Totex including cash items	£m	3	4.994	36.321
E - Unit cost information (operating expenditure)					
4D.25	Licenced volume available	Ml	3	741999.365	
4D.25	Volume abstracted	Ml	3		455409.713
4D.25	Volume transported	Ml	3		
4D.25	Average volume stored	Ml	3		
4D.25	Distribution input volume	Ml	3		
4D.25	Distribution input volume	Ml	3		
4D.26	Unit cost	£/Ml	3	6.730	46.400
4D.27	Population	000s	3	5045.276	5045.276
4D.28	Unit cost	£/pop	3	0.990	4.188

Network Plus				Total
Raw water transport	Raw water storage	Water treatment	Treated water distribution	
5.540	0.000	8.803	10.869	27.527
0.000	0.000	-0.305	0.000	-0.464
0.000	0.000	0.025	0.001	5.518
0.000	0.000	0.000	0.100	3.897
0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000
2.543	1.091	35.598	79.308	126.294
1.731	0.277	0.925	24.563	34.422
9.814	1.368	45.046	114.841	197.194
0.000	0.000	0.000	2.501	2.501
9.814	1.368	45.046	117.342	199.695
1.182	0.006	0.000	41.487	53.705
2.244	0.210	39.594	31.193	74.928
0.000	0.000	5.512	17.084	24.287
0.132	0.034	20.541	10.826	32.432
0.000	0.000	0.000	2.363	2.363
3.558	0.250	65.647	102.953	187.715
0.000	0.000	0.000	0.000	0.000
3.558	0.250	65.647	102.953	187.715
0.000	0.000	0.000	17.697	17.814
13.372	1.618	110.693	202.598	369.596
0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000
13.372	1.618	110.693	202.598	369.596
280890.510				
	119057.475			
		464239.850		
			464239.850	
34.939	11.490	97.032	252.762	
5045.276	5045.276	5045.276	5045.276	
1.945	0.271	8.928	23.258	

Key

Input cell | Calculation cell

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 waste water 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 waste water.

In 2017/2018, a charge for water sludge disposal has been recognised between Price Controls. A charge has been made by sludge treatment to water treatment. Conversely, there has been a charge of the clean water to waste water for the consumption of clean water on sites. These charges have been made in accordance with RAG 2.07.

We have not adjusted the operating cost lines in tables to exclude the pension deficit contributions. The Yorkshire Water defined benefit scheme is accounted for under accounting standard FRS102 which applies the same rules as a defined contribution scheme. This is because the historical pension scheme deficit cannot be allocated between group entities. This results in all cash contributions, including pension deficit contributions, being recognised as operating expenditure. This treatment contrasts with 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 their operating expenditure. The unit rate information on tables 4D and 4E use the operating cost line to calculate the unit rates, and so Yorkshire Water's rates appear slightly higher than other companies who exclude these pension contributions. We have confirmed that this approach is in line with Ofwat's expectations.

Gross regulated capital expenditure associated with the Wholesale Water (WW) programme in the current reporting year was £187.7m. With the associated income totalling £17.8m the net expenditure in the current reporting year was £169.9m.

Although there are timing differences in some areas of the wholesale water programme compared to the original FD there continues to be cost pressures to deliver our regulatory water quality improvements at some of our key water treatment works. This has also been impacted by our additional investment to deliver our leakage targets in year.

In the current reporting year, the majority of expenditure in table section(4D.12) 'Maintaining the long-term capability of the assets – infra' has been within treated water distribution and comprises of our annual block schemes (£21.0m) covering structural mains repairs, communication pipe failures, distribution management area (DMA) flushing, stop taps and distribution pipework fittings. Other key schemes include additional investment to support leakage (£4.0m), distribution and operations maintenance strategy (DOMS) schemes in the Sheffield area (£1.8m) and the Bilton trunk main (£2.5m).

Expenditure within raw water abstraction relates primarily to key schemes at Gouthwaite and Graincliffe impounding reservoirs IRE (£5.1m) and Dean Lower Open Stone Asphalt (OSA) spillway (£3.5m).

The majority of expenditure in table section (4D.13) 'Maintaining the long-term capability of the assets – non-infra' has been within water treatment and comprises of schemes at Irton water treatment works (WTW) (£3.1m), Loftsome Bridge (£1.7m), Chellow Heights WTW (£1.7m), Eccup (No.2) WTW (£2.2m) and block schemes for replacement of asset life expired Mechanical, Electrical and Instrumentation Control & Automation (MEICA) equipment (£3.4m) and Electricity at Work Regulations (EaWR) (£1.2m).

There is also £31.2m in treated water distribution, some of the key contributors to this are the SAP improvement scheme (£4.3m), data improvements (£1.4m), the annual domestic meter installation block scheme (£6m) and the Leeds Calm Network scheme (£1.1m).

Information on the expenditure in lines 4D.14 and 4D.15 can be found in the commentary for table 4L.

Information on the expenditure in line 4D.16 can be found in the commentary for table 2J.

Our investment to the end of 2017/2018 has supported the successful delivery of our water or cross business performance commitments in the first three years of the current asset investment period. We have achieved, and continue to forecast that we will achieve, acceptable service level performance on all our performance commitments with most agreed targets being met or bettered, except for Drinking Water Contacts.

Capital contributions on the water programme in the current year are higher than that allowed in the FD even though requests for mains diversions and new domestic connections have been lower than was identified in the FD. The increased income which offsets this reduction is due to the inclusion of Section 45 (S45) new water connections, which were not included in the FD.

The capital contributions variance up to the end of 2017/2018, compared to the allowed variance in the FD, is reduced for third party mains diversion requests and water new connections. This has also been offset by additional S45 income leading to more income to date compared to the FD allowance.

Our Management & General support programme continues to be proportionately allocated to the Water and Waste Water programmes as set out in the methodology statement for Capital expenditure in the Final Determination.

While we endeavour to meet all guidance, we have consulted and reviewed different interpretations of the policy regarding principal use. We have found that results can vary significantly depending on the information used to determine principal use. At this time, we have concluded, that the best course of action is to remain consistent with the Final Determination. We have made this clear and discussed it with our independent external auditor Halcrow. We will keep this under review and seek to clarify any further improvement that may be needed through the Regulatory accounting working group led by Ofwat.

Expenditure on the water Management & General programme remains broadly in line with the original drivers allowed for in the FD. Further investment however is being made within the current reporting period 2015 to 2020 to move to an updated SAP platform and expenditure within the current reporting year is £6.6m. Additionally, a scheme to provide enhanced system data is currently ongoing with expenditure within the current reporting year of £2.2m.

Table 4E: Wholesale totex analysis - wastewater

For the 12 months ended 31 March 2018

Line description		Units	DPs	Network Plus sewage collection		
				Foul	Surface water drainage	Highway drainage
A - Operating expenditure						
4E.1	Power	£m	3	1.436	1.660	0.679
4E.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000
4E.3	Discharge consents	£m	3	0.611	0.707	0.289
4E.4	Bulk discharge	£m	3	0.000	0.000	0.000
4E.5	Other operating expenditure - renewals expensed in year (Infrastructure)	£m	3	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
4E.7	Other operating expenditure - excluding renewals	£m	3	17.480	17.136	9.473
4E.8	Local authority rates and Cumulo rates	£m	3	0.075	0.056	0.044
4E.9	Total operating expenditure excluding third party services	£m	3	19.602	19.559	10.485
4E.10	Third party services	£m	3	0.000	0.000	0.000
4E.11	Total operating expenditure	£m	3	19.602	19.559	10.485
B - Capital Expenditure						
4E.12	Maintaining the long term capability of the assets - infra	£m	3	11.938	13.823	5.655
4E.13	Maintaining the long term capability of the assets - non-infra	£m	3	8.871	8.709	5.176
4E.14	Other capital expenditure - infra	£m	3	8.968	10.384	4.248
4E.15	Other capital expenditure - non-infra	£m	3	2.122	2.388	1.048
4E.16	Infrastructure network reinforcement	£m	3	0.000	0.000	0.000
4E.17	Total gross capital expenditure (excluding third party services)	£m	3	31.899	35.304	16.127
4E.18	Third party services	£m	3	0.000	0.000	0.000
4E.19	Total gross capital expenditure	£m	3	31.899	35.304	16.127
C - Grants and contributions						
4E.20	Grants and contributions	£m	3	3.565	4.128	1.689
4E.21	Totex	£m	3	47.936	50.735	24.923
D - Cash Expenditure						
4E.22	Pension deficit recovery payments	£m	3	0.000	0.000	0.000
4E.23	Other cash items	£m	3	0.000	0.000	0.000
4E.24	Totex including cash items	£m	3	47.936	50.735	24.923
E - Unit cost information (operating expenditure)						
4E.25	Volume collected	Ml	3	298444.770		
4E.25	Volume collected	Ml	3		317486.660	
4E.25	Volume collected	Ml	3			94833.678
4E.25	Biochemical Oxygen Demand (BOD)	Tonnes	3			
4E.25	Biochemical Oxygen Demand (BOD)	Tonnes	3			
4E.25	Volume transported	m3	3			
4E.25	Dried solid mass treated	ttds	3			
4E.25	Dried solid mass disposed	ttds	3			
4E.26	Unit cost	£/unit	3	65.680	61.606	110.562
4E.27	Population	000s	3	5148.798	5148.798	5148.798
4E.28	Unit cost	£/pop	3	3.807	3.799	2.036

Network Plus sewage treatment		Sludge			Total
Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
22.857	0.063	0.000	0.630	0.000	27.325
-0.142	0.000	0.000	-2.089	0.000	-2.231
3.109	0.000	0.000	0.000	0.319	5.035
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
39.527	2.121	6.374	27.619	11.558	131.288
19.309	0.013	0.018	1.324	0.002	20.841
84.660	2.197	6.392	27.484	11.879	182.258
0.000	0.000	0.000	0.000	0.000	0.000
84.660	2.197	6.392	27.484	11.879	182.258
0.363	0.000	0.000	0.000	0.000	31.779
68.575	0.470	1.594	56.091	0.203	149.689
0.167	0.000	0.000	0.000	0.000	23.767
38.835	0.021	0.071	1.472	0.009	45.966
0.000	0.000	0.000	0.000	0.000	0.000
107.940	0.491	1.665	57.563	0.212	251.201
0.000	0.000	0.000	0.000	0.000	0.000
107.940	0.491	1.665	57.563	0.212	251.201
0.217	0.000	0.000	0.000	0.000	9.599
192.383	2.688	8.057	85.047	12.091	423.860
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
192.383	2.688	8.057	85.047	12.091	423.860
126498.246					
	6116.227				
		1053176.980			
			150.760		
				123.327	
669.258	359.208	6.069	182302.998	96321.162	
5148.798	5148.798	5148.798	5148.798	5148.798	
16.443	0.427	1.241	5.338	2.307	

Key

- Input cell
- Calculation cell

Table 4E provides an analysis of the wholesale waste water upstream services, from sewerage collection to sludge disposal.

Major contributing factors in the reduction in operating expenditure from last year include general and support costs, following changes in manpower allocation, and a reduction of rates in sludge due to an improved approach of rates allocation. Furthermore, a reduction in operating expenditure is due to a reduction in mitigation costs associated with the flooding in December 2015.

We have not adjusted the operating cost lines in tables to exclude the pension deficit contributions. Under Yorkshire Water's accounting standards (FRS102), it accounts for its defined benefit pension scheme in the manner of a defined contribution scheme, because of being unable to allocate a historical deficit between group entities. This results in all cash contributions, including pension deficit contributions, being recognised as operating expenditure. This treatment contrasts with 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 opex. The unit rate information on tables 4D and 4E use the operating cost line to calculate the unit rates, and so Yorkshire Water's rates appear slightly higher than other companies who exclude these pension contributions. We have confirmed that this approach is in line with Ofwat's expectations.

Gross regulated capital expenditure associated with the Wholesale Waste Water (WWW) programme in the current reporting year was in total £251.2m. With the associated income totalling £9.6m the net outturn in the current reporting year was £241.6m.

Although there are timing differences in some areas of the WWW programme when compared to the Final Determination (FD) profile, the additional investment over and above the original FD in year is the re-investment associated with two new renewable energy and waste treatment facilities at Knostrop (Leeds) and Calder Valley (Huddersfield).

In the current reporting year, the expenditure driving (4E.12) Maintaining the long-term capability of the assets – infra is across many individual schemes including annual block schemes (£6.6m) supporting repair and maintenance (R&M) work, ironworks and Internal Flooding Other Causes. Other schemes are supporting CCTV surveys and repairs (£4.4m) and a Leeds low level syphons access scheme (£1.4m).

The majority of expenditure driving (4E.13) Maintaining the long-term capability of the assets – non-infra is within sewage treatment and disposal. This comprises many individual schemes with significant expenditure due to continued work at Beverley sewage treatment works (STW) (£4.0m), Goole Carr Lane sewage pumping station (SPS) (£3.2m), Whitby STW (£1.7m), Sutton STW (£1.4m), Blackburn Meadows (£1.3m), Dewsbury STW (£1.2m) and Normanton STW (£1.2m). There are also block schemes for MEICA (£6.3m) and EaWR (£2.0m).

Expenditure within sludge treatment is driven primarily by the continued work to deliver a new treatment facility at Knostrop (£26.2m) as well as schemes at Dewsbury sludge treatment facility (STF) (£2.9m), Wombwell (£2.2m), Colburn STF (£1.4m) and Whitby (£1.0m). Expenditure relating to the continued work to recover from the damage caused by flooding in December 2015 also contributed £17.4m to the annual expenditure and is detailed further in table 4K.

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.

Investment to date has supported the successful delivery of our waste water or cross business performance commitments in the first three years of the current period. To date we have achieved and continue to forecast to achieve acceptable service level performance on all our performance commitments, with all performance commitment targets being met or bettered to date.

Capital contributions on the waste water programme in the current year are lower than that allowed in the FD as requests for sewer diversions and new domestic waste water connections is at a lower level than that identified in the FD.

When reviewing the income variance to the end of 2017/2018, to that allowed in the FD, the same trend continues with a reduction of third party sewer diversion requests and waste water new connections resulting in less income to date compared to the FD allowance.

Our Management & General support programme continues to be proportionately allocated to the Water and Waste Water programmes as set out in the methodology statement for Capital expenditure in the Final Determination.

While we endeavour to meet all guidance, we have consulted and reviewed different interpretations of the policy regarding principal use. We have found that results can vary significantly depending on the information used to determine principal use. At this time, we have concluded, that the best course of action is to remain consistent with the Final Determination. We have made this clear and discussed it with our independent external auditor Halcrow. We will keep this under review and seek to clarify any further improvement that may be needed through the Regulatory accounting working group led by Ofwat.

Expenditure on the wastewater Management & General programme remains broadly in line with the original drivers allowed for in the FD. Further investment is being made within the current reporting period 2015 to 2020 to move to an updated SAP platform and expenditure within the current reporting year is £9.2m. Additionally, a scheme to provide enhanced system data is currently ongoing with expenditure within the current reporting year of £3.1m.

Technical notes

Table 4E Line 25 - Volumes of wastewater collected.

These are separated by the origin of the wastewater, comprising domestic foul sewage, surface water drainage and highway drainage. The foul sewage volume is slightly lower than last year, whereas the surface and highway drainage volumes are around 5% higher than last year, driven by higher rainfall data and the number of connected properties.

The volumes collected from surface water and highways drainage are estimated from secondary sources, such as the Generalised Land Use Database survey (GLUD) and are therefore of a lower confidence. The estimates are based on an average impermeable area for household and non-households (m2/property) that are drained to sewers, the number of properties connected and billed for drainage (including void properties), and the average rainfall (in mm) across the Yorkshire Water region in 2017/2018 (based on rain gauge data from eight locations). 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.

Table 4E Line 25 – Dried solid mass treated.

The overall value of sludge treated through waste water treatment works (WWTW) is calculated using instrumentation on operational sites, or weights of material transported where appropriate.

There is a significant difference between the mass of sludge treated and the mass of sludge disposed, which cannot all be attributed to changes in stock levels. This suggests a potential inaccuracy with one of the measures used (dry solids of sludge into digestion).

There is an action to improve the accuracy of this data which is underway and an action plan is in place to achieve this.

Table 4E Line 25 - Dried solid mass disposed.

‘Dried solids mass disposed’ includes material ‘recycled’ This is the majority of sludge 98% in 2017/2018 managed by Yorkshire Water.

The recycled material produced by Yorkshire Water is primarily ‘cake’, with a small proportion of liquid sludge, and is recycled to agricultural land, reclamation sites and in some cases sent to other water companies for further treatment.

This years ‘dried solid mass disposed’ total of 123.3ttds is considerably less than last year’s total of 149.3ttds. This is due to adverse climatic conditions during winter and spring which has significantly reduced the outlet availability.

As we have treated more solid mass than we have disposed of during 2017/2018 and the stock levels at our sites have increased by approximately 5ttds.

Table 4E Line 25 – Biochemical oxygen demand (BOD) - 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. We can calculate the liquor volume from the thickener or de-watered sludge feed flow and the change in dry solids concentration; which is an accurate methodology. However, we do not measure the concentration of BOD therefore text book estimates were applied to these derived liquor volumes to arrive at our reported figure.

Table 4E Line 25 - Volume transported - sludge transport.

The measure of sludge volume transported is meters cubed, and does not differentiate between liquid and cake. Our numbers have increased by 10% because we are moving more liquid and less cake than last year. The reason for this is due to capital undertakings to convert digester plants into raw cake plants. The interim mitigation is tankering liquid to other locations.

Table 4E Line 27- Connected population.

Connected population has increased by 0.6% since last year and this is in line with population forecast trends.

Table 4F: Cost analysis – household retail

For the 12 months ended 31 March 2018

Line description		Units	DPs	Household unmeasured			
				Water only	Wastewater only	Water and wastewater	Total
A - Operating expenditure							
4F.1	Customer services	£m	3	0.402	0.433	8.376	9.211
4F.2	Debt management	£m	3	0.090	0.098	1.890	2.078
4F.3	Doubtful debts	£m	3	0.472	0.088	11.002	11.562
4F.4	Meter reading	£m	3				
4F.5	Other operating expenditure	£m	3	0.197	0.212	4.104	4.513
4F.6	Total operating expenditure excluding third party services	£m	3	1.161	0.831	25.372	27.364
4F.7	Third party services operating expenditure	£m	3	0.000	0.000	0.000	0.000
4F.8	Total operating expenditure	£m	3	1.161	0.831	25.372	27.364
4F.9	Depreciation - tangible fixed assets (on assets existing at 31 March 2015)	£m	3	0.031	0.033	0.636	0.700
4F.10	Depreciation - tangible fixed assets (on assets acquired since 1 April 2015)	£m	3	0.027	0.029	0.571	0.627
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	1.219	0.893	26.579	28.691
4F.14	Capital expenditure	£m	3	0.020	0.021	0.415	0.456
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

Household measured				Total
Water only	Wastewater only	Water and wastewater	Total	
0.358	0.350	9.518	10.226	19.437
0.081	0.079	2.147	2.307	4.385
0.196	0.001	7.811	8.008	19.570
0.075	0.073	1.987	2.135	2.135
0.175	0.171	4.664	5.010	9.523
0.885	0.674	26.127	27.686	55.050
0.000	0.000	0.000	0.000	0.000
0.885	0.674	26.127	27.686	55.050
0.027	0.027	0.724	0.778	1.478
0.024	0.024	0.649	0.697	1.324
0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000
0.936	0.725	27.500	29.161	57.852
0.018	0.017	0.472	0.507	0.963
				0.282
				0.282
				0.000
				2.413
				2.413
				0.000

Household retail operating costs in 2017/2018 have increased to £57.9m from £53.7m in the prior year. The majority of the increases are as a result of improved reporting analysis and allocations methods, key movements from prior year include the following:

- Customer services has increased by £3.0m from £16.4m in 2016/2017 to £19.4m in 2017/2018.
- Increase in doubtful debts of £1.3m from £18.3m in 2016/2017 to £19.6m, this is mainly due to introduction of a new initiative to give customer in arrears a fresh start.
- Increase in meter reader staff time by £0.3m from £1.8m in 2016/2017 to £2.1m in 2017/2018.

Table 4G: Wholesale current cost financial performance

For the 12 months ended 31 March 2018

Line description		Units	DPs	Water	Wastewater	Total
4G.1	Revenue	£m	3	416.530	509.648	926.177
4G.2	Operating expenditure	£m	3	-199.695	-182.258	-381.953
4G.3	Capital maintenance charges	£m	3	-86.243	-156.356	-242.599
4G.4	Other operating income	£m	3	0.328	1.531	1.859
4G.5	Current cost operating profit	£m	3	130.920	172.565	303.484
4G.6	Other income	£m	3	6.073	5.639	11.712
4G.7	Interest income	£m	3	41.032	56.172	97.204
4G.8	Interest expense	£m	3	-138.618	-189.765	-328.383
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	39.407	44.611	84.017
4G.11	Fair value gains/(losses) on financial instruments	£m	3	17.503	23.961	41.464
4G.12	Current cost profit before tax	£m	3	56.910	68.572	125.481

Key

Input cell   Calculation cell

Table 4G looks at the financial performance of the Company in current cost terms. Current cost operating profit for the year is £304m compared to £345m in 2016/2017.

Technical notes

The key difference between current cost accounting and standard or historical cost accounting, is the revaluation of assets to 'money of the day' prices. Current cost accounting restates the value of assets each year, typically by the rate of inflation. This particularly impacts capital maintenance (depreciation) charges which tend to be higher in current cost accounting.

Whilst the year on year movements for revenue and net interest expense are minimal, there have been some significant movements within operating expenditure and other income. These relate to the ongoing additional operating costs relating to the severe flooding in 2015, which reduced during 2017/2018 and resulted in the recovery of insurance income within other operating income. There has also been a reduction in the fair value of financial instruments over the year, from £466.5m in 2016/2017 to £41.464m in 2017/2018. Yorkshire Water completed a transaction to restructure the terms of some financial swaps which has significantly contributed to this reduction. Further details on these instruments are contained in the ARFS and in the table 4I technical note.

Table 4H: Financial metrics

For the 12 months ended 31 March 2018

Line description		Units	DPs	Metric
A - Financial indicators				
4H.1	Net debt	£m	3	4790.618
4H.2	Regulated equity	£m	3	1655.707
4H.3	Regulated gearing	%	2	74.32%
4H.4	Post tax return on regulated equity	%	2	2.16%
4H.5	RORE (return on regulated equity)	%	2	4.61%
4H.6	Dividend yield	%	2	1.73%
4H.7	Retail profit margin - Household	%	2	0.74%
4H.8	Retail profit margin - Non household	%	2	-0.54%
4H.9	Credit rating	Text	n/a	Baa2
4H.10	Return on RCV	%	2	4.20%
4H.11	Dividend cover	dec	2	2.39
4H.12	Funds from operations (FFO)	£m	3	429.354
4H.13	Interest cover (cash)	dec	2	3.21
4H.14	Adjusted interest cover (cash)	dec	2	1.88
4H.15	FFO/Debt	dec	2	0.09
4H.16	Effective tax rate	%	2	29.84%
4H.17	RCF	£m	3	340.498
4H.18	RCF/capex	dec	2	0.79
B - Revenue and earnings				
4H.19	Revenue (actual)	£m	3	998.115
4H.20	EBITDA (actual)	£m	3	549.625
C - Borrowings				
4H.21	Proportion of borrowings which are fixed rate	%	2	39.66%
4H.22	Proportion of borrowings which are floating rate	%	2	26.93%
4H.23	Proportion of borrowings which are index linked	%	2	33.41%
4H.24	Proportion of borrowings due within 1 year or less	%	2	1.22%
4H.25	Proportion of borrowings due in more than 1 year but no more than 2 years	%	2	7.09%
4H.26	Proportion of borrowings due in more than 2 years but no more than 5 years	%	2	19.63%
4H.27	Proportion of borrowings due in more than 5 years but no more than 20 years	%	2	42.64%
4H.28	Proportion of borrowings due in more than 20 years	%	2	29.42%

Key

Input cell | Calculation cell

Line 5: RORE calculation

The RORE calculation is based on the cumulative position at the end of 2017/2018.

This is based on an average RCV figure of £16,541m at 2012/2013 average prices. A notional gearing of 62.5% has been used.

The base return for the 3 years has been calculated using the 5.65% equity return as included within the PR14 final determination.

All values have been included post tax.

Adjustment	Description	2017/2018 %	2017/2018 £m
	Base return	5.65%	350
1	Totex outperformance	-	-
2	Retail underperformance	(0.23%)	(14)
3	ODI reward	0.35%	21
4	Financing impact	(1.16%)	(72)
	RORE cumulative	4.61%	286

The adjustments are explained below:

1. Totex outperformance
We have included a cumulative outperformance against totex of £0m at 2012/2013 average prices.
The explanation of how this outperformance has been calculated is included within the commentary in Section 3, review of our performance.

2. Retail underperformance
We have included a cumulative underperformance against PR14 of (£14m) at 2012/2013 average prices.
This has been calculated by comparing the actual retail costs reported in table 2C to the operating cost allowances included within the PR14 final determination.

3. ODI reward
We have included a cumulative ODI reward of £21m at 2012/2013 average prices.
The explanation of how this has been calculated within Section 3.

4. Financing impact
We have included a cumulative financing impact of (£72m) 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 three years. This has been adjusted by the average RPI for both years using the Fisher formula.
This calculation provides a real cost of debt for 2015/2016 of 4.46%, 4.13% for 2016/2017 and 1.85% against the 2.59% cost of debt as included within the PR14 final determination.

Lines 6 and 11: Dividend yield and Dividend cover

For previous submissions, we elected to use the figure that transparently presents the dividend received by the ultimate shareholders, as an equity return, in the year in question. This year, we have updated our figures for dividend yield and dividend cover to remain unadjusted.

Line 9: Credit rating

Yorkshire Water Services Limited and its financing subsidiaries have credit ratings assigned by three rating agencies, Fitch Ratings ("Fitch"), Moody's Investors Services ("Moody's") and S&P Global ratings ("S&P").

The credit rating stated in table 4H, line 9 is Moody's latest published Corporate Family Rating for Yorkshire Water. Fitch and S&P do not publish the equivalent of a Corporate Family Rating, however, as with Moody's, both Fitch and S&P rate Yorkshire Water's and its financing subsidiaries' Class A debt and Class B debt.

The latest published ratings are as follows:

Credit rating Agency	Class A rating	Class B rating	Corporate family rating	Date of publication
Fitch	A (stable)	BBB+ (stable)	N/A	05/12/2017
Moody's	Baa1 (negative)	Ba1 (negative)	Baa2 (negative)	28/12/2017
S&P	A- (stable)	BBB (stable)	N/A	02/06/2017

On 2 June 2017 S&P affirmed the Yorkshire Water Financing Group's Class A rating of 'A- 'and Class B rating of 'BBB' both with a stable outlook.

On 5 December 2017, Fitch affirmed the Yorkshire Water Financing Group's Class A rating of 'A 'and Class B rating of 'BBB+' both with a stable outlook.

On 28 December 2017, Moody's affirmed the Corporate Family Rating of Yorkshire Water at 'Baa2' and affirmed the Yorkshire Water Financing Group's Class A and Class B rating at Baa1 and Ba1 respectively, while moving the associate outlooks for those ratings from stable to negative. Moody's stated that "the negative rating outlook reflected the expected decline in allowed returns on RCV after 2020, while Yorkshire Water's own cost of debt remains high. While management's financial strategy towards strengthening the balance sheet has created some headroom, the Company will have to continue to work on additional measures to maintain financial resilience. However, the current financial policy evidences a commitment towards maintaining credit quality".

The credit ratings 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 within the 'Investor Centre' section of the Kelda Group website at **www.keldagroup.com**

3. Effective tax rate, line item 16
In accordance with Ofwat requirements, this is the effective tax rate for current tax only, i.e. it does not include deferred tax.
A reconciliation of the current tax charge is provided in Appendix 4.

Line 13: interest cover (cash)

This is the formula we have used to calculate the interest cover (cash) in table 4H:

$$\text{Interest Cover (cash)} = \frac{\text{(Funds from Operations (Table 4H Line 12)+Interest Paid on Borrowings)}}{\text{Interest Paid on Borrowings}}$$

Interest paid on borrowings is made up of the following:

YW Net Interest Paid (Table 1D Line 10 of the APR)	£137.4m
Add back interest received on subordinated inter-company loans (see note 7 of Yorkshire Water Services Ltd ("YWS") annual report and financial statement for the year ended 31 March 2018, page 136) **www.yorkshirewater.com/sites/default/files/730444_YWS_ARFS%20 2018%20FINAL.pdf**	£51.1m
Add back a loan debt repayment from YWS to Yorkshire Water Services Odsal Finance Ltd ("YWSOFL" - a subsidiary of YWS) to pay the interest on bonds raised by YWSOFL which have previously been on-lent to YWS (see note 15 of YWSOFL annual report for the year ended 31 March 2018, page 23) **www.keldagroup.com/media/4475/Yorkshire-Water-Services-Odsal-Finance-Limited.pdf**	£6.0m
Interest Paid on Borrowings	**£194.5m**

Therefore, the calculation is as follows:

$$\text{Interest Cover (cash)} = \frac{£429.354+£194.5}{£194.5} = 3.21$$

Table 4I: Financial derivatives

For the 12 months ended 31 March 2018

Line description		Units	DPs	Nominal value by maturity (net)		
				1 to 2 years	2 to 5 years	Over 5 years
Derivative type						
A - Interest rate swap (sterling)						
4I.1	Floating to fixed rate	£m	3	0.000	0.000	45.000
4I.2	Floating from fixed rate	£m	3	0.000	0.000	430.000
4I.3	Floating to index linked	£m	3	117.537	151.523	1019.940
4I.4	Floating from index linked	£m	3	0.000	0.000	0.000
4I.5	Fixed to index-linked	£m	3	0.000	0.000	0.000
4I.6	Fixed from index-linked	£m	3	0.000	0.000	0.000
4I.7	Total	£m	3	117.537	151.523	1494.940
B - Foreign Exchange						
4I.8	Cross currency swap USD	£m	3	28.278	144.558	113.112
4I.9	Cross currency swap EUR	£m	3	0.000	0.000	0.000
4I.10	Cross currency swap YEN	£m	3	0.000	0.000	0.000
4I.11	Cross currency swap Other	£m	3	0.000	0.000	33.800
4I.12	Total	£m	3	28.278	144.558	146.912
C - Currency interest rate						
4I.13	Currency interest rate swaps USD	£m	3	0.000	0.000	0.000
4I.14	Currency interest rate swaps EUR	£m	3	0.000	0.000	0.000
4I.15	Currency interest rate swaps YEN	£m	3	0.000	0.000	0.000
4I.16	Currency interest rate swaps Other	£m	3	0.000	0.000	0.000
4I.17	Total	£m	3	0.000	0.000	0.000
D - Forward currency contracts						
4I.18	Forward currency contracts USD	£m	3	0.000	0.000	0.000
4I.19	Forward currency contracts EUR	£m	3	0.000	0.000	0.000
4I.20	Forward currency contracts YEN	£m	3	0.000	0.000	0.000
4I.21	Forward currency contracts Other	£m	3	0.000	0.000	0.000
4I.22	Total	£m	3	0.000	0.000	0.000
E - Other financial derivatives						
4I.23	Other financial derivatives	£m	3	0.000	55.416	0.000
F - Total						
4I.24	Total financial derivatives	£m	3	145.815	351.497	1641.852

Key

Input cell Calculation cell

Total value at 31 March 2018		Total accretion at 31 March 2018	Units	DPs	Interest rate (weighted average for 12 months to 31 March 2018)	
Nominal value (net)	Mark to Market				Payable	Receivable
45.000	-24.074	0.000	%	2	6.03%	0.00%
430.000	48.026	0.000	%	2	1.42%	0.00%
1289.000	-2398.836	172.124	%	2	2.53%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
1764.000	-2374.884	172.124				
285.948	35.808	0.000	%	2	1.66%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
33.800	-4.469	0.000	%	2	1.45%	0.00%
319.748	31.339	0.000				
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000				
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000	%	2	0.00%	0.00%
0.000	0.000	0.000				
55.416	8.003	0.000	%	2	0.00%	0.00%
2139.164	-2335.542	172.124				

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, amongst other things, inflation risk, interest rate risk and exchange rate risk.

In relation to inflation risk, Yorkshire Water's turnover is linked to the underlying rate of inflation measured by the retail price index (RPI) and therefore is subject to fluctuations in line with changes in RPI. In addition, Yorkshire Water's regulatory capital value (RCV), which is one of the critical components for setting customer's bills, is also linked to RPI. Yorkshire Water and its financing subsidiaries raises funds from third parties. These funds are used by the company to finance its activities (including funding the company's long-term capital investment programme). As the percentage of the company's net debt to RCV is a key covenanted ratio within Yorkshire Water's financing arrangements with its lenders, negative inflation, without appropriate management, could potentially breach such covenants despite the company being profitable. Yorkshire Water manages its inflation risk via a number of derivative financial instruments (also known as swaps), including interest rate swaps cross currency interest rate swaps and inflation linked swaps.

Technical notes

1. Interest rate swaps
Yorkshire Water holds £45.0m notional value (2016/2017: £45.0m) of floating to fixed rate swaps. Yorkshire Water also holds £430.0m notional value (2016/2017: £430.0m) of floating from fixed rate swaps.

2. Inflation linked swaps
The company holds a number of inflation linked (floating to index linked) swaps, with a notional value of £1,289.0m. The cashflows associated with these inflation linked swaps are as follows:

- Six monthly interest receivable linked to the London Interbank Offered Rate (LIBOR).
- Six monthly interest payable linked to inflation (RPI).
- An RPI-linked amount that is payable on maturity of the instruments or at certain predetermined dates over the duration of the swaps.
- In addition, a proportion of the inflation linked swaps also receives six monthly interest amounts based on a fixed rate.
- Table 4I reflects the fact that accretion is only applicable in the case of Yorkshire Water's inflation linked swaps.

3. Cross currency interest rate swaps
Yorkshire Water hedges the fair value of the US dollar bonds using a series of combined interest rate and foreign currency swaps that in combination form cross currency interest rate swaps, swapping US dollar principal repayments into sterling and fixed rate US dollar interest payments into floating rate sterling interest payments.

Yorkshire Water 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.

4. Nominal value
The Nominal value (sometimes 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 swap

5. Mark to market value
The mark to market value is essentially the net present value of all future expected receipts and payments under the swaps and 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.

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 on the next page reconciles the mark to market values shown in table 4I to the fair value amounts shown within table 1C and reflected within Yorkshire Water's published financial statements.

Table 4I to table 1C reconciliation	Table 4I - mark to market values £m	Valuation adjustment to reflect the day 1 loss/gain on exchange transaction on exchanged swaps in line with IFRS accounting £m	Accrued interest included in MtM but shown in other creditors in Accounts £m	Credit risk and other adjustments required under FRS102 accounting £m	Element of fair value of index link swaps presented within borrowing table 1E £m	Table 1C/ YW Statutory accounts £m
Floating to fixed rate	(24.07)		1.2	1.5		**(21.3)**
Floating from fixed rate	48.03			(2.7)		**45.3**
Floating from index linked	(2,398.84)	28.6		444.0	172.1	**(1,754.1)**
Cross currency swap USD	35.81			(0.9)		**34.9**
Cross currency swap Other	(4.47)			0.3		**(4.2)**
Financial instrument on energy contracts	8.00					**8.0**
Total	**(2335.54)**	**28.6**	**1.2**	**442.2**	**172.1**	**(1,691.4)**

Table 4I	£m
Non-current assets: Financial instruments	88.2
Non-Current liabilities: Financial instruments	(1,779.6)
Total	**(1,691.4)**

YW Statutory Accounts	£m
Derivative Financial Assets:	
Fixed to floating interest rate swaps	45.3
Combined cross currency interest rate swaps	34.9
Energy Derivative	8.0
	88.2
Derivative Financial Liabilities:	
Finance lease interest swaps	(21.3)
Inflation linked swaps	(1,754.1)
Combined cross currency interest rate swaps	(4.2)
Derivative financial instrument on energy contracts	0.0
	(1,779.6)
Total	**(1,691.4)**

Table 4J: Atypical expenditure by business unit – wholesale water

For the 12 months ended 31 March 2018

Line description		Units	DPs	Water resources	
				Abstraction licences	Raw water abstraction
A - Operating expenditure (excluding atypicals)					
4J.1	Power	£m	3	0.000	2.315
4J.2	Income treated as negative expenditure	£m	3	0.000	-0.159
4J.3	Abstraction charges/ discharge consents	£m	3	4.978	0.514
4J.4	Bulk supply	£m	3	0.000	3.797
	Other operating expenditure				
4J.5	- Renewals expensed in year (Infrastructure)	£m	3	0.000	0.000
4J.6	- Renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000
4J.7	- Other operating expenditure excluding renewals	£m	3	0.016	7.738
4J.8	Local authority and Cumulo rates	£m	3	0.000	7.285
4J.9	Total operating expenditure (excluding third party services)	£m	3	4.994	21.490
4J.10	Third party services	£m	3	0.000	0.000
4J.11	Total operating expenditure	£m	3	4.994	21.490
B - Capital expenditure (excluding atypicals)					
4J.12	Maintaining the long term capability of the assets - infra	£m	3	0.000	10.579
4J.13	Maintaining the long term capability of the assets - non-infra	£m	3	0.000	1.687
4J.14	Other capital expenditure - infra	£m	3	0.000	1.691
4J.15	Other capital expenditure - non-infra	£m	3	0.000	0.899
4J.16	Infrastructure network reinforcement	£m	3	0.000	0.000
4J.17	Total gross capital expenditure excluding third party services	£m	3	0.000	14.856
4J.18	Third party services	£m	3	0.000	0.000
4J.19	Total gross capital expenditure	£m	3	0.000	14.856
4J.20	Grants and contributions	£m	3	0.000	0.117
4J.21	Totex	£m	3	4.994	36.229

Key

Input cell | Calculation cell

Network+				Total
Raw water transport	Raw water storage	Water treatment	Treated water distribution	
5.540	0.000	8.803	10.869	27.527
0.000	0.000	-0.305	0.000	-0.464
0.000	0.000	0.024	0.001	5.517
0.000	0.000	0.000	0.100	3.897
0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000
2.543	1.091	35.598	79.308	126.294
2.039	1.258	1.076	29.057	40.715
10.122	2.349	45.196	119.335	203.486
0.000	0.000	0.000	2.501	2.501
10.122	2.349	45.196	121.836	205.987
1.182	0.006	0.000	41.487	53.254
2.229	0.210	39.594	31.193	74.913
0.000	0.000	5.512	17.084	24.287
0.132	0.034	20.541	10.826	32.432
0.000	0.000	0.000	2.363	2.363
3.543	0.250	65.647	102.953	187.249
0.000	0.000	0.000	0.000	0.000
3.543	0.250	65.647	102.953	187.249
0.000	0.000	0.000	17.697	17.814
13.665	2.599	110.843	207.092	375.422

Table 4J: Atypical expenditure by business unit – wholesale water (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Water resources	
				Abstraction licences	Raw water abstraction
C - Cash expenditure (excluding atypicals)					
4J.22	Pension deficit recovery payments	£m	3	0.000	0.000
4J.23	Other cash items	£m	3	0.000	0.000
4J.24	Totex including cash items	£m	3	4.994	36.229
D - Atypical expenditure					
4J.25	Rates refund (Opex)	£m	3	0.000	-0.359
4J.26	Flooding (Capex)	£m	3	0.000	0.451
4J.27	Item 3	£m	3		
4J.28	Item 4	£m	3		
4J.29	Item 5	£m	3		
4J.30	Item 6	£m	3		
4J.31	Item 7	£m	3		
4J.32	Item 8	£m	3		
4J.33	Item 9	£m	3		
4J.34	Item 10	£m	3		
4J.35	Total atypical expenditure	£m	3	0.000	0.092
E - Total expenditure					
4J.36	Total expenditure	£m	3	4.994	36.321

Key

Input cell   Calculation cell

Network+				Total
Raw water transport	Raw water storage	Water treatment	Treated water distribution	
0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000
13.665	2.599	110.843	207.092	375.422
-0.308	-0.981	-0.151	-4.494	-6.293
0.016	0.000	0.000	0.000	0.467
				0.000
				0.000
				0.000
				0.000
				0.000
				0.000
				0.000
				0.000
-0.292	-0.981	-0.151	-4.494	-5.826
13.373	1.618	110.692	202.598	369.596

This table is similar to table 4D, with the only difference being that the atypical expenditure has been split out, for more information on this table please see the commentary for 4D.

Gross operating expenditure excludes atypical expenditure associated with wholesale water activities. The exclusion is associated a one-off credit from a rates cumulo appeal of £6.3m. This is captured in section D of table 4J as a credit. The total of table 4J aligns to the operating costs section in table 4D.

Gross regulated capital expenditure associated with the Wholesale Water (WW) programme excluding atypical expenditure in the current reporting year was £187.2m. With the associated income totalling £17.8m the net capital expenditure in the current reporting year excluding atypical expenditure was £169.4m.

Atypical capital expenditure in the year, as with previous years, relates to the Flooding recovery programme and totalled £0.5m in year. This is driven primarily by work undertaken at Leeming reservoir and Leeshaw spillway.

Table 4K: Atypical expenditure by business unit – wholesale wastewater

For the 12 months ended 31 March 2018

Line description		Units	DPs	Network+ Sewage Collection		
				Foul	Surface water drainage	Highway drainage
A - Operating expenditure (excluding atypicals)						
4K.1	Power	£m	3	1.436	1.660	0.679
4K.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000
4K.3	Discharge Consents	£m	3	0.611	0.707	0.289
4K.4	Bulk discharge	£m	3	0.000	0.000	0.000
	Other operating expenditure					
4K.5	- Renewals expensed in year (Infrastructure)	£m	3	0.000	0.000	0.000
4K.6	- Renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000	0.000
4K.7	- Other operating expenditure excluding renewals	£m	3	17.481	17.136	9.473
4K.8	Local authority and Cumulo rates	£m	3	0.075	0.056	0.044
4K.9	Total operating expenditure (excluding third party services)	£m	3	19.602	19.558	10.486
4K.10	Third party services	£m	3	0.000	0.000	0.000
4K.11	Total operating expenditure	£m	3	19.602	19.558	10.486
B - Capital expenditure (excluding atypicals)						
4K.12	Maintaining the long term capability of the assets - infra	£m	3	11.935	13.820	5.654
4K.13	Maintaining the long term capability of the assets - non-infra	£m	3	8.019	7.722	4.773
4K.14	Other capital expenditure - infra	£m	3	8.968	10.384	4.248
4K.15	Other capital expenditure - non-infra	£m	3	2.122	2.388	1.048
4K.16	Infrastructure network reinforcement	£m	3	0.000	0.000	0.000
4K.17	Total gross capital expenditure excluding third party services	£m	3	31.044	34.314	15.723
4K.18	Third party services	£m	3	0.000	0.000	0.000
4K.19	Total gross capital expenditure	£m	3	31.044	34.314	15.723
4K.20	Grants and contributions	£m	3	3.565	4.128	1.689
4K.21	Totex	£m	3	47.081	49.744	24.520

Key

Input cell Calculation cell

Network Plus sewage treatment		Sludge			Total
Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
22.857	0.063	0.000	0.630	0.000	27.325
-0.142	0.000	0.000	-2.089	0.000	-2.231
3.109	0.000	0.000	0.000	0.319	5.035
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
39.140	2.121	6.374	22.984	8.505	123.212
19.309	0.013	0.018	1.324	0.002	20.841
84.273	2.197	6.392	22.849	8.826	174.183
0.000	0.000	0.000	0.000	0.000	0.000
84.273	2.197	6.392	22.849	8.826	174.183
0.363	0.000	0.000	0.000	0.000	31.772
60.300	0.470	1.594	48.674	0.203	131.755
0.167	0.000	0.000	0.000	0.000	23.767
38.835	0.021	0.071	1.472	0.009	45.966
0.000	0.000	0.000	0.000	0.000	0.000
99.665	0.491	1.665	50.146	0.212	233.260
0.000	0.000	0.000	0.000	0.000	0.000
99.665	0.491	1.665	50.146	0.212	233.260
0.217	0.000	0.000	0.000	0.000	9.599
183.721	2.688	8.057	72.995	9.038	397.844

Table 4K: Atypical expenditure by business unit – wholesale wastewater (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Network+ Sewage Collection		
				Foul	Surface water drainage	Highway drainage
C - Cash expenditure (excluding atypicals)						
4K.22	Pension deficit recovery payments	£m	3	0.000	0.000	0.000
4K.23	Other cash items	£m	3	0.000	0.000	0.000
4K.24	Totex including cash items	£m	3	47.081	49.744	24.520
D - Atypical expenditure						
4K.25	Flooding (Opex)	£m	3	0.000	0.000	0.000
4K.26	Flooding (Capex)	£m	3	0.855	0.990	0.405
4K.27	Item 3	£m	3			
4K.28	Item 4	£m	3			
4K.29	Item 5	£m	3			
4K.30	Item 6	£m	3			
4K.31	Item 7	£m	3			
4K.32	Item 8	£m	3			
4K.33	Item 9	£m	3			
4K.34	Item 10	£m	3			
4K.35	Total atypical expenditure	£m	3	0.855	0.990	0.405
E - Total expenditure						
4K.36	Total expenditure	£m	3	47.936	50.734	24.925

Key

Input cell Calculation cell

Network Plus sewage treatment		Sludge			Total
Raw water transport	Raw water storage	Sludge transport	Sludge treatment	Sludge disposal	
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
183.721	2.688	8.057	72.995	9.038	397.844
0.387	0.000	0.000	4.635	3.053	8.075
8.275	0.000	0.000	7.416	0.000	17.941
					0.000
					0.000
					0.000
					0.000
					0.000
					0.000
					0.000
					0.000
8.662	0.000	0.000	12.051	3.053	26.016
192.383	2.688	8.057	85.046	12.091	423.860

This table is similar to table 4E, with the only difference being that the atypical expenditure has been split out, for more information on this table please see the commentary for 4E.

Gross operating expenditure excludes atypical expenditure in section A of the wholesale waste water table. This was associated with expenditure associated with the December 2015 floods impacting waste water assets. The atypical operating expenditure is then captured in section E, and the total of these align to the operating costs section in table 4E.

Gross regulated capital expenditure associated with the Wholesale Waste Water (WWW) programme in the current reporting year excluding atypical expenditure was in total £233.3m. With the associated income totalling £9.6m the net outturn capital expenditure excluding atypical expenditure in the current reporting year was £223.7m.

Atypical capital expenditure in the year, as with previous years, relates to the Flooding recovery programme and totalled £17.9m in year. Expenditure relates to work undertaken across numerous sites over the year with ~£10m accounted for at six sites (Esholt STF, Calder Valley STF, Dewsbury STW, Calder Vale STF, Rodley Transfer SPS and Castle Mill SPS).

Table 4L: Enhancement expenditure by purpose – wholesale water

For the 12 months ended 31 March 2018

Line description		Units	DPs	Expenditure in report year						
				Water resources		Network Plus				Total
				Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
A - Enhancement expenditure by purpose										
4L.1	NEP - Making ecological improvements at abstractions (Habitats Directive, SSSI, NERC, BAPs)	£m	3	0.000	0.768	0.018	0.005	0.151	0.366	1.308
4L.2	NEP - Eels Regulations (measures at intakes)	£m	3	0.000	0.372	0.069	0.018	0.575	1.389	2.423
4L.3	Addressing low pressure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.4	Improving taste / odour / colour	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.5	Meeting lead standards	£m	3	0.000	0.000	0.000	0.000	0.000	0.893	0.893
4L.6	Supply side enhancements to the supply/demand balance (dry year critical / peak conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.7	Supply side enhancements to the supply/demand balance (dry year annual average conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.8	Demand side enhancements to the supply/demand balance (dry year critical / peak conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.9	Demand side enhancements to the supply/demand balance (dry year annual average conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.10	New developments	£m	3	0.000	0.000	0.000	0.000	0.000	7.484	7.484

Cumulative expenditure on schemes completed in the report year						
Water resources		Network Plus				Total
Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.046	0.029	0.007	0.239	0.578	0.899
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.330	0.330
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	7.387	7.387

Table 4L: Enhancement expenditure by purpose – wholesale water (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Expenditure in report year						
				Water resources		Network Plus				Total
				Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
A - Enhancement expenditure by purpose										
4L.11	New connections element of new development (CPs, meters)	£m	3	0.000	0.000	0.000	0.000	0.000	8.191	8.191
4L.12	Investment to address raw water deterioration (THM, nitrates, Crypto, pesticides, others)	£m	3	0.000	1.041	0.000	0.000	24.735	-0.012	25.764
4L.13	Resilience	£m	3	0.000	0.000	0.000	0.000	0.219	0.010	0.229
4L.14	SEMD	£m	3	0.000	0.072	0.045	0.011	0.373	0.902	1.403
4L.15	NEP - Investigations	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.16	Improvements to river flows	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.17	Metering (excluding cost of providing metering to new service connections) - meters requested by optants	£m	3	0.000	0.000	0.000	0.000	0.000	6.167	6.167
4L.18	Metering (excluding cost of providing metering to new service connections)- meters introduced by companies	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.19	Metering (excluding cost of providing metering to new service connections) - other	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.20	Drought Management Plan	£m	3	0.000	0.338	0.000	0.000	0.000	0.000	0.338
4L.21	Exclusions	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.22	Leakage Reduction - UQ	£m	3	0.000	0.000	0.000	0.000	0.000	2.519	2.519
4L.23	Reduction in Interruptions to Supply - UQ	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.24	Improving Water Quality - UQ	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.25	Infrastructure network reinforcement	£m	3	0.000	0.000	0.000	0.000	0.000	2.363	2.363

Cumulative expenditure on schemes completed in the report year						
Water resources		Network Plus				Total
Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
0.000	0.000	0.000	0.000	0.000	8.191	8.191
0.000	0.000	0.000	0.000	25.789	0.000	25.789
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.047	0.029	0.008	0.245	0.593	0.922
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	6.167	6.167
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.100	0.000	0.000	0.000	0.000	0.100
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	1.415	1.415
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 4L: Enhancement expenditure by purpose – wholesale water (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Expenditure in report year						
				Water resources		Network Plus				Total
				Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
A - Enhancement expenditure by purpose										
4L.26	Accounting Adjustment - IAS16	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.27	Capital expenditure purpose - WATER additional line 8 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.28	Capital expenditure purpose - WATER additional line 9 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.29	Capital expenditure purpose - WATER additional line 10 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.30	Capital expenditure purpose - WATER additional line 11 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.31	Capital expenditure purpose - WATER additional line 12 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.32	Capital expenditure purpose - WATER additional line 13 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.33	Capital expenditure purpose - WATER additional line 14 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.34	Capital expenditure purpose - WATER additional line 15 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4L.35	Total enhancement capital expenditure	£m	3	0.000	2.591	0.132	0.034	26.053	30.272	59.082

Cumulative expenditure on schemes completed in the report year						
Water resources		Network Plus				Total
Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.193	0.058	0.015	26.273	24.661	51.200

Key

Input cell

Calculation cell

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 recorded 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 reasons for most of the expenditure on any line with more than £0.5m of expenditure in either the report year or cumulative totals.

Investment in the current report year associated with (4L.1) NEP – Making ecological improvements at abstractions (Habitats Directive, SSSI, NERC. BAPs) of £1.3m is to continue to deliver our Sites of Special Scientific Interest (SSSI) and Heavily Modified Waterbodies (HMWB) obligations at various sites, as agreed and included in the National Environment Programme (NEP).

Investment in the current report year associated with (4L.2) NEP – Eels Regulations (measure at intakes) of £2.4m is to continue to deliver our defined fish pass solutions as agreed and included in the National Environment Programme (NEP). £0.9m of investment associated with one of the fish pass environmental improvement solution at Langsett has also been included in the cumulative expenditure as this solution has been completed in the report year.

Investment in the current report year associated with (4L.5) Meeting lead standards of £0.9m is to continue to replace lead communication pipes with a preferred material in areas that we could not access until now due to road embargoes since AMP5. The cumulative expenditure of £0.3m reported for this investment only includes the investment on the solutions that have completed in year. Completion of these outstanding replacements will make sure that lead has been removed from our network in the zones agreed with the Drinking Water Inspectorate (DWI).

Investment in the current report year associated with (4L.10) New developments of £7.5m is to make sure we are compliant with Water Industry Act 1991 to provide water mains to deliver supplies of water sufficient for domestic purposes. This investment funds the cost of designing and building or purchasing new water mains during the report year in response to notices served requiring the provision of such mains. This is primarily an annual block allocation allowance that is also reported in the cumulative expenditure of £7.4m as these are against solutions that have all been completed in the current report year.

Investment in the current report year associated with (4L.11) New connections element of new development (CPs, meters) of £8.2m is to make sure 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 allowance that is also reported in the cumulative expenditure of £8.2m as these are against solutions that have all been completed in the current report year.

In the current report year, the most significant expenditure is associated with investment to address raw water deterioration (Line 4L.12) under various investment drivers which totals £25.8m. One of the main contributors to this expenditure is the continued spend on schemes to improve water quality at Irton (£7.5m) and Heck and Cowick where the quality improvements have been completed in previous years, and the regulatory outputs claimed, but further work to make sure long term compliance is still being finalised. The regulatory obligation at Rivelin was completed in the report year and so has expenditure in both the current report year of £10.4m and accounts for the cumulative expenditure on schemes completed in the year of £25.8m. The investment to deliver our quality obligation at Langsett water treatment works contributes £5.3m in the total expenditure in the report year but this regulatory output is not forecast to be completed until later in the reporting period in line with its regulatory compliance date of March 2020.

There is some smaller expenditure associated with the delivery of other regulatory obligations also required to be delivered later in the reporting period in line with their respective compliance dates as previously agreed with DWI and the Environment Agency (EA).

Investment in the current report year associated with (4L.14) SEMD of £1.4m is to make sure we are compliant against our security obligations at relevant sites across all our water assets. This is a rolling programme of work that continues throughout the current reporting period 2015 to 2020 with some of the sites being completed in the current report year and therefore included in the cumulative expenditure at £0.9m to reflect the assets that have been completed only.

Investment in the current report year associated with (4L.17) Metering (excluding cost of providing metering to new service connections) – meters requested by optants of £6.2m has been to make sure that any customer that requests to move to a measured supply through our domestic meter optant programme can have a meter fitted at no cost to them.

Investment in the current report year associated with (4L.22) Leakage reduction – UQ of £2.5m is to support the delivery of our aspirations to drive a higher level of find and fix and network visibility activity to reduce leakage below our current service level commitments. Part of this investment has been included in the £1.4m cumulative expenditure on schemes completed in year to reflect the costs to complete the purchase of more loggers. These will be deployed to allow us to target any possible leakage areas before they are visible to our customers.

Investment in the current report year associated with (4L.25) Infrastructure network reinforcement of £2.4m. This expenditure relates to one solution to provide additional capacity at our service reservoir asset at Sneaton Castle, which, because of the incremental new connections and/ or new developments that have been added to the network over the past few years, is now undersized. As this solution is not forecast to complete until the next report year there is no investment identified in the cumulative expenditure on schemes completed in the report year.

In the updated PR19 Business Plan Table Guidance, released in May 2018 (**www.ofwat.gov.uk/wp-content/uploads/2017/12/PR19-Final-guidance-on-business-plan-tables-May-2018-update-v2.pdf**) Ofwat updated their guidance for reporting expenditure on projects after output delivery:

"We recognise however that, on occasion, a company may incur capex on an enhancement scheme in a year after that in which full beneficial use of the scheme is first made and, consequently, in which it is reported as being delivered. Work which may typically give rise to such continuing capex includes lighting, landscaping, "snagging list" items, demobilisation, etc.

Such continuing capex will be small compared to the overall cost of a scheme and for the purposes of populating tables WWS2 and WWS2a we would normally expect companies to treat it as if it was forecast to be incurred in the year in which the scheme is planned to be delivered and report it as such. However, exceptionally, should a company wish to report any continuing capex in a subsequent year, they may do so provided the details of the schemes and amounts involved are set out in the accompanying commentary."

Prior to this guidance in both the APR (4L and 4M) and PR19 (WS2a and WWS2a) tables we used the following methodology:

For overhang expenditure following the delivery of an output (listed as Expenditure After Output Delivery in the tables), i.e. spend in following years on a project that has delivered the required output, we have not retrospectively added this to the year the project completed but instead have created a separate line for this on the cumulative tables

We have now revised this approach in line with the latest guidance and updated our procedures to match. Whilst this guidance does not specifically relate to the APR reporting tables, as year 3 expenditure is reported in both the APR and PR19 we have revised the APR reporting to be consistent with the PR19 reporting.

This has resulted in a small movement of expenditure from reporting years 4 & 5 into Year 3:

4L Line	Spend After Output Delivery - Year 3		
	Total	Year 4 Exp	Year 5 Exp
2	**-0.727**	-0.727	0.000
9	**0.004**	0.000	0.004
11	**0.482**	0.557	-0.075
16	**0.053**	0.053	0.000
Total	**-0.189**	**-0.117**	**-0.071**

Table 4M: Enhancement expenditure by purpose – wholesale wastewater

For the 12 months ended 31 March 2018

Line description		Units	DPs	Expenditure in report year								
				Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total
				Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
A - Enhancement expenditure by purpose												
4M.1	First time sewerage (s101A)	£m	3	0.083	0.096	0.039	0.000	0.000	0.000	0.000	0.000	0.218
4M.2	Sludge enhancement (quality)	£m	3	0.000	0.000	0.000	0.035	0.000	0.000	-0.003	0.000	0.032
4M.3	Sludge enhancement (growth)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.4	NEP - Conservation drivers	£m	3	0.009	0.008	0.006	0.028	0.001	0.003	0.011	0.000	0.066
4M.5	NEP - Eels Regulations (measures at outfalls)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.6	NEP - Event Duration Monitoring at intermittent discharges	£m	3	0.000	0.000	0.000	0.487	0.000	0.000	0.000	0.000	0.487
4M.7	NEP - Flow monitoring at sewage treatment works	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.8	NEP - Monitoring of pass forward flows at CSOs	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.9	NEP - Schemes to increase flow to full treatment	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.10	NEP - Schemes to increase storm tank capacity	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.11	NEP - Storage schemes to reduce spill frequency at CSOs, storm tanks, etc	£m	3	0.069	0.080	0.033	-0.009	0.000	0.000	0.000	0.000	0.173
4M.12	NEP - Chemicals monitoring/ investigations/ options appraisals	£m	3	0.000	0.000	0.000	0.837	0.000	0.000	0.000	0.000	0.837
4M.13	NEP - National phosphorus removal technology investigations	£m	3	0.000	0.000	0.000	0.461	0.000	0.000	0.000	0.000	0.461
4M.14	NEP - Groundwater schemes	£m	3	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001

Cumulative expenditure on schemes completed in the report year								
Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total
Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
0.234	0.271	0.111	0.000	0.000	0.000	0.000	0.000	0.616
0.000	0.000	0.000	0.089	0.000	0.000	0.000	0.000	0.089
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.567	0.000	0.000	0.000	0.000	0.567
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 4M: Enhancement expenditure by purpose – wholesale wastewater (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Expenditure in report year								
				Network Plus sewage collection			Network Plus sewage collection		Sludge			Total
				Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
A - Enhancement expenditure by purpose												
4M.15	NEP - Investigations	£m	3	0.001	0.001	0.000	0.611	0.000	0.000	0.000	0.000	0.613
4M.16	NEP - Nutrients (N removal)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.17	NEP - Nutrients (P removal at activated sludge STWs)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.18	NEP - Nutrients (P removal at filter bed STWs)	£m	3	0.070	0.081	0.033	14.606	0.000	0.000	0.000	0.000	14.790
4M.19	NEP - Reduction of sanitary parameters	£m	3	0.014	0.016	0.007	19.294	0.000	0.000	1.470	0.000	20.801
4M.20	NEP - UV disinfection (or similar)	£m	3	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.005
4M.21	NEP - Discharge relocation	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.22	NEP - Flow 1 schemes	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.23	Odour	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.24	New development and growth	£m	3	1.902	2.202	0.901	0.000	0.000	0.000	0.000	0.000	5.005
4M.25	Growth at sewage treatment works (excluding sludge treatment)	£m	3	0.000	0.000	0.000	2.124	0.000	0.000	-0.244	0.000	1.880
4M.26	Resilience	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.27	SEMD	£m	3	0.205	0.171	0.138	0.637	0.020	0.068	0.239	0.009	1.487
4M.28	Reduce flooding risk for properties	£m	3	3.930	4.550	1.862	0.000	0.000	0.000	0.000	0.000	10.342
4M.29	Bathing water ELoS	£m	3	0.024	0.028	0.012	-0.008	0.000	0.000	0.000	0.000	0.056
4M.30	Pollution ELoS	£m	3	-0.003	-0.004	-0.002	0.000	0.000	0.000	0.000	0.000	-0.009

Cumulative expenditure on schemes completed in the report year								
Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total
Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
0.004	0.004	0.002	6.226	0.000	0.000	0.000	0.000	6.236
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	13.595	0.000	0.000	0.000	0.000	13.595
0.000	0.000	0.000	11.707	0.000	0.000	0.000	0.000	11.707
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.618	3.031	1.240	0.000	0.000	0.000	0.000	0.000	6.889
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.207	0.173	0.140	0.645	0.020	0.068	0.241	0.009	1.503
3.443	3.987	1.631	0.000	0.000	0.000	0.000	0.000	9.061
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 4M: Enhancement expenditure by purpose – wholesale wastewater (continued)

For the 12 months ended 31 March 2018

Line description		Units	DPs	Expenditure in report year								
				Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total
				Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
A - Enhancement expenditure by purpose												
4M.31	Transferred private sewers	£m	3	3.078	3.563	1.458	0.000	0.000	0.000	0.000	0.000	8.099
4M.32	Transferred private pumping stations	£m	3	1.705	1.974	0.808	0.000	0.000	0.000	0.000	0.000	4.487
4M.33	Connections (if applicable)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.34	Emergency Overflow Appeals	£m	3	0.004	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.011
4M.35	Exclusions	£m	3	0.000	0.000	0.000	-0.109	0.000	0.000	0.000	0.000	-0.109
4M.36	Pollution - UQ	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.37	Internal Flooding - UQ	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.38	Infrastructure network reinforcement	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.39	Accounting Adjustment - IAS16	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.40	Capital expenditure purpose - WASTEWATER additional line 12 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.41	Capital expenditure purpose - WASTEWATER additional line 13 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.42	Capital expenditure purpose - WASTEWATER additional line 14 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.43	Capital expenditure purpose - WASTEWATER additional line 15 [Other categories]	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4M.44	Total enhancement capital expenditure	£m	3	11.091	12.771	5.297	39.000	0.021	0.071	1.473	0.009	69.733

Cumulative expenditure on schemes completed in the report year								
Network Plus sewage collection			Network Plus sewage treatment		Sludge			Total
Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
3.052	3.534	1.446	0.000	0.000	0.000	0.000	0.000	8.032
0.180	0.209	0.085	0.000	0.000	0.000	0.000	0.000	0.474
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9.738	11.209	4.655	32.829	0.020	0.068	0.241	0.009	58.769

Key

Input cell

Calculation cell

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 reported 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 reasons for most of the expenditure on any line with more than £0.5m of expenditure in either report year or cumulative totals.

Investment in the cumulative expenditure on schemes completed in the report year associated with (4M.1) First time sewerage (s101A) of £0.6m. This is the total value of a scheme completed at Quaker Lane, Liversedge where a customer has requested to be connected to our sewer network.

Investment in the current report year associated with (4M.6) NEP – Event Duration Monitoring at intermittent discharges of £0.5m. This relates to expenditure across multiple sites as we continue to deliver the agreed EDM regulatory outputs.

Investment in the current report year associated with (4M.12) NEP – Chemicals monitoring investigations / options appraisals of £0.8m. Reported cumulative expenditure of £0.6m is for schemes completed in the report year and is the total solution costs associated with schemes at 15 wastewater sites (Pickering, Aldwarke, Balby, Slingsby, Beverley, Cherry Burton, Leven, Market Weighton, Nafferton, Darley, Easingwold, Knaresborough, Leyburn, Pately Bridge, Rawcliffe (York).

Investment in the current report year associated with (4M.13) NEP – National phosphorus removal technology investigations of £0.5m. This relates primarily to three schemes at Staveley STW, Bentley STW and Bolsover STW.

Investment in the current report year associated with (4M.15) NEP – Investigations of £0.5m. Expenditure reported in the cumulative expenditure of £5.9m is for investigations that were completed in line with their corresponding regulatory compliance dates as agreed with the EA and included in the NEP. These investigations will inform if solutions to deliver future environmental improvements are required and the potential benefits of any future investment.

Investment in the current report year associated with (4M.18) NEP – Nutrients (P removal at filter bed STWs) of £14.8m is to support delivery of our regulatory obligations agreed with the EA as part of the NEP. The majority of expenditure in year is for delivering Phosphorous (P) removal solutions at Wath (Ripon), Embsay, Patrington, Sherburn, Tollerton and Thornton le Dale. All of these sites, with the exception of Tollerton and Thornton le Dale, have been completed in the current year and therefore contribute to the majority of the expenditure identified in the cumulative expenditure on schemes completed in the report year of £13.6m.

Investment in the current report year associated with (4M.19) NEP – Reduction of sanitary parameters of £20.8m is to support the delivery of our regulatory obligations agreed with the EA as part of the NEP. The majority of expenditure in current report year is for delivering ammonia removal solutions at Bolton on Dearne, Clayton West, Tankersley, Dronfield, Lundwood and Hilam. Two of these solutions have been completed in the current report year, at Tankersley & Clayton West, and therefore contribute to the £11.7m total cumulative expenditure on schemes completed in the report year, along with solutions at Grimethorpe and Skipton.

Investment in the current report year associated with (4M.24) New development & growth of £5.0m is to make sure 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. This is an annual block allocation allowance where all the solutions have been completed in the current report year so it is also included in the cumulative expenditure of £6.9m as well as some solutions that were started in the previous year but did not complete until the current report year.

Investment in the current report year associated with (4M.25) Growth at sewage treatment works (excluding sludge treatment) of £2.1m within Sewage treatment and disposal is at numerous sites with the majority relating to work undertaken at Waverley (£1.6m), Beverley STW (£0.5m) and Whitby STW (£0.1m).

Investment in the current report year associated with (4M.27) SEMD of £1.5m. This is a rolling programme of work that continues throughout the current reporting period 2015-2020 with some of the sites being completed in the current report year and therefore included in the cumulative expenditure at £1.5m to reflect the assets that have been completed only.

Investment in the current report year associated with (4M.28) Reduce flooding risk for properties of £10.3m. This investment is to design and build solutions that reduce the frequency of internal flooding incidents that occur due to the under capacity of our sewer network leading to escapes. Expenditure across network+ sewage collection primarily comprises the resolution of internal flooding issues at 3 locations in Goole (£3.3m), Hinderwell Trunk, April Gardens & Farnley (£2.0m), Market street Mexborough £0.9m and Goole & Rawcliffe Fire Stations £0.8m. Cumulative expenditure within the reporting year of £9.1m comprises numerous schemes and is primarily driven by the completion of 38 outputs across Bradford, Mytholmroyd, Kirbymoorside, Withernsea and York (£5.8m), Wakefield (£0.9m), Runswick Bay (£0.5m) and Wilsden (£0.4m).

Investment in the current report year associated with (4M.31) Transferred private sewers of £8.1m is to resolve any sewer network issues such as blockages or collapses on the assets that were previously the responsibility of the homeowner but transferred to our ownership in AMP5. The majority of this investment is on annual block allocations where all the solutions have been completed in the current report year so it is also included in the cumulative expenditure of £8.0m as well as some solutions that were started in the previous year but did not complete until the current report year.

Investment in the current report year associated with (4M.32) Transferred private pumping stations of £4.5m. This investment is to bring pumping station assets that were previously owned and maintained by the homeowner up to a safe and serviceable standard in line with our asset standards after they have been transferred to our ownership at the start of the current reporting period. This is a rolling programme of work that continues throughout the current reporting period 2015-2020 with some of the sites being completed in the current report year and therefore included in the cumulative expenditure at £0.5m to reflect the assets that have been completed only.

In the updated PR19 Business Plan Table Guidance, released in May 2018 (**www.ofwat.gov.uk/wp-content/uploads/2017/12/PR19-Final-guidance-on-business-plan-tables-May-2018-update-v2.pdf**) Ofwat updated their guidance for reporting expenditure on projects after output delivery:

We recognise however that, on occasion, a company may incur capex on an enhancement scheme in a year after that in which full beneficial use of the scheme is first made and, consequently, in which it is reported as being delivered. Work which may typically give rise to such continuing capex includes lighting, landscaping, "snagging list" items, demobilisation, etc.

Such continuing capex will be small compared to the overall cost of a scheme and for the purposes of populating tables WWS2 and WWS2a we would normally expect companies to treat it as if it was forecast to be incurred in the year in which the scheme is planned to be delivered and report it as such. However, exceptionally, should a company wish to report any continuing capex in a subsequent year, they may do so provided the details of the schemes and amounts involved are set out in the accompanying commentary.

Prior to this guidance in both the APR (4L and 4M) and PR19 (WS2a and WWS2a) tables we used the following methodology:

For overhang expenditure following the delivery of an output (listed as Expenditure After Output Delivery in the tables), i.e. spend in following years on a project that has delivered the required output, we have not retrospectively added this to the year the project completed but instead have created a separate line for this on the cumulative tables.

We have now revised this approach in line with the latest guidance and updated our procedures to match. Whilst this guidance does not specifically relate to the APR reporting tables, as year 3 expenditure is reported in both the APR and PR19 we have revised the APR reporting to be consistent with the PR19 reporting.

This has resulted in a small movement of expenditure from reporting years 4 & 5 into Year 3:

4M Line	Spend after output delivery - Year 3		
	Total	**Year 4 Exp**	**Year 5 Exp**
12	**-0.125**	0.000	-0.125
15	**0.481**	0.305	0.176
17	**0.141**	0.141	0.000
19	**0.464**	0.594	-0.130
24	**0.155**	0.014	0.140
28	**0.005**	0.000	0.005
Total	**1.120**	**1.054**	**0.066**

Table 4N: Operating expenditure – sewage treatment – wholesale wastewater
For the 12 months ended 31 March 2018

Line description		Unit	DPs	Network plus	Sludge	Total
A - Properties and population						
4N.1	Direct costs of STWs in size band 1	£000	3	3085.845		3085.845
4N.2	Direct costs of STWs in size band 2	£000	3	1324.951		1324.951
4N.3	Direct costs of STWs in size band 3	£000	3	4649.556		4649.556
4N.4	Direct costs of STWs in size band 4	£000	3	3857.107		3857.107
4N.5	Direct costs of STWs in size band 5	£000	3	8285.347		8285.347
4N.6	General & support costs of STWs in size bands 1 to 5	£000	3	3157.997		3157.997
4N.7	Direct costs of STWs in size band 6	£000	3	38014.307		38014.307
4N.8	General & support costs of STWs in size band 6	£000	3	5160.573		5160.573
4N.9	Service charges for STWs in size band 6	£000	3	2017.558		2017.558
4N.10	Estimated terminal pumping costs size band 6 works	£000	3	780.868		780.868
4N.11	Estimated sludge costs size band 6 works	£000	3	0.000		0.000
4N.12	Total operating expenditure (excluding 3rd party services)	£000	3	67535.684		67535.684

Key
Input cell Calculation cell

This is a new table in 2017/2018 which 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 and Business Rates.
- General and support.

The requirement of the table is to have all the above costs directly /indirectly allocated in Bands 1-6 which are defined in the RAGs 4.07. The information to split the sites into bands and STW loads was supplied from the asset inventory system. Estimated terminal pumping percentages were supplied by energy experts within the business.

Clarity received from Ofwat on line 7 to include service charges and terminal pumping costs therefore lines 9 and 10 in this table are shown as disclosure items. These costs exclude business rates but include any atypical costs which is consistent with table 4E.

We have enhanced the cost allocation process for 2017/2018, following Ofwat feedback at a cost assessment meeting that showed Yorkshire Water sites showed few economies of scale as band size increased. Other companies reflected economies of scale, with average unit costs of a band 3 STW higher than a band 4 STW. Our current submission brings our unit price data in line with industry norms, and the data in table 4N should remain as submitted. Our intention has been to make our data more useful when combined / compared with that of other companies.

Examples of cost allocation improvements made this year includes:

- Maintenance - we have worked with the maintenance team and asset inventory team to determine maintenance costs by site, so they can be allocated to bands accurately.
- Power – each site has been reviewed to ensure accurate consumption and costs are reflected for sewage treatment.

In the future, as stated in the accounting separation methodology, we are refreshing our corporate SAP systems, whereby each site will have a separate cost centre therefore separating costs.

Table 40: Large sewage treatment works – wholesale wastewater

For the 12 months ended 31 March 2018

Line description		Unit	DPs	STWNAMED01	STWNAMED02	STWNAMED03
A - Sludge treatment works - Explanatory variables						
40.1	Works name	text	0	Aldwarke/STW	Beverley/STW	Blackburn Meadows/STW
40.2	Classification of treatment works	text	0	SAS	TB1	SAS
40.3	Population equivalent of total load received	000	2	111.61	37.84	510.07
40.4	Suspended solids consent	mg/l	0	40	60	30
40.5	BOD5 consent	mg/l	0	30	40	15
40.6	Ammonia consent	mg/l	0	3	10	3
40.7	Phosphorus consent	mg/l	0	0	0	0
40.8	UV consent	mW/s/cm2	0	0	0	0
40.9	Load received by STW	kg BOD5/d	0	6697	2270	30604
40.10	Flow passed to full treatment	m3/d	0	32,579	11,551	185,471
B - Sewage treatment works - Operating expenditure						
40.11	Direct expenditure	£000	0	980	699	3502
40.12	General and support expenditure	£000	0	133	95	475
40.13	Functional expenditure	£000	0	1113	794	3978
40.14	Service charges	£000	0	52	37	186
40.15	Estimated terminal pumping expenditure	£000	0	0	0	403

Line description		Unit	DPs	STWNAMED11	STWNAMED12	STWNAMED13
A - Sludge treatment work - Explanatory variables						
40.1	Works name	text	0	Dewsbury/STW	Dowley Gap/STW	Garforth/STW
40.2	Classification of treatment works	text	0	SB	SB	TA1
40.3	Population equivalent of total load received	000	2	337.45	39.27	40.59
40.4	Suspended solids consent	mg/l	0	65	75	30
40.5	BOD5 consent	mg/l	0	38	40	13
40.6	Ammonia consent	mg/l	0	5	10	6
40.7	Phosphorus consent	mg/l	0	0	0	0
40.8	UV consent	mW/s/cm2	0	0	0	0
40.9	Load received by STW	kg BOD5/d	0	20247	2356	2435
40.10	Flow passed to full treatment	m3/d	0	90,223	13,356	8,861
B - Sewage treatment works - Operating expenditure						
40.11	Direct expenditure	£000	0	2480	186	351
40.12	General and support expenditure	£000	0	337	25	48
40.13	Functional expenditure	£000	0	2816	211	399
40.14	Service charges	£000	0	132	10	19
40.15	Estimated terminal pumping expenditure	£000	0	0	0	0

STWNAMED04	STWNAMED05	STWNAMED06	STWNAMED07	STWNAMED08	STWNAMED09	STWNAMED10
Bolton on Dearne/ STW	Bradford Esholt/ NO 2 STW	Bridlington STW	Brighouse/Upper STW	Calder Vale/STW	Castleford/STW	Denaby/NO 2 STW
	TA2	TA2	SAS	SAS	SAS	SAS
0.00	481.68	38.40	54.29	121.53	31.19	32.33
0	20	60	30	30	65	35
0	10	0	20	20	45	25
0	3	0	5	3	10	9
0	0	0	0	0	0	0
0	0	20	0	0	0	0
0	28901	2304	3257	7292	1871	1940
0	133,213	13,473	22,942	35,644	12,195	7,389
0	4821	509	658	1343	240	422
0	654	69	89	182	33	57
0	5475	578	747	1526	273	480
0	256	27	35	71	13	22
0	170	0	0	0	16	46

STWNAMED14	STWNAMED15	STWNAMED16	STWNAMED17	STWNAMED18	STWNAMED19	STWNAMED20
Halifax/STW	Harrogate North/ STW	Harrogate South/ STW	Huddersfield STW Group	Hull/STW	Keighley Marley/ STW	Knostrop/STW
	SB	SAS		SAS	SB	TA1
0.00	42.41	38.66	0.00	428.98	89.11	684.68
0	40	30	0	0	45	50
0	14	20	0	0	25	18
0	10	3	0	0	15	3
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	2545	2320	0	25739	5347	41081
0	13,033	13,053	0	114,561	37,017	250,046
0	354	340	0	5334	489	4017
0	48	46	0	724	66	545
0	402	386	0	6058	555	4562
0	19	18	0	283	26	213
0	0	0	0	0	0	22

Table 40: Large sewage treatment works – wholesale wastewater (continued)

For the 12 months ended 31 March 2018

Line description		Unit	DPs	STWNAMED21	STWNAMED22	STWNAMED23
A - Sludge treatment works - Explanatory variables						
40.1	Works name	text	0	Lemonroyd/STW	Lundwood/STW	Malton/STW
40.2	Classification of treatment works	text	0	TA1	TB2	TB2
40.3	Population equivalent of total load received	000	2	32.40	86.17	25.73
40.4	Suspended solids consent	mg/l	0	45	40	50
40.5	BOD5 consent	mg/l	0	25	20	25
40.6	Ammonia consent	mg/l	0	5	5	11
40.7	Phosphorus consent	mg/l	0	0	0	1
40.8	UV consent	mW/s/cm2	0	0	0	0
40.9	Load received by STW	kg BOD5/d	0	1944	5170	1544
40.10	Flow passed to full treatment	m3/d	0	8,344	20,685	5,880
B - Sewage treatment works - Operating expenditure						
40.11	Direct expenditure	£000	0	361	479	564
40.12	General and support expenditure	£000	0	49	65	77
40.13	Functional expenditure	£000	0	410	544	640
40.14	Service charges	£000	0	19	25	30
40.15	Estimated terminal pumping expenditure	£000	0	0	0	0

Line description		Unit	DPs	STWNAMED31	STWNAMED32	STWNAMED33
A - Sludge treatment works - Explanatory variables						
40.1	Works name	text	0	Staveley/STW	Sutton/STW	Thorne/STW
40.2	Classification of treatment works	text	0	SAS	SB	SAS
40.3	Population equivalent of total load received	000	2	29.23	62.15	38.49
40.4	Suspended solids consent	mg/l	0	25	35	150
40.5	BOD5 consent	mg/l	0	15	25	150
40.6	Ammonia consent	mg/l	0	5	8	50
40.7	Phosphorus consent	mg/l	0	0	0	0
40.8	UV consent	mW/s/cm2	0	0	0	0
40.9	Load received by STW	kg BOD5/d	0	1754	3729	2309
40.10	Flow passed to full treatment	m3/d	0	7,578	10,666	10,008
B - Sewage treatment works - Operating expenditure						
40.11	Direct expenditure	£000	0	499	355	315
40.12	General and support expenditure	£000	0	68	48	43
40.13	Functional expenditure	£000	0	567	403	357
40.14	Service charges	£000	0	27	19	17
40.15	Estimated terminal pumping expenditure	£000	0	0	0	0

STWNAMED24	STWNAMED25	STWNAMED26	STWNAMED27	STWNAMED28	STWNAMED29	STWNAMED30
Neiley/NO 2 STW	Normanton/STW	Old Whittington/ STW	Rawcliffe York/STW	Sandall/STW	Scarborough/STW	South Elmsall/STW
SAS	SB	SAS	TA1	SAS	TA2	SB
27.69	41.75	107.11	25.88	98.56	53.74	34.34
70	40	25	50	60	60	30
21	35	15	30	40	0	15
3	14	3	21	10	0	5
0	0	0	0	0	0	0
0	0	0	0	0	16	0
1661	2505	6427	1553	5914	3224	2060
10,312	16,954	32,321	6,192	28,677	21,809	9,055
412	189	811	619	1125	523	292
56	26	110	84	153	71	40
468	215	921	703	1278	594	332
22	10	43	33	60	28	15
0	0	0	0	123	0	0

STWNAMED34	STWNAMED35	STWNAMED36	STWNAMED37	STWNAMED38	STWNAMED39	STWNAMED40
Wombwell/STW	Woodhouse Mill/ STW	York Naburn/STW	Bradford Esholt/ NO 1 STW	Knostrop/ H Level STW	Knostrop/L Level STW	Neiley/NO 1 STW
SAS	SAS	SAS				
43.18	142.34	169.56	0.00	0.00	0.00	0.00
30	40	55	0	0	0	0
14	20	35	0	0	0	0
2	3	6	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
2591	8540	10174	0	0	0	0
10,913	29,809	46,055	0	0	0	0
656	719	1969	0	0	0	0
89	98	267	0	0	0	0
745	816	2236	0	0	0	0
35	38	104	0	0	0	0
0	0	0	0	0	0	0

Table 40: Large sewage treatment works – wholesale wastewater (continued)

For the 12 months ended 31 March 2018

Line description		Unit	DPs	STWNAMED41	STWNAMED42	STWNAMED43
A - Sludge treatment works - Explanatory variables						
40.1	Works name	text	0	North Bierley/STW	Northallerton/STW	Salterhebble
40.2	Classification of treatment works	text	0			TA2
40.3	Population equivalent of total load received	000	2	0.00	0.00	156.55
40.4	Suspended solids consent	mg/l	0	0	0	50
40.5	BOD5 consent	mg/l	0	0	0	35
40.6	Ammonia consent	mg/l	0	0	0	5
40.7	Phosphorus consent	mg/l	0	0	0	0
40.8	UV consent	mW/s/ cm2	0	0	0	0
40.9	Load received by STW	kg BOD5/d	0	0	0	9393
40.10	Flow passed to full treatment	m3/d	0	0	0	0
B - Sewage treatment works - Operating expenditure						
40.11	Direct expenditure	£000	0	0	0	67
40.12	General and support expenditure	£000	0	0	0	9
40.13	Functional expenditure	£000	0	0	0	76
40.14	Service charges	£000	0	0	0	4
40.15	Estimated terminal pumping expenditure	£000	0	0	0	0

Key

Input cell   Calculation cell

STWNAMED44	STWNAMED45	STWNAMED46	STWNAMED47	STWNAMED48	STWNAMED49
Selby/NO.2 STW	Spenborough/STW	Tadcaster/ Trade STW	Whitby/STW	York/NABURN	Deighton/STW
SAS					TA2
26.21	0.00	0.00	0.00	0.00	236.90
200	0	0	0	0	30
400	0	0	0	0	20
0	0	0	0	0	5
0	0	0	0	0	0
0	0	0	0	0	0
1573	0	0	0	0	14214
0	0	0	0	0	102,435
258	0	0	0	0	1080
35	0	0	0	0	147
293	0	0	0	0	1227
14	0	0	0	0	57
0	0	0	0	0	0

This table follows on from 4N, lines 7-10 inclusive. All the sites above are separately costed within Yorkshire Water's accounting systems.

This table (Lines 1-10) contains detailed information relating to the large WWTWs with a population equivalent greater than 25000. Each of the 36 Yorkshire Water sites is listed together with its treatment type, population equivalent, consent information for common parameters, and flow and load received in 2017/2018.

Clarification received from Ofwat confirms this table should reconcile to line 7 and 8 in table 4N and follows the same principles explained in table 4N.

Line 10: Scarborough STW

The >3-fold increase in FFT from 6,686 to 21,809m3/d for line 10 Scarborough STW from last year to this year is due to the transposing of figures for the 2016/2017 submission. Last year, the figure for Selby No2 STW was used for Scarborough STW and vice versa. This has been corrected for this submission.

Line 15: Blackburn Meadows STW

The terminal pumping expenditure has increased for Blackburn Meadows STW because of the power costs to run terminal pumps. The costs for estimated terminal pumping expenditure have been reviewed for 2017/2018 submission with operational colleagues in much more detail than before as part of our ongoing improvement in cost allocation.

Table 4P: Non-financial data for WR, WT and WD – wholesale water

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Current year
A - Water resources				
4P.1	Proportion of distribution input derived from impounding reservoirs	Propn 0 to 1	3	0.429
4P.2	Proportion of distribution input derived from pumped storage reservoirs	Propn 0 to 1	3	0.000
4P.3	Proportion of distribution input derived from river abstractions	Propn 0 to 1	3	0.364
4P.4	Proportion of distribution input derived from groundwater works,excluding managed aquifer recharge (MAR) water supply schemes	Propn 0 to 1	3	0.207
4P.5	Proportion of distribution input derived from artificial recharge (AR) water supply schemes	Propn 0 to 1	3	0.000
4P.6	Proportion of distribution input derived from aquifer storage and recovery (ASR) water supply schemes	Propn 0 to 1	3	0.000
4P.7	Number of impounding reservoirs	nr	0	47
4P.8	Number of pumped storage reservoirs	nr	0	0
4P.9	Number of river abstractions	nr	0	9
4P.10	Number of groundwater works excluding managed aquifer recharge (MAR) water supply schemes	nr	0	45
4P.11	Number of artificial recharge (AR) water supply schemes	nr	0	0
4P.12	Number of aquifer storage and recovery (ASR) water supply schemes	nr	0	0
4P.13	Total number of sources	nr	0	101
4P.14	Total number of water reservoirs	nr	0	133
4P.15	Total capacity of water reservoirs	Ml	0	189089
4P.16	Total number of intake and source pumping stations	nr	0	96
4P.17	Total number of raw water transfer stations	nr	0	42
4P.18	Total capacity of intake and source pumping stations	kW	0	7388
4P.19	Total capacity of raw water transfer pumping stations	kW	0	35227
4P.20	Total length of raw water mains and conveyors	km	2	1465.70
4P.21	Average pumping head – resources	m.hd	2	3.81
4P.22	Average pumping head – raw water transport	m.hd	2	26.82

Line description		Unit	DPs	Current year
B - Water treatment				
4P.23	Total water treated at all SW simple disinfection works	Ml/d	2	0.00
4P.24	Total water treated at all SW1 works	Ml/d	2	0.00
4P.25	Total water treated at all SW2 works	Ml/d	2	0.00
4P.26	Total water treated at all SW3 works	Ml/d	2	460.07
4P.27	Total water treated at all SW4 works	Ml/d	2	159.96
4P.28	Total water treated at all SW5 works	Ml/d	2	413.78
4P.29	Total water treated at all SW6 works	Ml/d	2	0.00
4P.30	Total water treated at all GW simple disinfection works	Ml/d	2	0.00
4P.31	Total water treated at all GW1 works	Ml/d	2	0.00
4P.32	Total water treated at all GW2 works	Ml/d	2	53.89
4P.33	Total water treated at all GW3 works	Ml/d	2	49.71
4P.34	Total water treated at all GW4 works	Ml/d	2	82.39
4P.35	Total water treated at all GW5 works	Ml/d	2	65.63
4P.36	Total water treated at all GW6 works	Ml/d	2	0.00
4P.37	Total water treated at more than one type of works	Ml/d	2	0.00
4P.38	Total number of SW simple disinfection works	nr	0	0
4P.39	Total number of SW1 works	nr	0	0
4P.40	Total number of SW2 works	nr	0	0
4P.41	Total number of SW3 works	nr	0	14
4P.42	Total number of SW4 works	nr	0	6
4P.43	Total number of SW5 works	nr	0	7
4P.44	Total number of SW6 works	nr	0	0
4P.45	Total number of GW simple disinfection works	nr	0	0
4P.46	Total number of GW1 works	nr	0	0
4P.47	Total number of GW2 works	nr	0	12
4P.48	Total number of GW3 works	nr	0	5
4P.49	Total number of GW4 works	nr	0	4
4P.50	Total number of GW5 works	nr	0	1

Table 4P: Non-financial data for WR, WT and WD – wholesale water (continued)

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Current year
B - Water treatment				
4P.51	Total number of GW6 works	nr	0	0
4P.52	Number of treatment works requiring remedial action because of raw water deterioration	nr	0	1
4P.53	Zonal population receiving water treated with orthophosphate	000	3	5045.276
4P.54	Average pumping head – treatment	m.hd	2	10.81
C - Water distribution				
4P.55	Total length of potable mains as at 31 March	km	1	31693.4
4P.56	Total length of mains relined	km	1	15.4
4P.57	Total length of mains renewed	km	1	25.8
4P.58	Total length of new mains	km	1	100.2
4P.59	Potable water mains (<320mm)	km	1	29344.8
4P.60	Potable water mains 320mm - 450mm	km	1	988.1
4P.61	Potable water mains 450mm - 610mm	km	1	845.7
4P.62	Potable water mains > 610mm	km	1	514.8
4P.63	Total length of non-potable and partially treated main for supplying customers	km	1	0.0
4P.64	Total length of non-potable and partially treated main for treatment	km	1	0.0
4P.65	Capacity of booster pumping stations	kW	0	70804
4P.66	Capacity of service reservoirs	Ml	0	2221
4P.67	Capacity of water towers	Ml	0	32
4P.68	Distribution input	Ml/d	2	1271.89
4P.69	Water delivered (non-potable)	Ml/d	2	0.00
4P.70	Water delivered (potable)	Ml/d	2	1049.97
4P.71	Water delivered (billed measured residential)	Ml/d	2	280.29
4P.72	Water delivered (billed measured business)	Ml/d	2	276.12
4P.73	Total leakage	Ml/d	2	300.28
4P.74	Distribution losses	Ml/d	2	219.21
4P.75	Water taken unbilled	Ml/d	2	41.59
4P.76	Number of lead communication pipes	nr	0	1270935

Line description		Unit	DPs	Current year
C - Water distribution				
4P.77	Number of galvanised iron communication pipes	nr	0	1991
4P.78	Number of other communication pipes	nr	0	866912
4P.79	Number of booster pumping stations	nr	0	530
4P.80	Total number of service reservoirs	nr	0	368
4P.81	Number of water towers	nr	0	28
4P.82	Total length of mains laid or structurally refurbished pre-1880	km	1	348.8
4P.83	Total length of mains laid or structurally refurbished between 1881 and 1900	km	1	1885.8
4P.84	Total length of mains laid or structurally refurbished between 1901 and 1920	km	1	848.3
4P.85	Total length of mains laid or structurally refurbished between 1921 and 1940	km	1	4698.8
4P.86	Total length of mains laid or structurally refurbished between 1941 and 1960	km	1	8970.4
4P.87	Total length of mains laid or structurally refurbished between 1961 and 1980	km	1	5182.7
4P.88	Total length of mains laid or structurally refurbished between 1981 and 2000	km	1	6463.6
4P.89	Total length of mains laid or structurally refurbished post 2001	km	1	3294.9
4P.90	Average pumping head – distribution	m.hd	2	74.09
D - Band Disclosure (nr)				
4P.91	WTWs in size band 1	Nr	0	5
4P.92	WTWs in size band 2	Nr	0	3
4P.93	WTWs in size band 3	Nr	0	9
4P.94	WTWs in size band 4	Nr	0	4
4P.95	WTWs in size band 5	Nr	0	14
4P.96	WTWs in size band 6	Nr	0	8
4P.97	WTWs in size band 7	Nr	0	3
4P.98	WTWs in size band 8	Nr	0	2

Table 4P: Non-financial data for WR, WT and WD – wholesale water (continued)
For the 12 months ended 31 March 2018

Line description		Unit	DPs	Current year
E - Band Disclosure (nr)				
4P.99	Proportion of total DI band 1	%	1	0.3%
4P.100	Proportion of total DI band 2	%	1	0.7%
4P.101	Proportion of total DI band 3	%	1	4.6%
4P.102	Proportion of total DI band 4	%	1	3.4%
4P.103	Proportion of total DI band 5	%	1	24.2%
4P.104	Proportion of total DI band 6	%	1	26.8%
4P.105	Proportion of total DI band 7	%	1	16.6%
4P.106	Proportion of total DI band 8	%	1	23.6%

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 and is summarised in the technical notes below.

Technical notes

Lines 1-6. The proportion of distribution input by source remains similar to previous years.

Lines 7-13. Reflect that two impounding reservoirs have been brought back into service. Other changes relate to assets not being called into service during the year.

Lines 13-22. Reflect the capacity for raw water transfer through pumping stations, data in relation to Pumping Head resources and transportation.

Lines 23-5. A review of the WTW classification was undertaken in the year and this increased the number of works reported in SW4, GW4 and GW5 due to the identification of additional processes used on site.

Line 52. During this reporting year a scheme of work was completed at one treatment work (Rivelin) which required remedial action because of raw water deterioration. Raw water processed at Rivelin WTW is supplied from two sources; imports from Severn Trent's Derwent Valley reservoirs and supplies from Yorkshire Water's Redmires and Rivelin groups of reservoirs.

Line 53. Orthophosphate is dosed at our WTW as a way to reduce plumbosolvency (the ability to dissolve lead) and lead corrosion in the water network.

Line 54. The average pumping head for treatment is consistent with previous years:

Lines 91-106. The sizing methodology using Distribution Input (the amount of water the enters the distribution system from the WTW) has been applied resulting in the changes to the number of works by size band.

Line 20. Total length of raw water mains and conveyors.
This measure remains consistent each year as it represents the long established raw water transmission network, moving water from long established sources (such as Impounding Reservoirs, Boreholes etc). There has been no change to 2016/2017.

Line 55. Total length of potable mains.
The potable water network length over 2017/2018 has increased by a similar amount to 2016/2017. In 2016/2017 the length of potable mains increased by 82.1km. In 2017/2018 it increased by 79.3km. This reflects the growth in our potable network as the population we serve grows.

Line 56,57,58. The length of mains renewed, relined and new lengths, represents our investment to maintain stable performance. The new mains reported are as a result of new development (new properties that require infrastructure).

Line 59-62. Potable Water Mains by size range.
This measures and profiles our water mains by their diameter (<320mm, 320mm to 450mm, 450mm to 610mm and >610mm). This changes very little from year to year as we most often replace like for like (i.e. an old 4" Cast Iron main is usually replaced with a 110mm HPPE main) as was the case with 2016/2017 and 2017/2018.

Line 63-64. As with previous years, we have no mains that provide non-potable or partially treated water to customers or treatment.

Line 65,66,67. The capacity numbers provided are similar to historic ones, but have been adjusted slightly where there have been changes to the number of pumping stations, service reservoirs or water towers.

Lines 68-72. Are similar to previous years.

Line 73. Total Leakage.
Total leakage increased in 2017/2018 due to extended cold weather in December 2017 and February/March 2018. Reported leakage is 300.28Ml/d which is greater than the target for the year.

Line 74. Distribution Losses.
Our distribution losses have increased year on year since 2012/2013 (except 2014/2015). This is a result of total leakage increasing and these losses represent the majority of water lost. The targeted activity to reduce leakage over the next two years and in AMP7 will result in a reduction in distribution losses.

Line 75. Water taken unbilled.
We have been carrying out Distribution Management Area (DMA) flushing since 2015. This is flushing as part of the Distribution Operation Management Strategy (DOMS) programme to reduce water quality failure in distribution. In 2015 the DOMS programme was very small and included only 4 DMAs. In 2015/2016 this increased to 106 DMAs. In 2017/2018 900 DMA were included in the flushing programme, with estimated water use of 0.72Ml/d. This explains the reason for a small increase in this number.

Line 76, 77, 78. Number of lead, galvanised iron and other communication pipes.
The lead number has reduced in line with the number of lead pipes we have replaced as part of our quality programme, or as part of "Free and matching" scheme or exceedance of 10ug/l. The number of galvanised iron pipes has reduced slightly due to the proportional reduction of all other materials being replaced (as some will be galvanised iron) and the number of 'other' materials has increased due to new properties or the replacement of lead and galvanised iron being replaced with plastic communication pipes.

Line 79, 80 and 81. Number of WPS, SRE and WTR.
The number of Water Pumping Stations WPS has reduced by 3 from the previous year (mainly due to rationalisation or decommissioning), Service Reservoirs (SREs) and Water Towers (WTRs) number have remained the same.

Line 82-89. Total length of mains laid or structurally refurbished by time period.
This measures and profiles our potable water mains by their age range (pre-1880 and then by every 20-year period finishing with '> the year 2000'). The figures for our water mains laid before 2000 reduces slightly each reporting year. This reflects our replacement of older parts of our network and laying new mains for new housing developments.

Line 90. Average Pumping Head: There has been no material change to this figure.

Out of 308 key audit tests, Halcrow has identified one observation.

Halcrow observation
Halcrow raised some general concerns over the quality of some of the source data supporting information reported in this table, which requires assumptions to be made about asset capacities and allocations to price controls.

Halcrow has found our assumptions to be appropriate, however, in some cases they are based on limited source data, so the degree of extrapolation may create material errors in the reported figures. These issues are particularly compounded in the calculation of average pumping head. The reporting guidance has changed for 2017/2018 requiring a more granular allocation of assets and their performance between price controls.

Our management response
Our regulatory financial team has reviewed the allocation of assets to price controls and has not identified any material concerns. With the allocation of power costs according to the most recent Ofwat guidance, accounting for pumping head etc, has only a £250k impact, i.e. less than 0.1% of opex. As a result any material error in the APH figure would therefore generate a similarly small error in any relationship between activity and cost.

The procedure and analysis has been subject to Senior Manager review and sign-off. It has been signed-off as fit for purpose as it has been considered acceptable in previous years, and given the subsequent review by our regulatory finance teams we consider it to remain within the confidence limits quoted.

The methodology for these lines remains consistent with previous years. A similar level of concern has not previously been made, however we acknowledge the limitations in the approach and reflect this by the correct use of confidence grading, i.e. B3 and B4.

We acknowledge there is an opportunity to improve the confidence in the reported numbers. We will complete a thorough review of this area, consider whether it is sufficiently material to include within our annual Risks, Strengths and Weaknesses Statement. The review will consider where the accountability for these reported figures should reside so that the correct level of technical input can be applied to make improvements in confidence.

Table 4Q – Non-financial data - properties, population and other - wholesale water

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Current year
A - Properties and population				
4Q.1	Residential properties billed for measured water (external meter)	000	3	691.583
4Q.2	Residential properties billed for measured water (not external meter)	000	3	394.464
4Q.3	Business properties billed measured water	000	3	107.115
4Q.4	Residential properties billed for unmeasured water	000	3	968.051
4Q.5	Business properties billed unmeasured water	000	3	14.639
4Q.6	Total business connected properties at year end	000s	3	141.953
4Q.7	Total residential connected properties at year end	000s	3	2163.365
4Q.8	Total connected properties at year end	000	3	2305.318
4Q.9	Number of residential meters renewed	000	3	24.957
4Q.10	Number of business meters renewed	000s	3	1.866
4Q.11	Number of meters installed at request of optants	000	3	27.969
4Q.12	Number of selective meters installed	000	3	0.000
4Q.13	Total number of new business connections	000	3	0.900
4Q.14	Total number of new residential connections	000	3	13.882
4Q.15	Total population served	000	3	5045.276
4Q.16	Number of business meters (billed properties)	000	3	122.643
4Q.17	Number of residential meters (billed properties)	000	3	1151.202
4Q.18	Company area	km2	0	14394

Line description		Unit	DPs	Current year
B - Other				
4Q.19	Number of lead communication pipes replaced for water quality	nr	0	246
4Q.20	Total supply side enhancements to the supply demand balance (dry year critical / peak conditions)	Ml/d	2	0.00
4Q.21	Total supply side enhancements to the supply demand balance (dry year annual average conditions)	Ml/d	2	0.00
4Q.22	Total demand side enhancements to the supply demand balance (dry year critical / peak conditions)	Ml/d	2	0.00
4Q.23	Total demand side enhancements to the supply demand balance (dry year annual average conditions)	Ml/d	2	0.00
4Q.24	Energy consumption - network plus	MWh	0	260578
4Q.25	Energy consumption - water resources	MWh	0	45683
4Q.26	Energy consumption - wholesale	MWh	0	306261
4Q.27	Peak factor	%	2	108.59%
4Q.28	Mean Zonal Compliance	%	2	99.95%
4Q.29	Volume of Leakage above or below the sustainable economic Level	Ml	3	3.180

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 2017/2018.

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.

Technical notes

Lines 1-7. Provides information in respect of households and non- households for measured and unmeasured water, plus the number of connected properties at the end of the reporting year.

The 2017/2018 performance is in line with expectations. We continue to see a decrease in unmeasured customers and an increase in measured customers across both household and non-household customers.

There have been significant changes on lines 4Q.1 and 4Q.2 between 2016/2017 and 2017/2018, due to the work that was being undertaken on the billing files in preparation for the opening of the non-household retail market in 2016/2017. The reported figure for this year is correct and in line with historical trend between 2011/2012 and 2016/2017 as shown in the table below.

Table	Description	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
4Q.1	Residential properties billed for measured water (external meter)	000's	538.372	564.460	592.087	620.875	648.892	738.863	691.583
4Q.2	Residential properties billed for measured water (not external meter)	000's	275.925	298.048	319.864	334.504	348.818	305.401	394.464
	Residential properties billed for measured water (external meter)	%	66%	65%	65%	65%	65%	71%	64%
	Residential properties billed for measured water (not external meter)	%	34%	35%	35%	35%	35%	29%	36%

Line 19. Number of lead communication pipes replaced for water quality
Line 19 shows a significant reduction when compared to previous years because most of the lead replacement work was completed in 2015/2016 and 2016/2017. A few jobs remained due to a Highways Agency embargo which have been subsequently completed in 2017/ 2018 (Yr3 - 246). The reduced number of lead replacement work completed in Year 3 aligns with the Final Determination.

Line 24. Energy consumption – Network plus water.
This line is the energy consumed within the network plus boundary split for water treatment. This covers energy consumed for a range of activities including raw water pumping and the energy used at WTW. It does not include energy that is used in the extraction of water from source for example extraction from rivers and bore holes.

For collocated sites that contain both WTW and water resource assets a percentage split is applied to the main incoming supply based upon the equipment located on site and the knowledge provided by company experts. The main points are

Overall electrical consumption has increased. This is attributed to a relatively dry summer increasing the need for pumping around the region.

Office electrical consumption has decreased by 10% due to improvements in the way the data is reported. Annually there is has been a 0.1GWh decrease possibly due to occupancy levels.

Gas oil has been included in the data reporting for the first year.

Transportation fuel has decreased by approximately 2GWh due to business needs and the increase in using vehicles with smaller engines. Gas use has remained relatively static.

Line 25. Energy consumption – Water resources.
This line is the Energy Consumed that falls within the water resources boundary split for water treatment. This covers everything from raw water pumping from rivers to boreholes and in some cases small holding reservoirs. It does not include energy that is used in WTW or grid pumping. We have made further improvements to our reporting this year. Work has been carried out with our technical optimisation engineers in both clean water and waste water to further refine the detailed understanding of the boundaries between price controls. The refined process for allocating consumption resulted in an increase in assets falling within the water network plus boundary.

In summary:

- All major clean water sites are now broken out to a process level allowing better boundary splits to be reported. This has resulted in an individual percentage split for each large site depending upon what equipment is installed.
- Other refinements include the allocation of boreholes and raw water pumping stations.
- Office consumption is now based on the type of occupancy levels in the buildings as opposed to a generic 25% split.

The net result is an increase to energy consumption within water network plus and a decrease in energy consumption in water resources.

For collocated sites that contain both WTW and water resource assets, a percentage split is applied to the main incoming supply based upon the equipment located on the site and the knowledge of company experts.

Overall electrical consumption has increased this year. This is attributed to the need to pull from rivers and boreholes earlier than normally required.

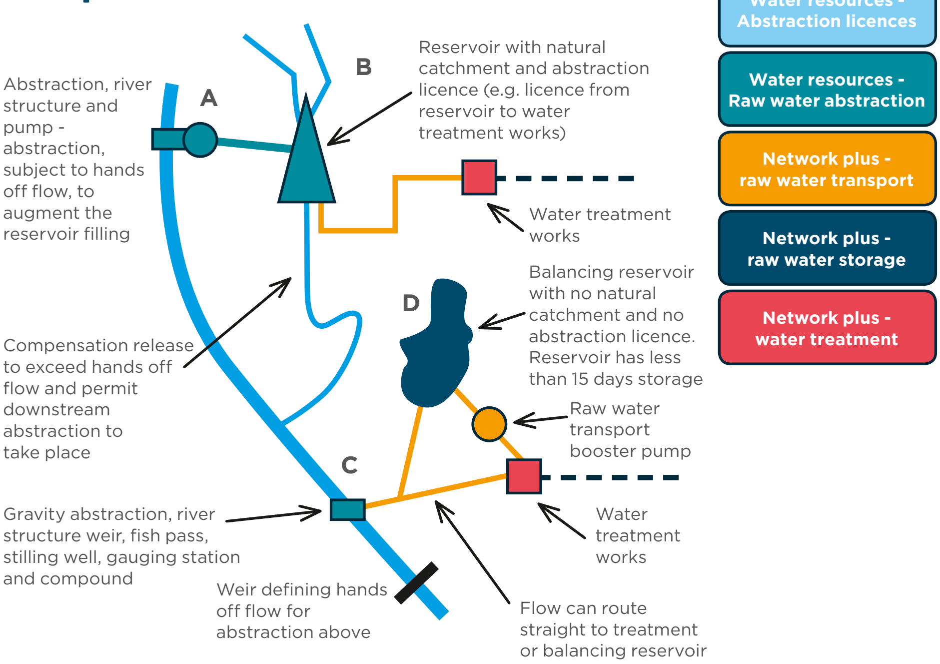
Office electrical consumption has increased by 10% due to improvements in the way the data is reported. Annually there has been a 0.5GWh increase possibly due to occupancy levels.

Transportation fuel has decreased by approximately 2GWh due to business needs and the increase in the use of smaller engine capacity vehicles.

Gas use has increased mainly due to the increase in gas consumption for offices due to an adverse winter.

Examples of applying the guidelines

Example 1



In this example there are four key points:

- **Point A** - Raw water is abstracted from the river via pumping assets. Any operation costs for assets supporting abstraction are included within this activity.
- **Point B** – A reservoir is supplied by its own natural catchment as well as the cross-catchment pumped abstraction via a pipeline. It releases eater back into the river in order to maintain flow conditions measured downstream. The reservoir also has an abstraction licence.
- **Point C** – The is a gravity abstraction from the river. Any operating costs for assets supporting abstraction are included within this activity.
- **Point D** – There is a reservoir, with no natural catchment, with no licence but filled via the licenced river abstraction. The reservoir itself has no abstraction licence. The reservoir has less than 15 days usable storage based on the average demand of the treatment works. The reservoir is a balancing asset that is used to maintain continuation of supply to the treatment works (acting as a buffer against short term low river flow or poor river quality).

Line 26 - Energy consumption – Wholesale.
This line is a summary of the table 4Q lines, incorporating all changes that have been described above.

Table 4R – Non-financial data - wastewater network and sludge - wholesale wastewater

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Current year
A - Wastewater network				
4R.1	Connectable properties served by s101A schemes completed in the report year	nr	0	11
4R.2	Number of s101A schemes completed in the report year	Nr	0	1
4R.3	Total pumping station capacity	kW	0	70022
4R.4	Number of network pumping stations	nr	0	2488
4R.5	Total number of sewer blockages	nr	0	30611
4R.6	Total number of gravity sewer collapses	nr	0	261
4R.7	Total number of sewer rising main bursts / collapses	nr	0	94
4R.8	Number of combined sewer overflows	nr	0	2113
4R.9	Number of emergency overflows	nr	0	580
4R.10	Number of settled storm overflows	nr	0	170
4R.11	Sewer age profile (constructed post 2001)	km	0	2165
4R.12	Volume of trade effluent	Ml/yr	2	18501.97
4R.13	Volume of wastewater receiving treatment at sewage treatment works	Ml/yr	2	659205.31
4R.14	Length of gravity sewers rehabilitated	km	0	23
4R.15	Length of rising mains replaced or structurally refurbished	km	0	0
4R.16	Length of foul (only) public sewers	km	0	5348
4R.17	Length of surface water (only) public sewers	km	0	7484
4R.18	Length of combined public sewers	km	0	16262
4R.19	Length of rising mains	km	0	1255
4R.20	Length of other wastewater network pipework	Km	0	355
4R.21	Total length of "legacy" public sewers as at 31 March	Km	0	30703
4R.22	Length of formerly private sewers and lateral drains (s105A sewers)	km	0	21560

Line description		Unit	DPs	Current year
B - Sludge				
4R.23	Total sewage sludge produced, treated by incumbents	ttds/ year	1	133.0
4R.24	Total sewage sludge produced, treated by 3rd party sludge service provider	ttds/ year	1	13.6
4R.25	Total sewage sludge produced	ttds/ year	1	146.6
4R.26	Percentage of sludge produced and treated at a site of STW and STC co-location	%	2	81.37%
4R.27	Total sewage sludge disposed by incumbents	ttds/ year	1	84.7
4R.28	Total sewage sludge disposed by 3rd party sludge service provider	ttds/ year	1	12.6
4R.29	Total sewage sludge disposed	ttds/ year	1	97.3
4R.30	Total measure of intersiting 'work' done by pipeline	ttds*km/year	0	0
4R.31	Total measure of intersiting 'work' done by tanker	ttds*km/year	0	776
4R.32	Total measure of intersiting 'work' done by truck	ttds*km/year	0	6683
4R.33	Total measure of intersiting 'work' done (all forms of transportation)	ttds*km/year	0	7458
4R.34	Total measure of intersiting 'work' done by tanker (by volume transported)	m3*km/year	0	23199114
4R.35	Total measure of 'work' done in sludge disposal operations by pipeline	ttds*km/year	0	0
4R.36	Total measure of 'work' done in sludge disposal operations by tanker	ttds*km/year	0	4
4R.37	Total measure of 'work' done in sludge disposal operations by truck	ttds*km/year	0	8262
4R.38	Total measure of 'work' done in sludge disposal operations (all forms of transportation)	ttds*km/year	0	8266
4R.39	Total measure of 'work' done by tanker in sludge disposal operations (by volume transported)	m3*km/year	0	91393
4R.40	Chemical P sludge as percentage of sludge produced at STWs	%	2	0.61%

Key

Input cell   Calculation cell

Table 4R provides information for the period 2017/2018 related to Wastewater networks and sludge for wholesale water.

Technical notes

Line 1. Connectable Properties served by s101A schemes completed in report year and line 2 Number of s101A schemes completed in report year.
Table 4R lines 1 and 2 provide the number of contactable properties and the number of schemes to comply with Section 101a. Section 101a, 'or first-time sewerage', is applicable where a private sewerage network not communicating with the existing public sewerage is causing an environmental issue. The owners of the private sewer network may approach Yorkshire Water to provide a public sewerage. Subject to meeting the criteria of 'first time sewerage', Yorkshire Water will provide the public sewer network to serve the affected properties. The frequency of first time sewerage requests or schemes is low. There are typically 1 or 2 requests in each five-year AMP period. The number of properties served is also low as first-time sewerage schemes tend to be more rural in locations.

Line 3. Total pumping station capacity.
Total pumping station capacity in 2017/2018 is 70,022Kw, an increase of 13.4% from 61,740Kw in 2016/2017. The majority of the increase is due to the inclusion of inlet pumping after clarification from OFWAT and a revision of the 'average Kw' capacity value used for transferred sites.
There were 21 private sewage pumping stations transferred to our network in 2017/2018 which have contributed to the increase in capacity.

Line 4. Number of Network Pumping Stations.
There has been a 6.7% increase in the number of network pumping stations to 2,488 in 2017/2018. This increase is related to the inclusion of inlet pumping after clarification from Ofwat. There have been 21 private sewage pumping stations identified for transfer in 2017/2018 which have also contributed to the reported increase.

The table below shows the historic data for lines 4R.3 and 4R.4 for the period 2011-12 to 2016-17.

Line number	Line Description	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
4R.3	Total pumping station capacity	66221	66190	66592	67281	67391	69757	70022
4R.4	Number of network pumping stations	1975	1993	2007	2042	2058	2463	2488

The introduction of the Water Act 2011 on 1/10/2016, resulted in a transfer of approximately 370 eligible private pumping stations to Yorkshire Water in 2016/2017, this increase can be observed on line 4R.4 in the table above.

Where pumping station kW capacity was unknown, due to being recently transferred under the Water Act 2011, we used the 2017/2018 post audit average values (5.4kW for pumping stations transferred 1/10/2016; 29.9kW for network SPS; 69.1kW for inlet pumping stations) were applied historically to prevent variation in average calculation.

Due to the replacement of pumps at pumping stations, there may be some variation in the total pumping station capacity. This is due to slight differences in pump kW ratings.

Line 5. Total number of Sewer Blockages.
The total number of sewer blockages has reduced from 32,849 in 2016/2017 to 30,611 in 2017/2018. The trend is showing a general year on year reduction and the overall the trend remains stable and in line with previous year's performance.

Line 6. Total number of gravity collapses.
There have been 261 incidents in 2017/2018 which is a reduction of 19.2% compared to 323 in 2016/2017.

This is the third year where we have reported a reduction in the number of incidents however there is a backlog of work that was promoted in last year with our Service Partner AMEY but wasn't completed – this may account for some of the stated reduction in the number of collapses this year.

Line 7. Total number of rising main bursts.
There have been 94 bursts in 2017/2018 which is an increase compared to 64 failures in 2016/2017. A number of mains have suffered multiple failures and are included in a sewer rehabilitation programme.

Line 8. Number of combined sewer overflows.
There have been 2,113 incidents in 2017/2018 which is an increase of 1.8% compared to the 2016/2017 reported figure of 2,075 incidents.

Line 9. Number of emergency overflows.
The total number of overflows in 2017/2018 was 580 occurrences, which is an increase of 0.7% compared to 576 occurrences reported in 2016/2017.

Line 10. Number of settled storm overflows.
Total pumping station capacity in 2017/2018 is 70,022Kw, an increase of 13.4% from 61,740Kw in 2016/2017. The majority of the increase is due to the inclusion of inlet pumping after clarification from OFWAT and a revision of the 'average Kw' capacity value used for transferred sites. There were 21 private sewage pumping stations transferred to our network in 2017/2018 which have contributed to the increase in capacity.

Line 11. Sewer Age Profile (constructed post 2001).
There is an increase in Sewer Age Profile from 2123km reported in 2016/2017 to 2165km in 2017/2018. This measure is impacted by new sewer assets created since 2001 we would expect to see this number increase year on year.

Line 12: Volume of trade effluent
Changes within industry have played a part in the reported reductions. We have observed that some traders have reduced the scale of their operations. Dependent upon the specific traders involved, volume and load can move differently.

In addition, this has been the first year of operating the non-household retail market and the management of trade effluent has transferred from our internal billing system to the new Central Market Operating System, which is designed to cope with all wholesalers billing arrangements. During the year we have identified a number of required improvements in the billing of wholesale services including trade effluent. We observed some unexpected results which we have been working to understand throughout the year and continue to work on this year. This has accounted for some of the reduction in the volume of trade effluent. Our expectation is that these improvements will be in place in this year for next year's reporting. We observe, that the load to flow ratio remains consistent with that of other companies.

Line 14. Length of gravity sewer rehabilitated.
Increase on 2017/2018, primarily due to increased activity for non-critical sewers renovated. The split of gravity or rising main has been determined based on the activity number used.

Line 15. Length of Rising Main replaced or structurally refurbished.
The majority of our refurbishment activity has been on non-critical rising main replacement; a total of 0.458 km was improved in 2017/2018.

Line 16. Length of Foul (only) public sewers.
The length of foul sewer has been increased by 5,348km in this year compared to 5,340 km in 2016/2017.

Line 17. Length of surface water (only) public sewers.
The length of surface water public sewer has increased by 7,484km (0.21%) in 2017/2018 compared to 7,468km reported in 2016/2017.

Line 18. Length of combined public sewer.
This year we have reported 16,262 km of combined sewer which is an increase of 1km of built sewer on the 16,261km measure reported in last year.

Line 19. Length of Rising Main.
The recorded length of Rising Main in 2017/2018 is 1,255 km. This is an increase of 0.80 % compared to 1,245 km reported in 2016/2017. Most of this increase relates to rising mains associated with 21 private sewage pumping stations identified for transfer in 2017/2018.

Line 20. Length of other waste water network pipework.
The length of waste water pipework has increased in 2017/2018 to 356 km, which is an increase of 0.28% compared to the previous year's reported figure of 355 km.

Line 21. Total length of 'legacy' public sewers as at 31 March.
The length of "legacy" sewers in 2017/2018 is reported at 30,703km, which is an increase of 0.11% compared to the 2016/2017 reported figure of 30669km.

Line 22. Total length of formerly private sewers and lateral drains (s105A sewers).
The length of former private sewers and lateral drains across our network in 2017/2018 is 21,560km. This measurement includes the length of sewer figure reported at the transfer of assets in 2011. The total length of these assets has been mapped and confirmed as 2.173 km- or 0.01% of total of the length of private sewers.

Lines 23-25. Sludge.
The same data set has been used to populate table 4E (line 25) and 4R (lines 23 to 29, not including line 26) minus grit and screenings data.

The treated and disposed data is identified for each destination site as either 'treated' or 'disposed' by the incumbent or third party.

There has been less third-party treatment this year due to our programme to deliver increased asset availability on our sites. Although we have closed some digesters at two small sites (Wombwell and Sutton), which produced an untreated material that could not be recycled using normal methods, these closures were offset by the increase in our internal treatment capacity elsewhere.

The use of third party services will be significantly reduced in 2019/2020 following the completion of the Knostrop digestion complex and the refurbishment of the Mitchell Laithes digestion plant.

Line 26. Percentage of sludge produced and treated at a site of STW and STC co-location.
We have interpreted the definition for this line to be "any plant that dewatered sludges whether its treated or not". For example, raw caking is included as well as digestion plant processing.

Using this definition, we have been able to deduce that any sludge produced from sites where this does not happen would be tankered into a STC (Sludge Treatment Centre)

The percentage of collocation was within 1% of last year's figures.

Lines 27-29. Total sewage sludge disposed.
A greater proportion of sludge was disposed/recycled by incumbents than in the previous year, as we were able to treat more, due to sustained effort resulting in increased asset availability, enabled us to recycle it ourselves.

Overall, the amount of material recycled/disposed in 2017/2018 has decreased since the previous year due to the freezing weather conditions in the winter and spring which has significantly reduced outlet availability. As a result, stocks on site have increased by around 5,000tds.

Lines 30-34. Total measure of Intersiting work done.
The geographical nature of Yorkshire means that we generally tanker our sludge. Yorkshire Water does not currently transport its sludge from STW's to an STC other than co-located sites.

The difference between reported figures in 2017/2018 compared to 2016/2017 is the intersiting of truck movements. This year our interpretation of the definitions has been updated and we have included movements to third party treatment, whereas last year we understood this measure as work done by trucks to Yorkshire Water treatment assets only.

Line 35. This is a zero report as we do not dispose of any sludge by pipeline.

Lines 36–39. These lines record the materials we recycle or disposed to farmland and land reclamation sites. For example, Naburn produces digested liquid sludge which is recycled to farmland specifically to turf growing land.
This provides valuable nutrients, and a physical top dressing to prevent wind erosion of soil. Naburn's digested liquid is recycled by tanker and measured in cubic meters (as physically recycled) and not ttds, multiplied by average km travelled to land.

Table 4S: Non-financial data – sewage treatment – wholesale wastewater

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Treatment categories			Treatment categories				
				Primary	Secondary		Tertiary				Total
					Activated Sludge	Biological	A1	A2	B1	B2	
A - Load received at sewage treatment works in 2017-18											
4S.1	Load received by STWs in size band 1	kg BOD_5/day	0	60	349	1062	29	0	61	0	1562
4S.2	Load received by STWs in size band 2	kg BOD_5/day	0	19	270	868	21	18	184	61	1442
4S.3	Load received by STWs in size band 3	kg BOD_5/day	0	150	752	2784	160	134	702	489	5171
4S.4	Load received by STWs in size band 4	kg BOD_5/day	0	0	4301	9503	872	2267	2032	2722	21696
4S.5	Load received by STWs in size band 5	kg BOD_5/day	0	0	8410	16922	5644	2910	4213	2315	40414
4S.6	Load received by STWs above size band 5	kg BOD_5/day	0	0	120661	38789	47012	58036	2271	6714	273483
4S.7	Total load received	kg BOD_5/day	0	229	134743	69928	53739	63365	9462	12301	343767
4S.8	Load received from trade effluent customers at treatment works	kg BOD_5/day	0								36011
B - Number of sewage treatment works at 31 March 2018											
4S.9	STWs in size band 1	nr	0	33	68	201	3	0	7	0	312
4S.10	STWs in size band 2	nr	0	1	12	40	1	1	8	3	66
4S.11	STWs in size band 3	nr	0	3	12	45	2	2	12	5	81
4S.12	STWs in size band 4	nr	0	0	13	35	2	8	8	10	76
4S.13	STWs in size band 5	nr	0	0	8	18	5	3	4	2	40
4S.14	STWs above size band 5	nr	0	0	17	7	4	5	1	2	36
4S.15	Total number of works	nr	0	37	130	346	17	19	40	22	611

Line description		Unit	DPs	Current Year
C - Population equivalent				
4S.16	Current population equivalent served by STWs	000	3	5729.451
4S.17	Current population equivalent served by discharge relocation schemes	000s	3	0.000
4S.18	Current population equivalent served by filter bed STWs with tightened/new P consents	000s	3	160.893
4S.19	Current population equivalent served by activated sludge STWs with tightened/new P consents	000s	3	0.000
4S.20	Current population equivalent served by groundwater protection schemes	000s	3	0.000
4S.21	Current population equivalent served by STWs with a Flow1 driver scheme	000s	3	0.000
4S.22	Current population equivalent served by STWs with tightened/new N consents	000s	3	0.000
4S.23	Current population equivalent served by STWs with tightened/new sanitary parameter consents	000s	3	16.049
4S.24	Current population equivalent served by STWs with tightened/new UV consents	000s	3	0.000
4S.25	Population equivalent treatment capacity enhancement	000s	3	0.000

Key

Input cell | Calculation cell

Treatment works consents																
Phosphorus					BOD_5						Ammonia					
<=0.5mg /l	>0.5 to <=1mg/l	>1mg /l	No permit	Total	>7mg /l	>7 to <=10mg/l	>10 to <=20mg/l	>20mg /l	No permit	Total	<=1mg /l	>1 to <=3mg/l	>3 to <=10mg/l	>10mg /l	No permit	Total
0	0	0	1562	1562	0	0	25	76	1461	1562	0	0	11	161	1390	1562
0	0	0	1442	1442	0	0	194	728	520	1442	0	0	270	713	458	1442
0	0	335	4835	5170	0	157	1646	3056	310	5170	0	98	1988	2495	589	5170
0	900	188	20608	21696	0	1424	5039	11607	3625	21696	0	2489	6410	7428	5370	21696
0	1859	4641	33914	40414	0	4308	14077	19398	2631	40414	0	2107	22211	7142	8954	40414
0	1544	0	271939	273483	0	28901	127032	83026	34525	273483	0	136112	88016	13258	36097	273483
0	4303	5163	334301	343767	0	34790	148014	117891	43072	343767	0	140806	118906	31197	52858	343767
0	0	0	312	312	0	0	2	9	301	312	0	0	1	15	296	312
0	0	0	66	66	0	0	9	31	26	66	0	0	12	31	23	66
0	0	4	78	82	0	2	22	49	7	80	0	1	26	43	11	81
0	3	1	72	76	0	5	18	42	11	76	0	6	24	27	19	76
0	2	5	32	39	0	4	15	19	3	41	0	2	23	7	8	40
0	1	0	35	36	0	1	13	18	4	36	0	10	16	5	5	36
0	6	10	595	611	0	12	79	168	352	611	0	19	102	128	362	611

This table (Lines 1-25) contains summary information relating to WWTWs and completed investment.

The first series of lines summarise the number of WWTWs across a number of size bands, together with the total loads received by the sites in these bands. There are minor changes in this table from previous years data due to changes in population and trade effluent.

The remainder of the lines record the population equivalent associated with a number of completed WWTW investment schemes including relocations, quality drivers (for Phosphorus, Flow, Nitrogen, Groundwater, Sanitary Determinands and (UV) and growth. We show the outcomes from schemes relating to Phosphorus and Sanitary Determinands.

Line 8

Changes within industry have played a part in the reductions we have reported. We have observed that some traders have reduced the scale of their operations. Dependent upon the specific traders involved, volume and load can move differently.

In addition, this has been the first year of operating the non-household retail market and the management of trade effluent has transferred from our internal billing system to the new Central Market Operating System, which is designed to cope with all wholesalers billing arrangements. During the year we have identified a number of required improvements in the billing of wholesale services including trade effluent. We observed some unexpected results which we have been working to understand throughout the year and continue to work on this year. This has accounted for some of the reduction in the volume of trade effluent.

We expect that these improvements to our reporting will be in place for next year's reporting. We observe, that the load to flow ratio remains consistent with that of other companies.

Table 4T – Non-financial data - sludge treatment - wholesale wastewater

For the 12 months ended 31 March 2018

Line description		Unit	DPs	by Incumbent	by 3rd party sludge service providers
A - Sludge treatment process					
4T.1	% Sludge - untreated	%	1	18.0%	0.0%
4T.2	% Sludge treatment process - raw sludge liming	%	1	3.0%	7.3%
4T.3	% Sludge treatment process - conventional AD	%	1	53.0%	0.0%
4T.4	% Sludge treatment process- advanced AD	%	1	15.5%	0.1%
4T.5	% Sludge treatment process - incineration of raw sludge	%	1	2.2%	0.0%
4T.6	% Sludge treatment process - incineration of digested sludge	%	1	0.0%	0.0%
4T.7	% Sludge treatment process - phyto-conditioning/ composting	%	1	0.9%	0.0%
4T.8	% Sludge treatment process - other (specify)	%	1	0.0%	0.0%
4T.9	% Sludge treatment process - total	%	1	92.6%	7.4%

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.

Technical notes

Lines 1-9. Show data on the method of sludge treatment, further separated by who carried out the treatment – either incumbent (YWS) or third party (various). The largest treatment route is conventional digestion followed by land reclamation which is in line with the previous year.

Lines 10-15. These lines provide data on the recycling/disposal route, further separated by who carried out the recycling/ disposal. We have seen 72% of our material recycled to farmland which is in line with normal trends.

This number will significantly increase next year when our Knostrop digestion plant is operational, and will also increase the proportion of sludge treated and recycled by incumbents compared to third parties.

Line description		Unit	DPs	by Incumbent	by 3rd party sludge service providers
B - (Un-incinerated) sludge disposal route					
4T.10	% Sludge disposal route - landfill, raw	%	1	0.0%	0.0%
4T.11	% Sludge disposal route - landfill, partly treated	%	1	0.0%	0.0%
4T.12	% Sludge disposal route - land restoration / reclamation	%	1	27.9%	0.0%
4T.13	% Sludge disposal route - sludge recycled to farmland	%	1	60.6%	11.5%
4T.14	% Sludge disposal route - other (specify)	%	1	0.0%	0.0%
4T.15	% Sludge disposal route - total	%	1	88.5%	11.5%

Key

Input cell Calculation cell

This table provides information on the Population resident within National Parks, SSSI (Sites Special Scientific Interest) and Areas of Outstanding Natural Beauty, designated by Natural England or by Natural Resources Wales. It also includes the business and residential properties connected and billed for sewage, and energy consumption by business units in the relevant Ofwat boundaries.

The number of properties connected year on year has decreased slightly. In line with expectations, we continue to see a decline in the number of unmeasured household properties and an increase in the number of measured household properties. Due in part to the market eligibility classification of properties, the non-household number of properties has decreased year on year. This has also been impacted by Severn Trent Water and United Utilities now taking ownership of billing their non-household customers. The number of void properties for water and sewerage services has increased this year but remains broadly in-line with previous years.

Technical notes

Lines 13 -15. Energy consumed.
This is a measurement of the total energy consumed in the relevant Ofwat boundaries. It includes electricity (used to power pumps, blowers, thickening equipment etc), Gas oil (Use for heating in boilers and Incineration), Natural Gas (heating in boilers), Kerosene (heating in boilers) and Transportation fuels as well as fuel used for sites.

Line 13. Energy consumption - network plus waste.
This is the energy consumed that falls within the network plus boundary split for waste water. This covers everything from sewage pumping to secondary treatment. It does not include the sludge treatment facilities such as digestion and associated equipment. For cohabited sites that contain both Sewage treatment works (STW) and sewage treatment facilities (STF's) a percentage split is applied to the main incoming supply based upon the equipment located on site and the knowledge of company experts.

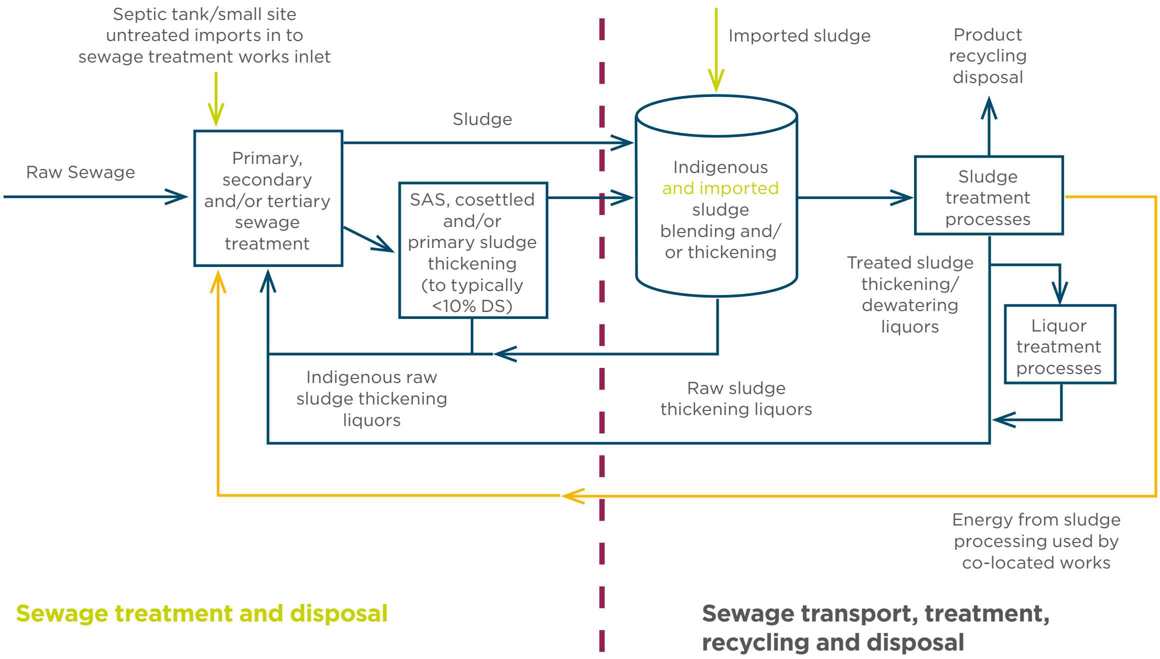
- Overall Electrical Consumption has increased.
- Gas oil has been included for the first year.
- Office electrical consumption has increased by 8% due to improvements in the way our data is reported. There has been an annual increase in consumption of 0.2GWh.
- Natural Gas consumption has increased by approximately 40% due to freezing weather at the start of 2018 and more heating required.
- Transportation has remained relatively static.

Line 14. Energy consumption – sludge.
This measure is the energy consumed that falls within the sludge boundary split for waste water. This covers everything after the 'network plus' boundary. All activities from thickening, sludge pumping, digestion and dewatering are included.

All sludge sites at Yorkshire Water are collocated. For collocated sites that contain both sewage treatment works (STW) and sewage treatment facilities (STF's) a percentage split is applied to the main incoming supply based upon the equipment located on site and the knowledge of company experts.

- Overall electrical consumption has decreased
- Gas oil has been included for the first year
- Office electrical consumption has seen a shift of 8%. This is a result of annual improvements to the reporting process allowing a more granular data set to be reported. Annually there has been a 0.18GWh decrease in electrical consumption.
- Natural Gas – has seen an increase of approx. 13% due to adverse weather at the beginning of the 2018, this resulted in the requirement for additional heating for anaerobic digestion plants. Annually a 0.6GWh increase has been seen.
- Transportation fuel has decreased by approx. 7%,

The following is the detail of the boundary split for sludge and network plus designated by Ofwat.



Line 15. Energy consumption – wholesale
This line summarises lines 13 and 14 and all changes have been described above.

Table 4U – Non-financial data - properties, population and other

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Current year
A - Properties and population				
4U.1	Residential properties connected during the year	000	3	13.347
4U.2	Business properties connected during the year	000	3	0.725
4U.3	Residential properties billed unmeasured sewage	000	3	972.372
4U.4	Residential properties billed measured sewage	000	3	1084.891
4U.5	Residential properties billed for sewage	000	3	2057.263
4U.6	Business properties billed unmeasured sewage	000	3	15.787
4U.7	Business properties billed measured sewage	000	3	89.259
4U.8	Business properties billed for sewage	000	3	105.047
4U.9	Void properties	000	3	120.813
4U.10	Total number of properties	000s	3	2283.122
4U.11	Resident population	000	3	5102.072
4U.12	Non-resident population	000	3	46.724

Key

Input cell Calculation cell

Line description		Unit	DPs	Current year
B - Other				
4U.13	Energy consumption - network plus	MWh	3	323836569.048
4U.14	Energy consumption - sludge	MWh	3	98379392.044
4U.15	Energy consumption - wholesale	MWh	3	422215961.092
4U.16	Population resident in National Parks, SSSIs and Areas of Outstanding Natural Beauty (AONBs)	000s	3	70.036
4U.17	Total sewerage catchment area	km2	0	1693
4U.18	Designated bathing waters	nr	0	19
4U.19	Number of intermittent discharge sites with event duration monitoring	nr	0	174
4U.20	Number of monitors for flow monitoring at STWs	Nr	0	0
4U.21	Number of odour related complaints	nr	0	3004
4U.22	Volume of storage provided at CSOs, storm tanks, etc to meet spill frequency objectives	m3	0	0
4U.23	Total volume of network storage	m3	0	4081786

Table 4V– Operating cost analysis - water resources

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Impounding reservoir	Pumped storage	River abstractions
Water resources						
A - Opex analysis						
4V.1	Power	£m	3	0.236	0.059	0.529
4V.2	Income Treated as negative expenditure	£m	3	-0.109	-0.051	0.000
4V.3	Local authority and Cumulo rates	£m	3	4.995	0.019	0.123
4V.4	Other direct operating expenditure	£m	3	7.453	0.021	2.339
4V.5	Other indirect operating expenditure	£m	3	0.817	0.000	0.407
4V.6	Total operating expenditure (excluding 3rd party)	£m	3	13.392	0.050	3.398
4V.7	Depreciation	£m	3	2.815	0.014	0.625
4V.8	Total operating costs (excluding 3rd party)	£m	3	16.207	0.064	4.023

Line description		Unit	DPs	Water resources	Raw water distribution	Water treatment
B - Other expenditure - wholesale water						
4V.9	Employment costs - directly allocated	£m	3	2.128	1.243	11.351
4V.10	Employment costs - indirectly allocated	£m	3	1.111	0.517	3.483
4V.11	Number FTEs consistent with 4V.9 above	Nr	0	50	29	259
4V.12	Number FTEs consistent with 4V.10 above	Nr	0	27	12	81
4V.13	Costs associated with Traffic Management Act	£m	3	0.000	0.000	0.000
C - Service charges						
4V.14	Canal & River Trust service charges and discharge consents	£m	3	0.000	0.000	0.000
4V.15	Environment Agency service charges/ discharge consents	£m	3	4.978	0.514	0.025
4V.16	Other service charges / permits	£m	3	0.000	0.000	0.000
4V.17	Statutory water softening	£m	3	0.000	0.000	0.000

Groundwater, excluding MAR water supply schemes	Artificial recharge (AR) water supply schemes	Aquifer storage and recovery (ASR) water supply schemes	Total
1.491	0.000	0.000	2.316
0.000	0.000	0.000	-0.159
1.789	0.000	0.000	6.926
2.851	0.000	0.000	12.664
3.153	0.000	0.000	4.377
9.284	0.000	0.000	26.125
2.159	0.000	1.247	6.860
11.443	0.000	1.247	32.985

Treated water distribution	Total
21.655	36.377
11.658	16.769
579	917.000
273	393.000
1.437	1.437
0.000	0.000
0.001	5.518
0.000	0.000
0.000	0.000

Key

Input cell | Calculation cell

This is a new table for 2017/2018, and is further disaggregation of water resources data contained within 4D, and reconciles to line 9 however, it does not reconcile with table 4J. To allocate these costs, all relevant assets were classified according to the tables in line with RAG 4.07. Of the total cost 83% have been directly allocated, given that most assets already had dedicated cost centres. The remaining 13% have been apportioned accordingly using management assessment.

To allocate employment costs and full-time equivalents (FTE's) into the wholesale water categories, we have used consistent manpower allocations (detailed by each FTE) which has provided the basis for lines 9 -13.

The traffic management act (TMA) costs have been provided by our internal permitting team, and only include the direct costs of the permits, and exclude the on costs associated with Local Authority Charges.

Total direct and indirect employment costs within water networks plus have moved year-on-year by under 5%, but with a significantly increased proportion of directly attributed employment costs. We have included the main price control allocation changes within our Methodology Statement, included in this report. The main reasons for the increase in the proportion of directly attributed salary allocations (and vice versa, similarly for FTE numbers) are:

1) By using a new Business Intelligence (BI) tool using data recorded from SAP, a new and more detailed view of staff time has been obtained. In addition, where managers or teams are not time scheduled on SAP (for example team leaders) we have challenged these teams to be specifically charged to price control rather than as general and support expenditure categories. This has driven more directly attributable costs.

2) There has been an increase in directly allocated FTE's and employment costs within water networks plus as a result of the escalation to meet the leakage targets and deal with the severe weather experienced during 2017-18, without increasing back office costs to the same proportion.

These changes are also reflected in table 4W which looks at waste water employment costs and FTE's.

Table 4W– Operating cost analysis - sludge treatment

For the 12 months ended 31 March 2018

Line description		Unit	DPs	Untreated sludge	Raw sludge liming	Conventional AD
Sludge treatment opex by treatment type						
A - Sludge treatment type						
4W.1	Power	£m	3	1.124	0.000	-0.388
4W.2	Income treated as negative expenditure	£m	3	0.000	0.000	-1.627
4W.3	Local authority and Cumulo rates	£m	3	0.730	0.000	0.438
4W.4	Other direct operating expenditure	£m	3	6.734	0.000	7.399
4W.5	Other indirect operating expenditure	£m	3	4.443	0.000	4.897
4W.6	Total operating expenditure (excluding 3rd party)	£m	3	13.031	0.000	10.719
4W.7	Depreciation	£m	3	3.655	0.000	8.565
4W.8	Total operating costs (excluding 3rd party)	£m	3	16.686	0.000	19.284
B - Sludge disposal route						
4W.9	Power	£m	3	0.000	0.000	0.000
4W.10	Income treated as negative expenditure	£m	3	0.000	0.000	0.000
4W.11	Local authority and Cumulo rates	£m	3	0.001	0.000	0.001
4W.12	Other direct operating expenditure	£m	3	1.874	0.000	3.516
4W.13	Other indirect operating expenditure	£m	3	0.947	0.000	1.775
4W.14	Total operating expenditure (excluding 3rd party)	£m	3	2.821	0.000	5.292
4W.15	Depreciation	£m	3	0.000	0.000	0.000
4W.16	Total operating costs (excluding 3rd party)	£m	3	2.821	0.000	5.292

Other expenditure - Wholesale wastewater

Line description		Unit	DPs	Network plus sewage collection	Network plus sewage treatment	Sludge
C - Opex analysis						
4W.17	Employment costs - directly allocated	£m	3	13.130	21.443	10.337
4W.18	Employment costs - indirectly allocated	£m	3	5.662	5.409	2.712
4W.19	Number FTEs consistent with line 4W.17	Nr	0	367	505	239
4W.20	Number FTEs consistent with line 4W.18 above	Nr	0	127	119	60
4W.21	Costs asscociated with Traffic Management Act	£m	3	0.285	0.000	0.000
4W.22	Costs associated with Industrial Emissions Directive	£m	3	0.000	0.000	0.000
D - Service charges						
4W.23	Canal & River Trust service charges and discharge consents	£m	3	0.272	0.000	0.000
4W.24	Environment Agency service charges / discharge consents	£m	3	1.335	3.109	0.319
4W.25	Other service charges / permits	£m	3	0.000	0.000	0.000

Advanced AD	Incineration of raw sludge	Incineration of digested Sludge	Photo-conditioning / composting	Other	Total
-0.106	0.000	0.000	0.000	0.000	0.630
-0.461	0.000	0.000	0.000	0.000	-2.088
0.156	0.000	0.000	0.000	0.000	1.324
2.519	0.000	0.000	0.000	0.000	16.652
1.626	0.000	0.000	0.000	0.000	10.966
3.734	0.000	0.000	0.000	0.000	27.484
0.000	0.000	3.599	0.000	0.233	16.052
3.734	0.000	3.599	0.000	0.233	43.536
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.000	0.000	0.000	0.000	0.002
2.501	0.000	0.000	0.000	0.000	7.891
1.264	0.000	0.000	0.000	0.000	3.986
3.766	0.000	0.000	0.000	0.000	11.879
0.000	0.000	0.000	0.000	0.000	0.000
3.766	0.000	0.000	0.000	0.000	11.879

Total
44.911
13.784
1112
307
0.285
0.000
0.272
4.763
0.000

This is a new table for 2017/2018, with Sections A and B being a disaggregation of table 4E of sludge treatment costs, and reconciles to line 9 however, it does not reconcile with table 4K, with further opex and service charge analysis for wholesale waste water in Sections C and D.

To allocate the sludge treatment costs, all relevant assets were classified according to the tables in line with RAG 4.07, with sludge treatment costs directly allocated by site where possible into the relevant treatment categories (Untreated Sludge, Conventional & Advanced). Of the total cost 65% have been directly allocated, given that most assets already had dedicated cost centres. The remaining 35% non-site-specific costs were apportioned using the site-specific splits.

To allocate employment costs and full-time equivalents (FTE's) into the wholesale waste water categories, we have used consistent manpower allocations (detailed by each FTE) which has provided the basis for lines 17- 20.

The traffic management act (TMA) costs have been provided by our internal permitting team, and only include the direct costs of the permits, and exclude the oncosts associated with Local Authority Charges. The Traffic Management Act costs reported in table 4W have significantly increased year on year based on the requirements from local authorities who are implementing permitting schemes and increasing their annual usage of permits across varying road types.

The costs for Traffic Management Act on table 4W has been reported in Network plus sewage collection.

Key

Input cell | Calculation cell

8. 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 waste water is an essential service we provide to Yorkshire Water customers. To make sure that this is achieved in a way that is safe and compliant for all our customers and stakeholders whilst protecting and enhancing the environment we need to comply with a range of regulatory and legal obligations. We recognise the importance of our reporting to build customer and stakeholder confidence and that we need to openly report our level of compliance with these obligations and how this has been achieved.

This statement sets out how we have complied with the statutory, licence and regulatory 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 their obligations.

This statement covers the reporting year 1 April 2017 to 31 March 2018 for all obligations, except for environmental compliance and water quality parameters. These obligations are reported for the calendar year, 1 January 2017 to 31 December 2018.

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 our Board.
- **Section 2:** Outlines the processes and assurance we have in place to achieve compliance and meeting our obligations.
- **Section 3:** Copy of the assurance letter from our independent technical advisor Jacobs.

Section 1

Board Assurance Statement

As the Board of Yorkshire Water Services, we are satisfied that we have the 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 systems of internal control to meet our obligations.
- 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 F6A).
- 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 seven years, to 2025, as set out in our long-term viability statement which can be found in Appendix 04 of this 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).
- Made sure that all trade with associate companies in the year has been at arm's length (Licence condition F6).
- Maintained the investment grade credit rating Baa2 (Licence condition F6A.6).
- Explained how we link Directors' pay to standards of performance which can be found in our Annual Report and Financial Statements (section 35A of the Water Industry Act 1991).
- Reported in Table 1 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 Technical Adviser Jacobs has reviewed the approach and processes we follow in assessing compliance with our obligations. A copy of their Assurance Statement 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 guidance.

The Board is pleased to confirm that by 31 March 2015, it had fully implemented the principles which Ofwat expects companies operating in the water sector in England and Wales to apply, as set out in its document entitled "Board leadership, transparency and governance principles" published in January 2014 ("the Ofwat Principles"). A majority of independent Non-Executive Directors sit on the Board, which is led by an independent Non-Executive Chairman. There are three investor representatives present on the Board.

The matters reserved to the Board, together with the Terms of Reference of the Board's principal Committees are published on the Company's website: **www.yorkshirewater.com/about-us/what-we-do/corporate-governance-and-structure**. In accordance with the Ofwat Principles the Board adopted its own "Board Leadership, Transparency and Governance Code" ("the Yorkshire Water Code") in February 2014. This is available on the website: **www.yorkshirewater.com/sites/default/files/Yorkshire%20Water%20transparancy%20code.pdf** The Yorkshire Water Code sets out how the Company has complied with the Ofwat Principles and the time frame within which it would fully implement the Ofwat Principles.

The Board also notes the Government's proposals on corporate governance reform and recognises its accountability to all stakeholders in terms of its corporate governance as a large, private company. Further information on our governance is contained within Section 6 and Appendix 4 of the Annual Performance Report. Additional detail is also provided within the Annual Report and Financial Statements **www.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
Water Industry Act: maintain maps of their sewers. Clause/Section 199. **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.**	The Water Industry Act places an obligation on wastewater companies to maintain maps of their sewers. In common with all other wastewater companies in England and Wales not all our sewers are mapped.	We continue to improve our maps as we perform work on our waste water networks.
Performance commitments. **For 2017/2018 we have met or exceeded 22 of our 26 Performance Commitments**	**These are the four performance commitments we did not achieve this year.** **Energy generation performance commitment.** • In 2017/2018, we supplied 11.4% of our needs through self-generated energy. This being a two year high compared with 2015/2016 & 2016/2017, where self-generation was 11.3% & 10.4% respectively. However, this falls short in achieving our Performance Commitment of generating 12% of our energy needs from renewables. **Drinking water quality contacts performance commitment.** • We did not achieve our target of 6,108 contacts. **Drinking water quality compliance performance commitment.** • We did not achieve our target of 100% compliance. Drinking water quality in Yorkshire remains excellent at 99.953%. **Leakage performance commitment.** • This year we narrowly missed our performance target of 297.1 million litres a day (Ml/d) throughout the year. This year we reported annual average leakage as 300.28 Ml/d which is within 1% of our target. You can read more about how we have performed against our promises to you in our performance summary report. Click here for a link: **www.yorkshirewater.com/reports**	Detailed action plans to improve our performance are monitored by our Asset Delivery Assurance Groups. You can read more about our actions in Section 3, Review of our performance and Section 7, Regulatory Information of our annual performance report.

Exceptions - continued

Obligation	Yorkshire Water position	Action being taken to improve
Environment Agency Environmental Performance Assessment.	The Environment Agency annually completes an Environmental Performance Assessment (EPA) of the water companies in England, examining performance on a range of environmental compliance matters such as pollutions incidents and waste water treatment works compliance. Our overall treatment works compliance in the 2017 calendar year was 98.3%. This was an improved performance compared to 2016 when we had seven failing waste water works or 97.6% compliance.	We have continued to deliver our programme of environmental investment and investigation needs to 2020. This programme focuses on the investment required to enhance our waste water treatment capabilities and protect the environment. The programme also includes investigations to understand and inform future investment needs.

In addition to these known exceptions to achieving our obligations, our annual Control and Risk Self-Assessment process, by which all senior leaders across the business confirm their awareness and compliance with our obligations, has identified a risk of non-compliance. The risk has been identified where our process identified 92% awareness and compliance across all relevant obligations, including corporate governance. The obligations with the highest risk of non-compliance are the General Data Protection Regulations (GDPR) and the Network and Information Security Directive which came into effect in May 2018. There are 279 actions which are being monitored to improve awareness and compliance. This view of compliance is consistent with the view of our independent technical advisor Jacobs, who similarly identify opportunities for us to improve controls and awareness.

Board Signatures

Anthony Rabin
Chairman

Richard Flint
Chief Executive

Liz Barber
Director of Finance,
Regulation & Markets

Pamela Doherty
Director of Service Delivery

Nevil Muncaster
Director of Asset Management

Julia Unwin
Non-Executive Director

Teresa Robson-Capps
Non-Executive Director

Ray O'Toole
Non-Executive Director

Andrew Wyllie
Non-Executive Director

Mark Amsden
Company Secretary (Interim)

Scott Auty
Non-Executive Director

Andrew Dench
Non-Executive Director

Michael Osborne
Non-Executive Director

Section 2

Assurance to confirm compliance

Understanding and meeting our obligations

Our activities are governed by a range of legislation as well as the requirements of our Licence. Yorkshire Water employs relevant expertise to ensure that we understand these requirements and translate them into compliant policies and procedures for colleagues to apply. This expertise includes, but is not limited to, Legal Services, the Regulation team, Company Secretariat, Financial Services, Health and Safety, Asset and Process Engineers and Human Resources. These teams draw on deeper external expertise to ensure that any changes to our obligations are appropriately applied.

Compliance with approved policy and procedure is monitored through our three lines of assurance. This assurance is mapped to ensure effective coverage and dynamic escalation of issues. Corrective actions are raised and monitored where 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 legislation, regulation and governance by completing an annual Control and Risk Self-Assessment (CRSA). Subject matter experts highlight the legislation and regulation each team needs to comply with, including changes. Where leaders identify weaknesses, they are required to set out 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 Committee, the Kelda Management Team and the Board. The results of this self-assessment are triangulated with other sources of assurance. An annual Internal Audit of the process tests individual judgements on the level of compliance to the supporting evidence.

CRSA outturn for 2017/2018 indicates a high level of compliance in Yorkshire Water at 92%. Compliance with, and awareness to, human resources (93%), procurement (93%), environment (98%), finance (100%) and health & safety (90%) related legislation was scored as high. Compliance with, and awareness to, our Corporate Governance Manual (89%) as well as data and security related regulatory requirements (76%) will be key areas for improvement this year, especially where GDPR and the Network and Information Security Directive came into force in May 2018.

Understanding and meeting our customer 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 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. Insights from our ongoing customer and stakeholder engagement has led to the co-creation and co-development of our long-term strategy consultation document earlier this year, as well as informing the development of our PR19 business plan. We have continued to look closely at the future economic, social and environmental issues which Yorkshire faces and have spoken at length to our varied and diverse customers and stakeholders.

We've taken care to analyse the pressures we face such as population growth and changing weather patterns and to understand the rich and diverse community that we serve here in Yorkshire. We've looked at how that community is made up now and how that will change in the future. We set out to better understand what people value in their lives and the role water plays. We've investigated how customers with different lifestyles rely on water in different ways and we've looked at how some people are much more dependent on their supply for a range of religious or medical reasons.

We have also taken a step back and thought about how we, as a company, impact on Yorkshire's environment, its people and economy as we carry out our activities. We have asked where we can do better to improve what we do, how we do it and how we can work better with others to make sure that the people of Yorkshire get the best all round value for what they spend on water. Customers have told us that we could do better in areas that are important to them. This insight has informed our plans to significantly improve our leakage, pollution and sewer flooding performance through our upper quartile plan.

As well as talking directly to 30,000 of our customers and stakeholders about what they want and need from us, we've also engaged with the Yorkshire Forum for Water Customers, which has given us valuable insight into what our customers want from us now and into the future. The Yorkshire Forum for Water Customers is an independent challenge group that is responsible for ensuring our customers' views are fairly reflected in our PR19 business plan and ensuring we meet the performance commitments we have made to customers.

We continue to carry out extensive research, using new and innovative methods alongside tried and trusted ones. We have worked with customers and stakeholders in lots of different ways including research projects, monthly customer trackers, focus groups, round table events with our Directors, stakeholder briefing sessions and new ideas like the Hull and Haltemprice Charrette. In the Charrette we engaged with various customers and stakeholders to collaboratively design a vision for future flood alleviation schemes in Hull.

We have created an online community which has over 1,000 customers who regularly comment on and take part in research on a host of different subjects related to topics like customer service, reporting, our plans or even just the way in which we communicate with them. This engagement, alongside our regular interactions with customers and stakeholders has given us a much-improved insight into the diverse and changing needs of our customers and stakeholders

Identifying, managing, mitigating and reviewing our risks

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 ensure that risks, including potential non-compliance with our obligations, are identified and escalated in a timely way to be managed to appetite at the right level of the business. Our risk management framework and the principal risks to achieving our objectives are detailed in Appendix 4 of the annual performance report.

Regulatory obligations at risk

Based on 2017/2018 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:

- **Energy generation**
- **Drinking water quality contacts**
- **Drinking water quality compliance**
- **Leakage**
- **Discharge permit compliance**
- **Pollution serious incidents (Category 1-2)**

- Energy generation: We did not meet our 2017/2018 performance commitment of 12%. Our consumed electricity increased in 2017/2018, from 570GWh to 598GWh from the previous year. We work hard to minimise our electricity consumption and to maximise the amount of energy we generate. In 2017/2018, we supplied 11.4% of our needs through self-generated energy. This is a two year high compared with 2015/2016 and 2016/2017, where self-generation was 11.3% and 10.4% respectively. We expect to meet our 12% target a in 2018/2019.
- Drinking water quality contacts: We did not meet our 2017/2018 performance commitment target of 6,108. We had 8,100 contacts in 2017/2018. 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. The improvement wasn't enough to meet the extremely challenging target, but our initiatives continue to reduce the number contacts we receive. While we strive to achieve this stretching performance commitment, our Price Review business plan and funding agreement with Ofwat was based on maintaining the level of contacts at or around 12,143 contacts each year between 2015 and 2020.
- Drinking water quality compliance: We have identified a risk of achieving the 100% compliance required after 2017/2018. We achieved 99.953% in 2017/2018.
- Leakage: This year we reported annual average leakage as 300.28 Ml/d and meeting our 2018/2019 target of 292.1Ml/d will be challenging. In December 2018 we announced ambitious plans to reduce leakage by over 40% by 2025 and become a water industry leader. We have recruited over 100 more leakage inspectors with further increases planned. We are using satellite technology to locate leaks in Halifax, Keighley and Shipley where over 120 leaks have been investigated with a 55% success rate. We have deployed 600 acoustic loggers in Huddersfield and found nearly a million litres per day of leakage and we are using drones on the York to Selby trunk main.
- Discharge permit compliance: While it is our aim to achieve high levels of performance and drive towards 100% compliance, five of our approximately 600 waste water treatment works did not meet their discharge permit conditions in 2017, securing 98.3% compliance. This was an improvement compared to 2016 when we had seven failing waste water works or 97.6% compliance. We will continue to manage the growing challenges to our compliance from population growth and more extreme and prolonged rainfall events.
- Pollution Serious Incidents (Category 1-2): There is a risk that we will not be able to achieve our zero-incident target by 2019/2020. We recognise the need to go further and we are working to achieve the ambitious performance commitment for zero serious incidents by 2020. However, we also recognise that reducing the number of pollution incidents and consistently achieving this performance commitment will be challenging.

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 standard. This 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 ensure 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 assurance plan, you can find a copy here: **www.yorkshirewater.com/reports**

We can confirm that we have followed these processes for our Annual Performance Report.

Each year we consult on, and publish our Risks, Strengths and Weaknesses Statement (**www.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 2017/2018, 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 4 of our Annual Performance Report. Our targeted areas are listed below.

- Information published is what our customers want and need.
- Information is always accurate and reliable.
- Information is easy to find.
- Information is easy to read and understand.
- Performance commitments where the target was missed in the previous year (drinking water quality contacts and energy self-generation).
- Performance commitments where additional challenge was provided by our external auditors in the previous year (waste diverted from landfill and stability and reliability factor: sewer network).
- Performance commitments where we are forecasting a financial incentive penalty (at September 2017 this was forecast to be drinking water quality, drinking water complaints and pollution incidents).
- Performance commitments where we are forecasting a financial incentive reward (at September 2017 this was forecast to be water supply interruptions).
- Cost allocation in the Kelda Group.
- Price control cost allocation.
- Price Review 2019.

Taking responsibility for resilience: managing our obligations

Our customers have told us that they expect us to deliver safe, affordable water and waste water services, and for us to play our part in protecting and enhancing the natural environment. Our ability to deliver on the commitments we have made to our customers is dependent on our business being resilient. We need 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.

As part of our long-term planning we have reviewed how we maintain and further enhance the levels of resilience we provide, and to ensure we meet our resilience duty. We are developing our approach to ensure that we can keep things running well and are responding to future challenges in the most sustainable way.

We do this through:

- Understanding the nature of customer expectations and the future level of demand.
- Embedding systems and controls to understand the risks to achieving these expectations, including changing environmental factors, and using this information to manage our risks effectively.
- Improving our ability to deal with the consequences of unplanned failures or crises.
- Performing a long-term review of our financial resilience as reported in our Annual Report and Financial statements. Here is a link to our reports: **www.yorkshirewater.com/reports**

We have recently developed a whole-business resilience framework to help us further enhance our approach. This has been supported by resilience experts at Arup and brings together a range of international best practice tools and processes to develop a system which enables quantification of our resilience over time, and which complements our existing approach to risk management. We have used the framework to complete a business-wide assessment of past, current and future practice against the British Standard. We are currently embedding the regular and ongoing use of our new framework within our standard business governance arrangements to support the process of continual improvement.

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 British Standard 65000:2014 Organisational Resilience. We were the first water company to ask the experts at the Cabinet Office Emergency Planning College (EPC) to complete an independent maturity assessment against the standard in Spring 2018 to measure the effectiveness of our current practice and make recommendations for further improvements.

We will be publishing a report on our resilience framework and maturity assessment later in the Summer of 2018.

Section 3

Jacobs assurance letter

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Yorkshire Water Technical Assurance Framework

Yorkshire Water Services

2017-18 Risk & Compliance

19 June 2018

Final

2017-18 Risk & Compliance

Yorkshire Water Technical Assurance Framework

Project No:	672454.AA.18.06
Document Title:	2017-18 Risk & Compliance
Document No.:	
Revision:	
Date:	19 June 2018
Client Name:	Yorkshire Water Services
Client No:	
Project Manager:	Andrew Mcgeoghan
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Letter of Assurance

19 June 2018

Attention: The Board
Yorkshire Water
Western House
Western Way
Halifax Road
Bradford
BD6 2SZ

Subject: 2017-18 Risk and compliance statement – assurance statement

As set out in IN 18/07 Ofwat requires companies to publish an annual risk and compliance statement, confirming they have complied with all relevant statutory, licence and regulatory obligations and are taking appropriate steps to manage and/or mitigate any risks they face. Companies are required to do this within the context of the Company Monitoring Framework (CMF).

In preparing the statement companies are required to consider their obligations in both legislation and their licences. As with other company information, it is important that stakeholders can have trust and confidence in your risk and compliance statement.

Our review focused on the approach and processes you follow to assess your compliance with your obligations, in particular we concentrated on your Control and Risk Self -Assessment (CRSA) process and documentation. We also provided advice on the content and drafting of your risk and compliance statement which is reflected in the final version of your statement.

As part of our risk based approach we met with Sarah Lubbe to review the CRSA process in her roles as both a member of the Risk and Compliance team, and as a Risk Champion. We also met with three Legal Champions to review their experience of the CRSA sign off process for three obligations - Security of Network and Information Systems, Water Framework Directive and Provision of Trade Effluent Services.

We are aware that you do have processes to manage compliance with other obligations and duties, but that they are not explicitly covered as part of the CRSA process and therefore are not part of your risk and compliance statement. We note that the CRSA process is a Kelda Group Process, and that risk appetite was assessed using a Kelda Group scale. We did not review the process you use to assess whether non-compliance with legislation falls below your risk appetite. Therefore, we did not consider whether the risk threshold and risk appetite was appropriate for the Appointed Business as a whole or for the various Appointed Business price controls.

Our main observations from our assurance activity are as follows; -

- During our review we evidenced that as a company you have established appropriate systems and processes for identifying, managing, mitigating and reviewing risk;
- We observed that you recognise the importance of risk management, and have an established Risk Committee to monitor and manage risk, which is then cascaded through the business;
- In our discussions with Legislation Champions we observed that generally the process was well understood and had been communicated across the business. Where the CRSA process had not been complied with it did not mean that regulations or obligations were not being complied with; and
- Within the CRSA process we observed evidence of horizon scanning to identify new risks, for example, your teams working with DWI & NCSC.

2017-18 Risk & Compliance

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We note that whilst you have appropriate systems in place, that there remain opportunities for improvement. For example, we observed that: -

- Where there had been a handover in responsibility between legislation champions, the transition between the current and previous Legislation Champion had not gone smoothly. We recommend that you consider if there are any lessons learnt from the handover process which can be used to improve future handovers.
- We found that in some areas the Legislation Champions probably have the most detailed knowledge of the obligations in their respective part of the business. It was not always clear whether the Legal Team would be able to effectively review and challenge their interpretation of the relevant obligations in all areas. For example, we found that the new WFD Legislation Champion had identified that the existing list of environmental obligations was not complete, some obligations had been superseded and the list of obligations required updating. The gaps did not relate to recent legislation, and the list, although signed off in the CRSA process, had not been complete in the prior year. We recommend that in certain specialist areas it may be necessary to obtain challenge from others within the same team.
- For some obligations in the CRSA process there were no visible controls in place, and whilst it is the responsibility of T2s to ensure that controls were put in place we recommend additional checks and controls to monitor progress
- There are some obligations, for example, Competition Act, where whilst the Legislation Champion and CRSA sign off is by a single business area, we discussed that the compliance risk is wider and other areas need to be aware of the obligation and the associated compliance risks. We understand that the legal champion will identify and make the appropriate parts of the business aware of compliance risks as appropriate, but note that documenting details of the awareness risk is not currently part of the CRSA.

As part of our review across the sector we observed that some companies continue to note exceptions, or areas for improvement as part of their annual statements. We understand that you are proposing to report exceptions for 4 performance commitments and for two other obligations. As the risk and compliance statement is not required to be part of the APR for 2017-18 we recommend that you link to the APR where you provide further information on your performance.

We therefore consider that, other than where indicated otherwise in this letter and/or the feedback we provided:

- **you have a full understanding of the company's relevant obligations (as you have interpreted the scope required for this exercise); and**
- **you have appropriate systems and processes in place to run your business and identify and manage risks in a way that meets the relevant obligations (as you have interpreted the scope of these).**

Yours sincerely

Andrew McGeoghan

Head of Regulation and Assurance

0121 437 5000
andrew.mcgeoghan@jacobs.com

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Important note about your letter

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Appendix 1.
Financial auditor’s opinion

Independent Auditors' report to the Water Services Regulation Authority (the WSRA) and the Directors of Yorkshire Water Services Limited

Report on the audit of the Regulatory Accounting Statements

Opinion

We have audited the sections of tables within Yorkshire Water Services Limited ("the Company") Annual Performance Report for the year ended 31 March 2018 ("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) 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) and the related notes.

We have not audited the Outcome performance table (tables 3A to 3S) and the additional regulatory information in tables 4A to 4W.

In our opinion, Company's Regulatory Accounting Statements have been properly prepared in accordance with financial reporting provisions of Condition F, the Regulatory Accounting Guidelines issued by the WSRA (RAG 1.08, RAG 2.07, RAG 3.10, RAG 4.07 and RAG 5.07) and the accounting policies (including the Company's published accounting methodology statement, as defined in RAG 3.10, appendix 2), set out in Appendix 3. Accounting Separation Methodology Statement of the Annual Performance Report.

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 Auditor’s responsibilities for the audit of the Regulatory Accounting Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the Regulatory Accounting Statements in the UK, including the Financial Reporting Council’s Ethical Standard, 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 Condition F, the Regulatory Accounting Guidelines, the accounting policies (including the Company’s published accounting methodology statement, as defined in RAG 3.10, 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.

The Regulatory Accounting Statements are separate from the statutory financial statements of the Company and have not been prepared under the basis of United Kingdom Generally Accepted Accounting Practice (“UK GAAP”). Financial information other than that prepared on the basis of UK GAAP 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 in Section 7. Regulatory Information of the Annual Performance Report have been drawn up in accordance with Regulatory Accounting Guidelines with a number of departures from UK GAAP. 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 respective Directors’ and Auditor's responsibilities sections below. As a result, the Regulatory Accounting Statements may not be suitable for another purpose.

Our opinion is not modified in this respect.

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 when:

- 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.

However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Company's ability to continue as a going concern.

Other information

The other information comprises all of the information in the Annual Performance Report other than the Regulatory Accounting Statements and our auditor's report thereon. The Directors are responsible for the other information. Our opinion on the Regulatory Accounting Statements does not cover the other information and, accordingly, we do not express an audit opinion or any form of assurance 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 or inconsistency of this other information, we are required to report that fact.

We have nothing to report based on these responsibilities.

Responsibilities of the Directors

As explained more fully in the Statement of Directors' Responsibilities set out in Appendix 4. Disclosures of the Annual Performance Report, the Directors are responsible for the preparation of the Regulatory Accounting Statements in accordance with Condition F, the Regulatory Accounting Guidelines issued by the WSRA and the Company's accounting policies (including the Company's published accounting methodology statement as defined in RAG 3.10, appendix 2).

The Directors are also responsible for such internal control as they determine is necessary to enable the preparation of the Regulatory Accounting Statements that are free from material misstatement, whether due to fraud or error.

In preparing the Regulatory Accounting Statements, 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

Our objectives are to obtain reasonable assurance about whether the Regulatory Accounting Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's 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 FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

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 paragraph 3 of 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 within the Annual Performance Report is separate from our opinion on the statutory financial statements of the Company for the year ended 31 March 2018 on which we reported on 13 July 2018, 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 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

Deloitte LLP

Leeds, UK

13 July 2018

Appendix 2. Technical assurance statement

JACOBS®
Halcrow Management Sciences Limited

YORKSHIRE WATER SERVICES
ANNUAL PERFORMANCE REPORT 2018
TECHNICAL ASSURANCE REPORT

July 2018

Yorkshire Water Services

Annual Performance Report 2018

Technical Assurance Report

Document Control

Title: APR18_Assurance Report

Project: 672454/APR18

Version	Issued to	Date	Prepared by	Checked by	Approved by
1.0	YWS	06 July 2018	C Turner	C Morley	CWJ Turner

Yorkshire Water Services

Annual Performance Report 2018

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 2018.

HMS is a Jacobs Company but operates independently to ensure confidentiality and to avoid 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 outcome, performance commitment and incentive mechanisms.

Each company's board is accountable for the quality and transparency of the information they provide on their performance and for implementing assurance procedures to make sure they 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 work has been determined by YWS and has included:

- Performance metrics on Tables: 3A, 3B, 3C (n/a), 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: 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 against PR14 and business targets
- Networks and treatment
- 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: versions 2.07 and 4.07
- APR18 table templates and guidance
- 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

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 Face-to-Face Audits
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 adequately transparency of the issue.
9. Presentations and preparation of Reports and Assurance Statements.

3.2 Assessment

We use the following 'RAG' coding to simply highlight the areas of concern

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

The following tests are applied to the data presented and accompanying commentaries:

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, APR18 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 2017/18 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 good evidence of senior management engagement, but greater and earlier formalisation of this would benefit the assurance process

Summary of Issues remaining at audit closure		RAG Status		
Issue Group	Issue category	R	A	B
1	Note for PR19 that YWS currently over-report sewer blockages	-	-	1
2	Methodologies – complex and/or in need of improvement	-	-	6
3	Confidence Grades – improvements recommended	-	-	1
4	Poor evidence of QA checks, document control, sign-off	-	-	10
5	Data not confirmed as final	-	-	-
6	Enhancements to APR commentary recommended	-	-	1
7	Assumptions – amendments/improvements suggested	-	-	2
8	Ambiguity in guidance - clarification required	-	-	3
9	Poor source data quality and/or handling improvements required	-	1	12
	Totals	**0**	**1**	**36**

RED issues

There are no RED status issues remaining.

AMBER issues

The reporting guidance has changed for 2017/18 requiring a more granular allocation of assets and their performance between price controls. YW has provided an action plan to address this but we are concerned that some of the numbers reported in Table 4P do not yet have sufficiently robust audit trails to confirm their accuracy.

BLUE issues

Whilst a substantial number of issues found during the audit process have been identified and satisfactorily resolved, clearly there remain several additional areas where further improvements have been recommended. This particularly includes improvements to the quality and handling of some source data, general improvements to quality assurance and governance processes, and improvements to methodologies (including seeking clarification of Ofwat's reporting requirements). However, these are not deemed to be sufficiently material to be escalated into this report.

5. 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 2018 has included:

- Performance metrics on Tables: 3A, 3B, 3C (n/a), 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: 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 2018 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 2018 provides a fair, balanced and understandable summary of the Company's 2017/18 circumstances and performance.

CWJ Turner

Director
Halcrow Management Sciences Limited

July 2018

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 7 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 7) and Wholestream upstream services (Annual Performance Report Section 7).

In accordance with RAG 3.10, the document is separated into the following three sections:

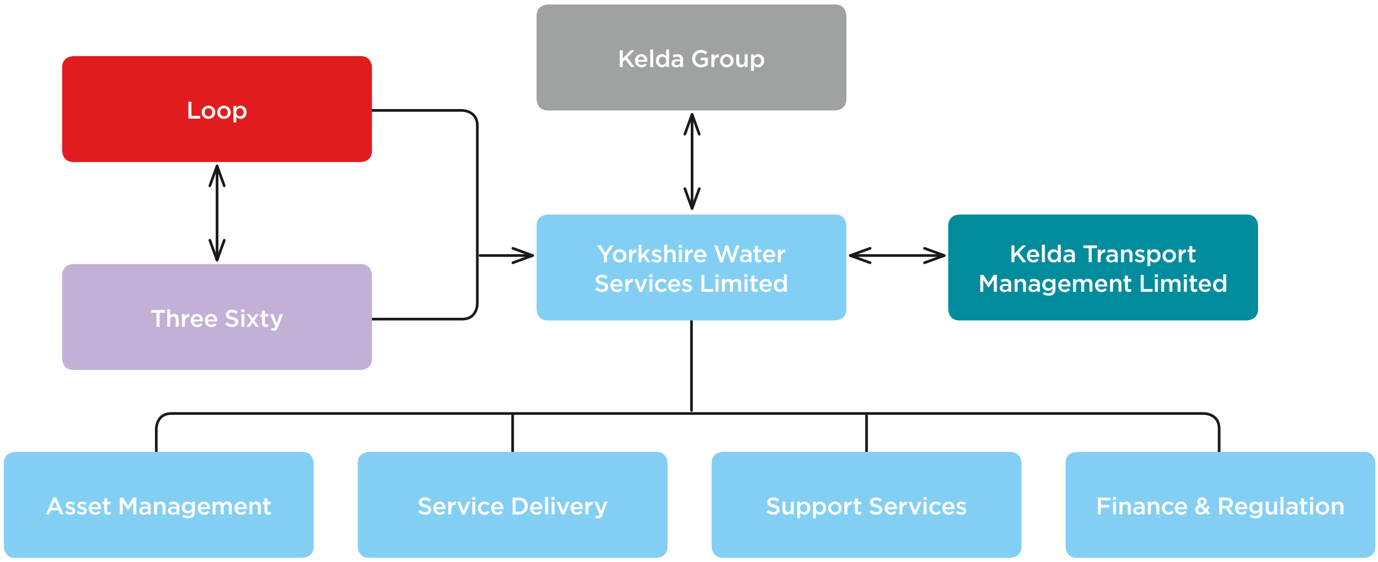
- High Level Overview
- Price Controls Units
- Wholestream Upstream Services

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



The company is managed in four separate Business Units, which are supported by three sister companies.

Yorkshire Water Service Limited is the legal entity that includes all appointed costs, which are defined to be all regulated costs within the business.

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 (Three Sixty) is a sister company to Yorkshire Water that has a contract with Yorkshire Water to manage non-household retail services for Yorkshire Water. Further details on the outsource agreement are stated within the ‘outsourced function’ section opposite. Non-Household is a function that has a small number of dedicated staff to manage Yorkshire Water as the incumbent retailer entering into the competitive market. Further details of this arrangement are stated opposite.

These are our four separate Business units

- Asset Management is a business unit within Yorkshire Water that sets asset policy and manages the delivery of the capital programme, which is predominantly delivered through the use of external third party contractors.
- Service Delivery is a business unit within Yorkshire Water and includes the operation and maintenance of the wholesale assets, associated wholesale customer services and meter reading.
- Support Services encompasses a number of business units which provide non-operational support to the group including IT, Finance, Human Resources, Communications, Shared Services, Procurement and Facilities Management. Some of these functions are used by other group companies, as described further within the ‘outsourced functions’ of this document.
- Finance & Regulation is a business directorate within Yorkshire Water that includes tax & treasury, Finance Business partnering, financial accounting and control risk and assurance, legal and the regulatory team that undertakes price submissions and tariff setting.

Until recently, some of the above functions also provided support to our non-regulated businesses and for this reason were employed within Kelda Group. The costs have been recharged at an arms-length price for these non-appointed processes. Recently, the Kelda Group has taken the strategic decision to divest most of its’ non-appointed businesses, and in future this will allow more costs to be directly situated removing some inter-company charging.

Outsourced functions

A significant proportion of Retail activities are 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. 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.

These arrangements have been in place since April 2016 when Yorkshire Water signed an outsourcing agreement with Three Sixty specifically for Non-Household customers. This contract was in preparation of the market opening for non-household (NHH) customers, and created an arm's length agreement between retail and wholesale. The business strategy is to achieve a withdrawal from the NHHR market, either as direct provider or as a support service provider. Three Sixty contracted with Loop's customer service function to fulfil Yorkshire Water's requirements.

The table below shows the activities that were outsourced to third parties by Yorkshire Water and Loop for the year ended 31 March 2018.

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 – NHH customers only	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 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) 17/08 'Regulatory Accounting Guidelines 2017/2018.
- RAG 1.08 – Principles and guidelines for regulatory reporting under new UK GAAP.
- RAG 2.07 – Guideline for the classification of costs across the price controls.
- RAG 3.10 – Guideline for the format and disclosures for the annual performance report.
- RAG 4.07 – Guideline for the table definitions for the annual performance report.
- RAG 5.07 – Guideline for transfer pricing.
- 2018 Annual Report Performance tables.

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.
- 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 others 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 waste water network plus and then recharged to other business units using an appropriate cost driver. The recharges are included in table 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	Headcount	15.703	0.361	6.302	6.154	1.793	0.951	0.142
General offices	FTE	1.700	0.039	0.688	0.679	0.199	0.083	0.012
Operational assets not directly allocated	FTE	0.814	0.020	0.349	0.344	0.101	0.000	0.000
Research & development	FTE	0.582	0.014	0.249	0.246	0.072	0.000	0.000
Regulation	FTE	3.040	0.069	1.200	1.185	0.347	0.208	0.031
Scientific services	FTE	0.007	0.000	0.000	0.007	0.000	0.000	0.000
Stores/ Depots	FTE	0.111	0.000	0.000	0.111	0.000	0.000	0.000
Telemetry	FTE	2.644	0.000	0.000	2.644	0.000	0.000	0.000
Vehicles	FTE	2.923	0.000	0.000	2.923	0.000	0.000	0.000
Retail	Retail HH / NHH	2.005	0.000	0.000	0.000	0.000	2.005	0.000

- Whilst the assets follow principle use, with depreciation recharged to other price controls, our Management & General support capital programme expenditure programme continues to be proportionately allocated to the Water and Waste Water programmes in line with the price control units section on the following page. 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.

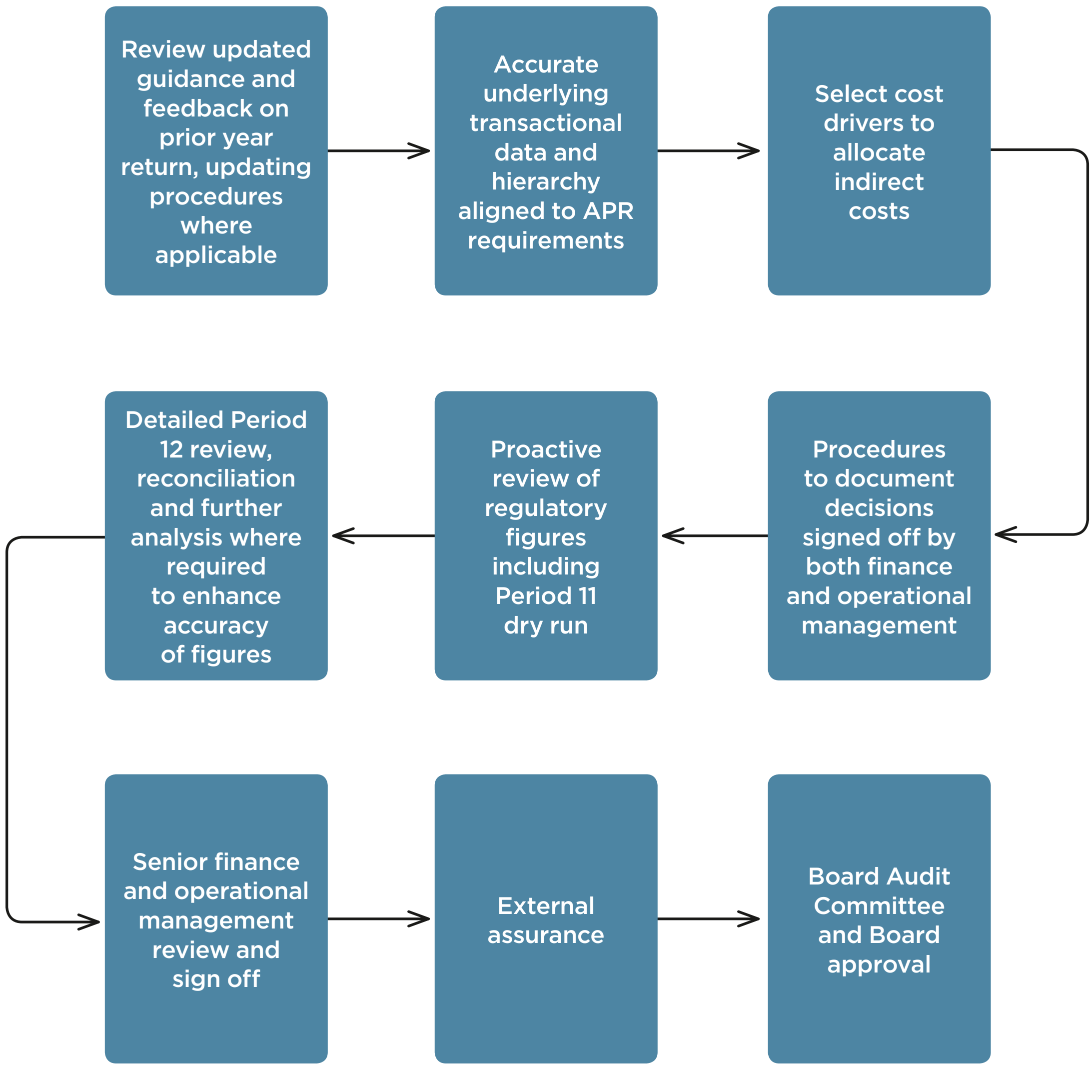
Governance

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.
- Management of underlying financial transactions, cost centres and cost drivers ensuring all values reconcile and all costs are included within the regulatory accounts.
- 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.
- Confirm appropriate Confidence Grades (where required) for the reliability of 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. The system is long established, with more modules being implemented since the original financial SAP system went live in 2000. Cost centres have been setup for all sites and network location, 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 on SAP from cost capture information that has been set to include price control data wherever possible. The current operating structure and management accounts of Yorkshire Water have been deliberately structured similar 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 similar to Ofwat’s Price Controls.

Price Control Units

The principles and guidance set out in RAG 4.07 have been applied in the preparation and completion of the regulatory accounting tables.

There are four price controls specified by Ofwat (water wholesale, waste water 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), who holds delegated authority from the Yorkshire Water Board to actively manage the capital programme and the associated regulatory and customer performance commitments. This includes intervention 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 as necessary, and is in 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 1.07. Further details of the methodology for the allocation of costs over price controls is detailed in Tables 1 – 6 attached to this report.

An analysis and explanation of operating expenditure by price control and variance from the previous year are detailed in Section 7, table 2B.

The RAG 4.07 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 CRC should be allocated directly to the correct service cost centre in SAP, in accordance to RAG 3.10.

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	2017/2018	2017/2018	2016/2017
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	N/A
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	All allocated to retail with the exception of wholesale sundry billing debt
Meter reading	YW	Wholly in retail	Per Ofwat RAG 2.07	Wholly in retail

Activity	Company	2017/2018	2017/2018	2016/2017
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.
OOE - General and Support - IT costs	YW	Split based on headcount - proxy to number of computers	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	Timesheets are not available so Ofwats second preference has been used	HR on headcount, everything else FTEs

Table 1 – Wholesale / retail allocations (continued)

Activity	Company	2017/2018	2017/2018	2016/2017
Wholesale / Retail		**Cost Driver**	**Why considered appropriate**	**Cost Driver**
OOE - Executive Directors remuneration	YW	FTEs	Timesheets are not available so Ofwats second preference has been used	FTEs
OOE - Non-Executive Director's remuneration	YW	FTEs	Timesheets are not available so Ofwats second preference has been used	FTEs
OOE - General and support - Facilities, building / grounds maintenance	YW	FTE (Inc. office based contractors) & grounds maintenance is directly allocated to the associated site	Per Ofwat RAG 2.07	Facilities is recharged based on FTE, buildings & 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 Ofwats 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	Per Ofwat RAG 2.07	One ninth to retail, eight ninths to wholesale
OOE - Local Authority Rates	YW	Rateable Asset Value	Per Ofwat RAG 2.07	Floor space & FTE
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	2017/2018	2017/2018	2016/2017
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 Ofwats 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 Ofwats 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 Ofwats second preference has been used	Volume of visits
Customer Services Other customer services	YW / Loop	Customer numbers	Timesheets are not available so Ofwats third 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 Ofwats third preference has been used	Number of meter reads

Table 2 – Retail household / non-household allocations (continued)

Activity	Company	2017/2018	2017/2018	2016/2017
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 Ofwats 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 Ofwats 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 Ofwats second preference has been used	FTEs used to allocate to within retail activity

Activity	Company	2017/2018	2017/2018	2016/2017
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 Ofwats 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 Ofwats 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	Ofwats 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	Optima system 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 4.07	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 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 (SRM) and work management system (WMS). For elements which cross price controls, assessment are 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 are directly allocated. Mobile phones 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

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 & Ex gratia	Directly allocated	Directly allocated	Monthly Guarantee Standards Scheme & exgratia 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

Table 3 – Wholesale Water cost allocations (continued)

Expenditure line	Method of allocation	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 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 waste water cost allocations

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
Power	Optima system 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 4.07	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 (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 (SRM) and work management system (WMS). For elements which cross price controls assessment are 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 waste water 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 & Ex gratia	Directly allocated	Directly allocated	Monthly Guarantee Standards Scheme & exgratia 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

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
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
Other business activities (Licence fee)	One ninth of Regulation staff and license costs are allocated to Retail, with the remainder equally allocated to Wholesale 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 (Waste 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 5 – Retail cost allocations

Expenditure line	How costs are allocated	Why considered appropriate	How satisfied
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
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

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 who 's 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	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 4.07 Appendix 1 Ofwat email following CEPA review
Operating costs	Associated operating costs with revenue stated above, fully including with depreciation when appropriate	RAG 4.07 & Ofwat email following CEPA review
UK Corporation tax	Yorkshire Water Services Limited has no corporation tax liability for the period. As such, there are no corporation tax costs to allocate to the non-appointed business	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, %
Combined	18,451	53%
Foul	7,173	21%
Surface water	9,022	26%
Total	**34,646**	**100%**

Function	Length, Kilometres	Split by function, %
Foul	13,323	38%
Surface Water	15,173	44%
Highways	6,150	18%
Total	**34,646**	**100%**

Changes to methodology, reasons and quantification

A thorough review of operating cost allocations and SAP processes has been undertaken to ensure compliance with Regulatory Accounting Standards, with some of the enhancements made moving overhead costs to more accurate categorisations compared to previous years. This should allow greater comparability to other water and sewerage companies.

The main changes have 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 didn't take account 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 in Yorkshire Water. For example, the logistics function for tankering sludge has historically been designed as a directly (internally) resourced function, whilst below ground repair and maintenance functions have long been outsourced functions.

As outsourced functions have been encouraged to move onto Yorkshire Water IT platforms, they have become material users of systems. Many contracted staff have been encouraged to work on Yorkshire Water premises given the cost efficiencies obtained through co-location. Given the causality principle set out in RAG 2.07, it is fairer and more appropriate to allocate some IT and facilities costs according to contractor consumption. Most outsourced and contracted resources work within water networks plus, and proportionally, most directly employed resources work within sludge. As a consequence of the improved recharges, proportionally slightly more overhead has been allocated to water, and vice versa, and less to waste networks and sludge.

By using a new Business Intelligence (BI) tool using data recorded from SAP, a new and more detailed view of staff time has been obtained.

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 2016/2017	4%	40%	14%	26%	10%	5%	1%	**100%**
Total overhead 2017/2018	2%	39%	17%	23%	11%	6%	2%	**100%**
Management services & finance 2017/2018	1%	52%	21%	14%	7%	4%	1%	**100%**
Data processing 2017/2018	2%	50%	19%	16%	8%	4%	1%	**100%**
Facilities 2017/2018	2%	47%	17%	19%	9%	5%	2%	**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 YW 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 numbers of contractors using these services have been included and similarly where contractors use Yorkshire Water facilities they have been within the FTE. These allocations have been improved from previous years and ensure that each price control receives a fair share of the Management & General costs. The financial impact of this is shown below as variances from 2016/2017 (although in totality overhead costs have increased by £4.9m due to projects with the business support group function of the business):

Table 9

Variance	Water resources	Water network plus	Network plus sewage collection	Network plus sewage treatment	Sludge	Retail HH	Retail NHH	Total
General & Support Variance	-£0.8m	£6.6m	£1.9m	-£3.5m	-£0.9m	£0.7m	£0.8m	**£4.9m**

In addition, inter-price control charges have been introduced for the consumption of water by waste water network plus and sludge, and offsetting this a charge for the disposal of water sludges produced through water treatment. Ofwat reminded the industry in RAG 2.07 November 2018, paragraph 2.15, that these recharges should be made, and these have been implemented in this year's APR tables. These changes are listed and quantified in the table below:

Table 10

	Water Networks Plus	Waste Networks Plus	Retail Household	Retail Non Household
Water usage	£1.2m	-£1.2m	£0.0m	£0.0m
Waste Water disposal	-£5.4m	£5.4m	£0.0m	£0.0m

Further enhancements to the regulatory accounts for 2017/2018 include consistent reporting of tankered trade effluent for two new customers resulting in £2.1m reduction in Wholesale operating costs.

We have used a review of the MEAV for all the rateable assets for each upstream service. Historically the allocation method used MEAV of all assets regardless of whether the assets were rateable or not, and given the RAG 2.07 principle of causality we have only used rateable assets. The quantification of the change is shown below:

Table 11

Line description	Water resources		Network plus				Total
	Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution	
Rates 17-18 £m's	-	6.9	1.7	0.3	0.9	24.6	34.4
Rates 17-18 £m's (using 16-17 allocation %)	-	6.3	1.6	0.5	1.3	24.7	34.4
Variance	-	0.6	-0.1	-0.3	-0.4	-0.1	-

Line description	Network plus sewage collection			Network plus sewage		Sludge			Total
	Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
Rates 17-18 £m's	0.1	0.1	0.0	19.3	0.0	0.0	1.3	0.0	20.8
Rates 17-18 £m's (using 16-17 allocation %)	0.1	0.1	0.0	17.9	0.1	0.0	2.6	0.0	20.8
Variance	-0.0	-0.0	- 0.0	1.4	- 0.1	0.0	- 1.3	- 0.0	-

There has been a disclosure change in the allocation of Table 2E income between 'Capitalised and amortised in accounts' and 'Fully netted off capex' has been done in this year's APR.

The change means that the income which is transferred to Deferred Income in the statutory accounts is included in the column 'Capitalised and amortised in accounts', and the income which is retained within fixed assets is included in the column 'Fully netted off capex'. The largest recategorization relates to diversions, where given that the payment is in relation to a discrete and specific service rather than the provision of ongoing access to a supply of goods or services, the capital income is accounted for within fixed assets in the statutory accounts. The revised split has been shown to more accurately reflect the actual treatment in the statutory accounts under FRS102.

Power

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. Any percentage allocations are provided by experts on electricity in waste water in the business. These require review at regular intervals to ensure they remain relevant, especially on those allocations made on a monthly basis.

Direct and Indirect Costs

Detailed below is the split of direct and indirect costs for other operating expenditure. 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. The tables below show the proportions which are direct and indirect:

Planned Improvements for future years

Our long-term ambition is to move operational budgets to the same Price Control basis to remove disaggregation of costs, and this has been incorporated into the refresh of our corporate SAP system.

Yorkshire Water is currently designing a new financial system using SAP 4 HANA. The new primary SAP hierarchy for budgets and costs will be in accordance with current boundary guidelines for each price controls, with operational management controlling RAG based budgets, rather than consolidating or reallocating management accounts into price controls at year end. This builds on our current operational management accounts which are currently split into areas that closely match the regulatory price controls and upstream services. This helps to minimise the variances between management and regulatory accounts. The areas for future management accounts reporting are:

- Water Distribution
- Water Production
- Waste Water Catchments
- Waste Water Treatment
- Bio-Resources
- Household retail

Table 12

	Wholesale			
	Water		Waste Water	
	Direct	Allocated	Direct	Allocated
Power	64%	36%	71%	29%
Other operating costs	66%	34%	60%	40%

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-F). 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 as 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	YW 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.	Licenced volume in Ml
	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. Yorkshire Water has only one bulk supply import that is allocated to water resources.	Volume abstracted in Ml
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 Ml
	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 Ml
	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 Ml.

Table showing Water upstream cost methodology & assumptions (continued)

Price control	Upstream service	YW methodology & assumptions	Volumes / Drivers
Water Networks plus (continued)	Treated Water Distribution	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. Above Ground Assets The following types of assets were split between trunk and local: Water Pumping Stations (WPS) Water Towers (WTR) Service Reservoirs (SRE) Critical Supply Reservoirs (CRE) 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. 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. 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. Below Ground Assets 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. 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.	Distribution input (potable) volume in Ml.

Table showing Waste upstream cost methodology & assumptions

Price Control	Upstream Service	YW 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. 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. 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.	Volume collected in Ml.
	Surface water drainage		Volume collected in Ml.
	Highway drainage		Volume collected in Ml.
Network plus sewage treatment	**Sewage treatment & 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	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.	Biochemical oxygen demand (BOD) in tonnes.
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 (m3)
	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.	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.
- Networks 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.
- Networks Plus – raw water storage: There is an annual review of each abstraction source's category.
- Networks Plus – Water Treatment and Water Distribution: Distribution Input volumes come from the corporate Water into Supply databases, which are assured as part the APR process and as part of the process for reporting total leakage. For this reporting table the volume is converted to an annual volume by multiplication by 365 days.
- Population is the sum of our water and water and waste water customers. The information comes from our billing system and is assured annually.

Waste

- Line 22: 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.
- Lines 23-24: 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.
- Line 25: 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.
- Line 26: 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 %ds figures expected upstream at each process step was calculated. With the calculated volume, the total BOD load has been calculated using 'expected' BOD concentrations.
- Line 27: 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 increased year on year by £15m, c7%, but given the RPI inflation which is expected to be 3%, the net real increase would be c£9m.

The only upstream service that has moved by more than a £1m are within networks plus, and are raw water storage, water treatment, and treated water distribution.

- A one-off historic rates refund has been applied across water upstream services as a proportion of MEAV (as per RAG 2.07)
- No power costs have been attributed to raw water storage in 2018 – RAG 4.07 states that "in general no raw water transport costs should be allocated to this service, since the cost of raw water transfer should be included within the "raw water transport" service". Consequently, there has been a £0.7m reduction in this upstream service.
- Water treatment has increased by £4.7m, mostly within power and other operating costs. Within operating costs, there is a net movement of £4.2m reflecting the recharge of water consumed by waste water sites, offset by the charges for treating water treatment sludge's.
- Treated water distribution has increased by £11m, mostly within other operating expenditure. Most of this relates to the increased spend for leakage and the increased costs relating to 1 March 2018 'Beast from the East' cold weather event that impacted most water companies.
- Pension costs are included (as prior year) within other operating costs, as Yorkshire Water accounting policies are in accordance to FRS102 these pension costs are included within the P&L.

Overall net capital costs for the water service increased year on year by £26m, c18%.

The only upstream services that have moved by more than a £1m are within networks plus, and are raw water transport, water treatment, and treated water distribution.

- Much of the £1.4m increase in raw water transport expenditure was within 'Maintaining the long-term capability of the assets - non-infra' £1.1m, of which over half is due to one project at Arthington raw water pumping station (RPS) to support water resource availability for distribution. This had a greater level of expenditure in the year (£0.6m increase), with another £0.4m due to various new projects starting within the year.
- The £17.8m increase in water treatment expenditure was split across 'Maintaining the long-term capability of the assets - non-infra' £10.5m, 'Other capital expenditure – infra' £5.1m and 'Other capital expenditure – non-infra' £2.4m which supports improvements on water quality.
  - Most of the increase within 'Maintaining the long-term capability of the assets - non-infra' was due to increased levels of expenditure on existing projects from the previous year, with the following increasing by more than £0.5m: A Gas Replacement Programme (£3.7m), Irton (£1.5m), EITSA (£1.2m), Albert lime dosing (£0.6m) and a Flow Meter replacement scheme (£0.5m). A new chlorine dosing scheme at Chellow Heights WTW also started in the year (£1.9m).
  - The majority of the increase in 'Other capital expenditure – infra' was due to the expenditure at Langsett WTW Quality increasing as this project fully entered the delivery phase (£4.2m).
  - Much of the increase in 'Other capital expenditure – non- infra' was due to the expenditure at Irton WTW increasing as this project fully entered the delivery phase (£5.6m). This increase was offset at Heck & Cowick and Rivelin having much lower expenditure this year compared to the previous year as the majority of the work had already been completed and the outputs delivered.
- The £6.4m increase in treated water distribution expenditure was split across 'Maintaining the long-term capability of the assets - infra' £9.7m, 'Maintaining the long-term capability of the assets - non-infra' £4.9m, 'Other capital expenditure – non-infra' £2.7m and 'Infrastructure network reinforcement' £2.4m.
  This was offset by a decrease in expenditure on 'Other capital expenditure – infra' -£10.1m and an increase in income received in 'Grants and contributions' -£3.2m. This investment support improvements to our water network.
  - The key contributors to the increase within 'Maintaining the long-term capability of the assets - infra' was additional leakage funding (£4.0m), Bilton Trunk Main (£2.0m), Nostell (£0.9m), systematic flushing (£0.9m) and Communication Pipe Failures (£0.9m).
  - The key contributors to the increase within 'Maintaining the long-term capability of the assets – non-infra' were Leeds Calm Network (£1.1m) which began in year 3, EITSA (£0.7m), Roof Membrane Installation (£0.6m), DMA Meter Replacement (£0.4m) and another £2.2m on various smaller schemes which started in year 3.
  - The key contributor to the decrease within 'Other capital expenditure – infra' was the completion of the lead renewal schemes in year 2 (-£6.8m), various other smaller schemes also completed in Year 2.
  - The key contributors to the increase within 'Other capital expenditure – non-infra' were Leakage Acoustic Logger purchase (£1.4m) and an increase in Domestic Meter Optants (£0.9m).
  - 'Infrastructure network reinforcement' was a new line for 2017/2018 and so did not appear in the previous APR submission – the expenditure identified for this line relate to Boston Park and Sneaton Castle service reservoirs.

- Most of the increase in income in 'Grants and contributions' was due to Mains Diversion at Chain Bar Roundabout (£0.9m), Britvic 3rd Party work (£0.5m) and an increase in the Connection Charges (£0.6m), the Section 45 Connection Charges (£0.3m) and the Provision of Statutory Mains (£0.2m).

Water unit rates

Overall distribution input water volumes have increased very slightly (0.8%), with the movement in unit price reflecting the operating cost variances described above. Unit prices are c3% higher under the FRS102 accounting rules. This results in Yorkshire Water having to include pension deficit contributions within its operating costs, rather than exclude them from operating costs and include them within cash items on table 4D.

Waste

There has been a significant reduction in other operating costs within waste services as a whole, with operating costs reducing by £23.8m:

- General and support costs have reduced by £4.9m following the enhancements made to cost allocations as described in Section 7 of the Annual Performance Report
- The introduction of intercompany recharges for water consumption and the cost of treating water sludges has reduced costs within this price control a further £4.2m in 2017/2018 (as covered above in water).
- Exceptional costs relating to flooding have reduced from c£15m to £8m as more assets have been reinstated during the year. These reductions can be seen within the sludge upstream services.
- Further efficiencies have been made, and a new R&M contract was introduced during the year, which reflect the reductions in the sewerage catchment upstream services.
- Pension costs are included (as prior year) within other operating costs, as Yorkshire Water accounting policies are in accordance to FRS102 these pension costs are included within the P&L.

The opex upstream services that have moved by more than £1m within the year are within network plus sewage collection and sewage treatment and disposal.

Overall net capital costs for the waste water service have increased year on year by £30m, c14%.

- Expenditure within network plus Sewage Collection remains broadly stable. This is to limit escapes from our sewerage network which support our environmental improvements. Year on year movements within Maintaining long term capability of assets – Infra & Non-Infra and Other capital expenditure – Infra table lines reflects reporting improvements when reconciling between statutory and regulatory accounts. This is as set out in Section 7 of the Annual Performance Report. The net impact of these improvements equates to less than £2m across network plus Sewage Collection in 2017/2018.
- The £28.1m increase in sewage treatment and disposal expenditure was split across 'Maintaining long term capability of assets - Infra '-£3.3m, 'Maintaining the long-term capability of the assets - non-infra' £8.0m and 'Other capital expenditure – non-infra' £23.8m. This ensures we continue to treat and safely dispose of our waste water and supporting our goal of improving our environment.
    - The decrease within 'Maintaining long term capability of assets - Infra' (-£3.3m) is driven primarily by the reduction of activity in the last 12 months at the Wheatcroft Long Sea Outfall.
    - The increase within 'Maintaining long term capability of assets - Non-Infra' (£8.0m) is driven by varied activity across ongoing schemes within the last 12 months however increased activity at our scheme at Goole Carr Lane SPS has contributed £2.9m versus last year. Additionally, activity on our flood recovery programme has also increased in the year with expenditure versus last year higher by £4.6m.
    - The increase within 'Other capital expenditure - Non-Infra' has been significant within the year (£23.8m). Whilst some schemes concluded in 2016/17 several ongoing schemes have seen activity ramp up in the last 12 months. This includes Clayton West STW (£4.0m), Bolton on Dearne STW (£2.3m), Patrington and Sherburn (£3.5m), Dronfield WwTW (£2.6m) and Tankersley (£2.6m). Several new schemes have also gone in to delivery in 17/18 including Embsay STW (2.1m), Hillam STW (1.3m), Waverley (£1.3m), Denholme STW (£1.6m), Lundwood STW (£3.3m) and Tollerton and Thornton le Dale STW's (£1.5m).

Waste Water Units

Overall the main volume variance is on sludge disposal due to a significant reduction in sludge disposal volume (21%), combined with a higher unit price in 2016/2017. The reason for this is due to the impact on waste water assets by the floods in December 2015, resulting in outage of sludge treatment facilities hence requiring additional sludge disposal to third parties. Unit prices are c3% higher under the FRS102 accounting rules. This results in Yorkshire Water having to include pension deficit contributions within its operating costs, rather than exclude them from operating costs and include them within cash items on table 4E.

Appendix 4.
Disclosures

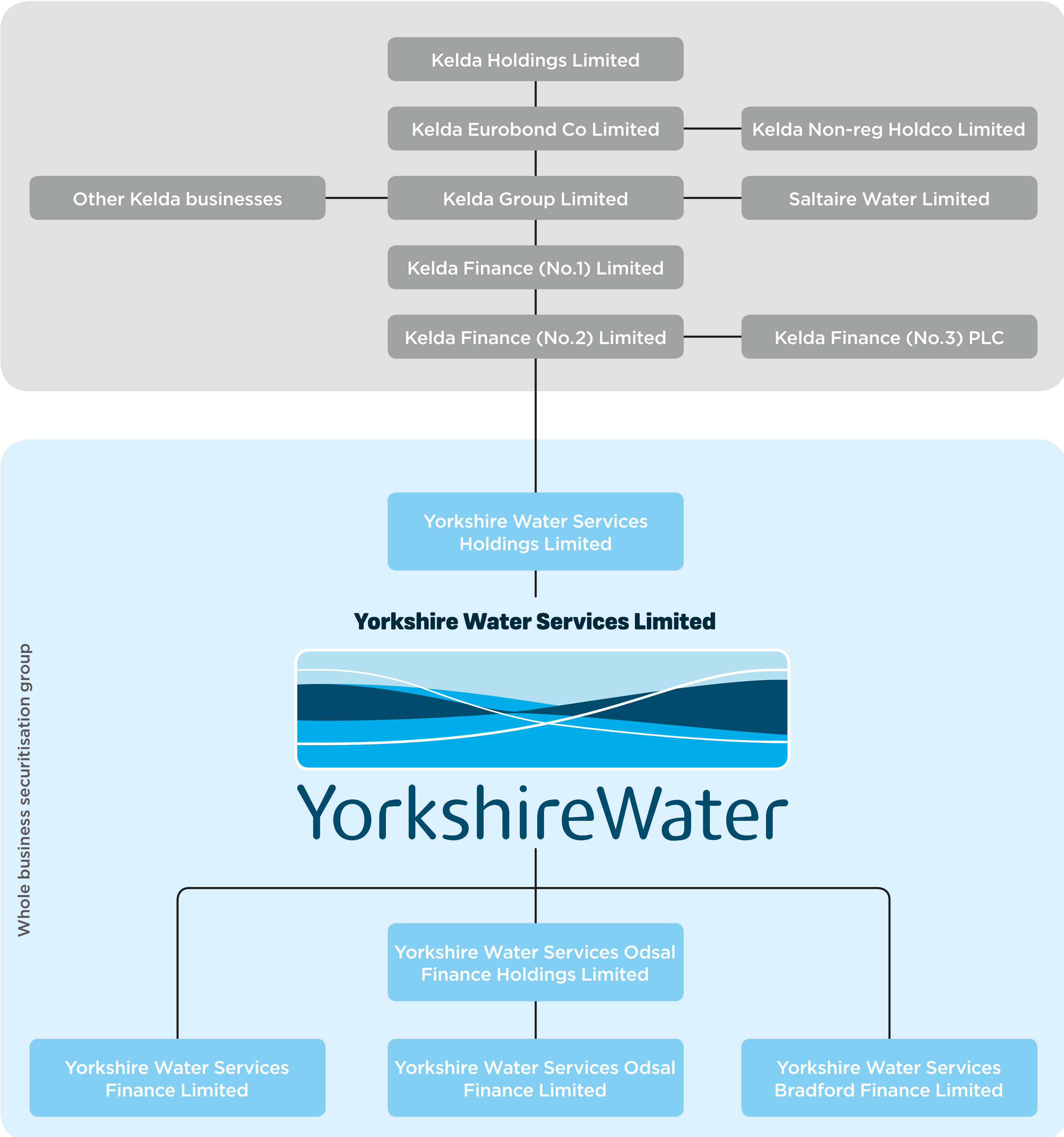
This disclosures section provides additional information for our regulator, Ofwat. It contains anything that we must disclose within the Annual Performance Report, that we have not provided elsewhere within this report.

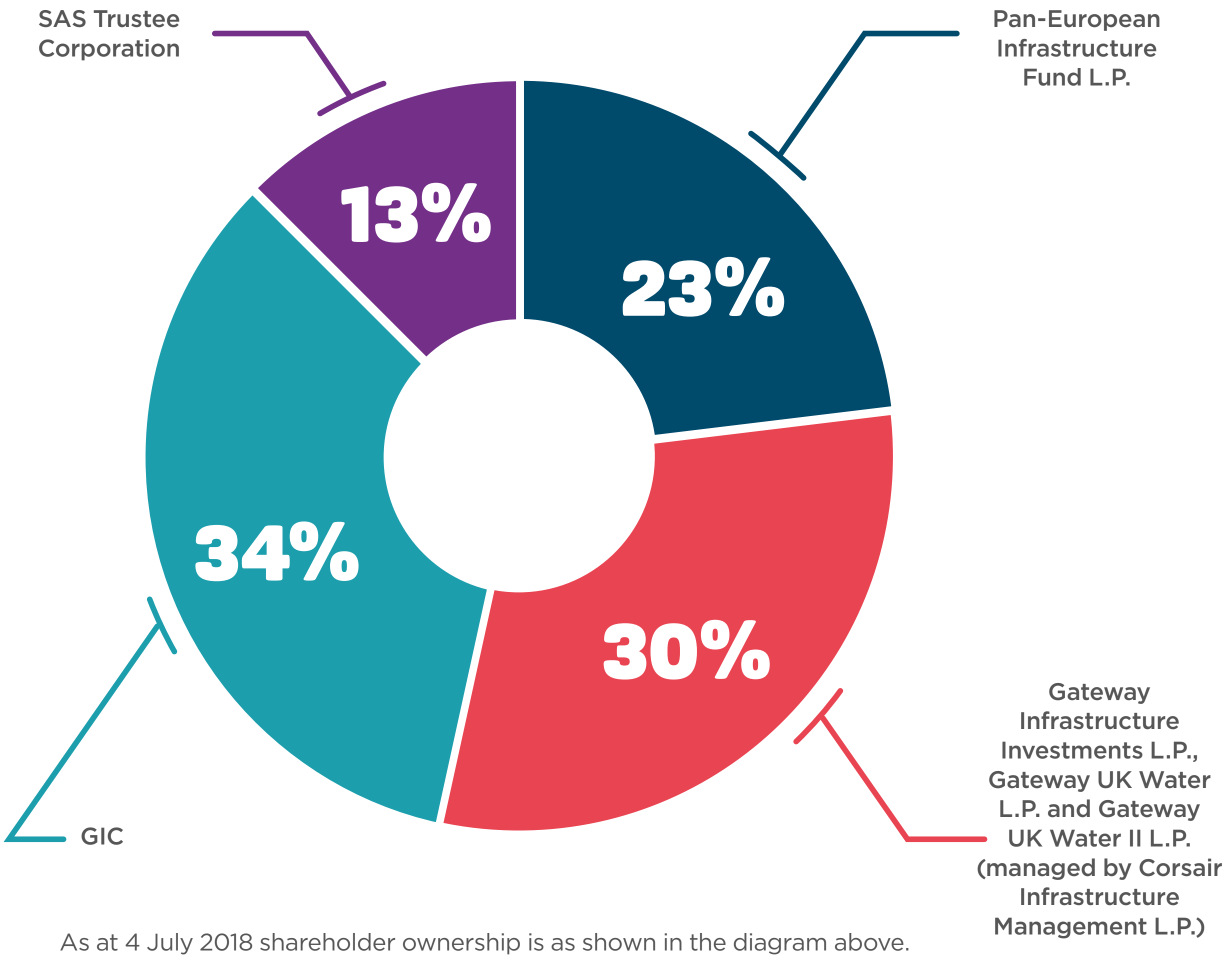
In the disclosures section we will cover:

- Information on our corporate structure – this provides additional information to the summary information provided within Section 6 on our governance.
- Corporate governance statement.
- A statement on Directors' responsibility.
- Information on Director's remuneration - 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)).
- 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 Condition K compliance.
- A statement on Condition F compliance.
- License Condition F certificate.
- A statement on diversification and protection of the core business.
- The tax strategy for the appointed business.
- Tax reconciliations.
- Information on transactions with associates and the non-appointed business.
- A statement on differences between statutory and Regulatory Accounting Guidelines (RAG) definitions.
- Managing key risks to the business.
- Long-term viability statement.
- A statement explaining out/under performance of the return on regulated equity (RORE).

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. We have condensed this structure to remove our inactive companies which exist for legacy reasons but are no longer in use.





As at 4 July 2018 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 within the Group. The Company is incorporated in Jersey and 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 (i.e. corporate debt) 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 non-regulated businesses (ie those businesses other than Yorkshire Water).

Kelda Group Limited – originally the ultimate holding company in the Group and formerly a public listed company, Kelda Group Plc. It was incorporated in England and Wales and is wholly and exclusively resident for tax in the UK. Kelda Group Plc's 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:

- **Kelda Water Services Limited (KWS)** – operates water and waste water contracts across the UK.
- **Three Sixty Water Limited** – offers water and waste water retail and added value services to non-household customers across the UK.
- **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 and held by KWS have been sold, with the remaining KWS businesses due to be sold during 2018. This action has enabled Yorkshire Water to enhance the leadership of the business for example by removing potential distractions that arise from other parts of the group.

Kelda Finance (No.1) Limited, Kelda Finance (No.2) Limited and Kelda Finance (No.3) PLC – these companies were incorporated to issue debt and raise loan financing facilities outside of the Yorkshire Water Whole Business Securitisation ringfenced structure (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 waste water services to the Yorkshire region.

Yorkshire Water Services Bradford Finance Limited, Yorkshire Water Services Odsal Finance Limited, Yorkshire Water Services Odsal Finance Holdings Limited and Yorkshire Water Services Finance Limited – these companies, along with Yorkshire Water Services Limited, are the companies within the Yorkshire Water Whole Business Securitisation ringfence as described opposite.

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 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 be the case.

The WBS works by placing a protective ring-fence around Yorkshire Water's business which 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 profits to more than cover the amount of interest that Yorkshire Water pays.

Due to technical reasons applicable at the time that our owners purchased the Kelda Group and set up the WBS, it was necessary to establish three companies in the Cayman Islands "Cayman Companies" in order to raise debt on the listed bond markets. These companies are:

- Yorkshire Water Services Bradford Finance Limited (issues new corporate debt and lends the funds raised to Yorkshire Water Services Limited from the establishment of the WBS through to 31 March 2018).
- Yorkshire Water Services Odsal Finance Limited (issued corporate debt and on-lent the funds raised to Yorkshire Water Services Limited during the establishment of the WBS).
- Yorkshire Water Services Odsal Finance Holdings Limited (a non-trading, holding company).

The technical requirements for these Cayman Companies being part of the WBS are no longer relevant and therefore they would not be required if the WBS was established today. All three Cayman Companies are wholly and exclusively resident for tax in the UK and file their tax returns only with HMRC. This means that any profit or loss made by these companies is subject only to UK tax.

Yorkshire Water has committed to taking the necessary steps to ultimately remove these Cayman Companies from the WBS and for future debt to be raised by a new company incorporated and tax resident in the UK. The necessary consents for these changes from HMRC, Ofwat and financial creditors, within the WBS were obtained in May and June. These changes are in the process of being implemented and will be completed during 2018.

Yorkshire Water Services Finance Limited – incorporated in England and Wales and wholly and exclusively resident for tax in the UK. This company issued corporate debt and on-lent the funds raised to Yorkshire Water Services Limited prior the establishment of the WBS.

We have published two videos on our website to explain our financial and corporate structure. Here is the link to the videos. **www.yorkshirewater.com/tax**

Corporate governance statement

The Board confirms that it has complied with the Code throughout the year under review except for the following matters:

- **A.4.1** The Board did not appoint a Senior Independent Director for the period to 12 July 2017 when Ray O'Toole was appointed to the role, upon recommendation by the Nomination Committee. The role was previously held by Anthony Rabin until his appointment as Chairman in September 2016. For the period from September 2016, until the appointment of new Independent Directors to the Board, the appointment remained open and the Board considered that it remained effective and comfortable maintaining this position in the interim. Within this period, the appraisal of the Chairman's performance was carried out by the Board as a whole, supported by the Company Secretary. The Board recognises that the appointment of a Senior Independent Director is a requirement of the Code, to serve as an intermediary for the other Directors and to lead the appraisal of the Chairman's performance. The appraisal of the Chairman's performance was carried out by the Board as a whole in the financial year 2016/2017, supported by the Company Secretary.
- **B.1.1** It is a requirement of the Code that the Board should state its reasons if it determines that a Director is independent, despite their serving on the Board for more than nine years. As noted above, Kath Pinnock served on the Board for nine and a half years when she stepped down on 31 August 2017. The extension of her term of appointment beyond nine years was considered by the Board appropriate to enable a thorough search for new independent Non-Executive Directors to be undertaken, which concluded successfully with the appointment of Andrew Wyllie on 1 September 2017.

  The Board was satisfied that Kath Pinnock remained independent in judgement and character throughout her term of office and regards the extension of her terms of office beyond nine years as being for a minimal period.
- **B.1.2** At the end of the financial year, the Company did not comply with the Code requirement that at least half of the Board, excluding the Chairman, should comprise Non-Executive Directors determined by the Board to be independent. This position occurred with the appointment of additional Directors, representing investors on 13 September 2017. The Board however recognises that the appointments align with Ofwat's expectation that a unitary Board will operate and that the number of investor representatives should be no greater than the number of independents (excluding the independent chair). This is the current position for the Board, who welcome the additional insight and dynamic to Board discussions. Although Board composition will remain under review, the Board believes that this significant change makes it better equipped to focus on its strategy to meet the performance and service needs of all stakeholders, including its customers, the environment, the business and shareholders.
- **B.2.3** The Non-Executive Directors are appointed for specified terms, however as described above, Kath Pinnock's term extended beyond a period of six years. The Board considers that this was appropriate in the circumstances described. Kath Pinnock retained her independence prior to her departure on 31 August 2017 and the Board recognises that there is no adverse impact on the Company in having Directors serve more than a six year term.

  The Directors are not submitted for re-election at regular intervals and considering the private status of the Company the articles of the Company do not require that the Directors retire by rotation.
- **B.7.1** The Directors are not subject to re-election every three years as the Company is a private company and the articles of the Company do not require that the Directors retire by rotation.
- **E.2** As a private company, the Company is not required to hold an annual general meeting unless the shareholders so request. Representatives from the Board, and the Board committees, meet regularly with shareholders throughout the year as described in this report.

Directors responsibility

ARFS prepared to FRS102 - APR prepared to RAGs 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.
- Make judgements and accounting estimates that are reasonable and prudent.
- State whether applicable UK Accounting Standards comprising FRS 102 have been followed, subject to any material departures disclosed and explained in the financial statements.
- Notify its shareholders in writing about the use of disclosure exemptions, if any, of FRS 102 used in the preparation of financial statements.
- 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. They 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 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 a duly authorised committee of the Board of and is included in the ARFS.

Directors' Remuneration Report

Directors' remuneration at a glance

A summary of the key decisions taken by the Remuneration Committee in relation to base pay and incentives for Executive Directors in respect of the year ended 31 March 2018 are shown on this page.

2017/2018 remuneration decisions

Remuneration Policy unchanged.

Remuneration Committee Terms of Reference updated.

Incentive Plan weightings amended, increasing the weighting given to Corporate objectives.

2017 LTIP awards were approved; structure of metrics amended.

A significant proportion of total remuneration is performance related.

2015 LTIP award based on a three-year cycle, failed to vest and no payments were made.

Key outcomes

Executive Director	Role	2018/2019 pay increase %	Bonus for 2017/2018 % of salary	2015 LTIP payments % of salary
Richard Flint	Chief Executive	2.50%	67.70%	0%
Liz Barber	Director of Finance, Regulation & Markets	4.46%	68.00%	0%
Nevil Muncaster	Director of Asset Management	2.50%	47.10%	0%
Pamela Doherty	Director of Service Delivery	4.02%	47.40%	0%

Changes for 2018/2019

2018/2019 salaries for all Executive Directors increased as shown in Key Outcomes table

2018 Incentive Plan structure under review to place greater emphasis on delivery of strategic objectives

2018 LTIP structure under review to allow for transition between AMP6 and AMP7

Annual Statement by the Chair of the Remuneration Committee

On behalf of the Remuneration Committee (the Committee), I am pleased to present the Directors' remuneration report, including details of the Directors' pay for the year to 31 March 2018.

Remuneration highlights

Our remuneration policy was unchanged during the year under review, with executive remuneration retaining its significant link to performance and delivery for our customers. Limited changes were made to the structure and operation of our short and long term incentive plans to ensure that they continue to recognise exceptional delivery against appropriate metrics.

Activities of the Remuneration Committee

The Committee met on seven occasions during the financial year. Its main goals have again been to ensure that the company's remuneration practices remain in line with our approved policy and that we maintain a strong and effective link between customer experience, financial performance and remuneration decisions. Activities included:

- Approval of the 2017 Long-Term Incentive Plan (LTIP) participants and Plan structure.
- Review and approval of Executive Directors' corporate, departmental and individual objectives.
- Approval of the vesting position of the 2015 LTIP.
- Review and approval of Executive Directors' salary levels.
- Review and approval of Executive Directors' and Senior Manager bonus levels.
- Review and approval of revised Terms of Reference for the Remuneration Committee.
- Review and approval of fees for Non-Executive Committee Chairs.

In addition, the Committee reviewed and approved for publication our response to the Equality Act 2010 (Gender Pay Gap Information) Regulations 2017, details of which can be found in our strategic report.

Directors' performance and impact on pay

Despite delivering improvements to SIM (the water industry's measure of service), which resulted in an overall performance score of 84.26 (up from 83.4 in 2016/2017 and 82.6 in 2015/2016), the Company did not achieve its SIM target. SIM acted as a gateway performance metric under the 2015/2018 LTIP and as a result, although satisfactory progress was made against other performance conditions, no payments were made to scheme participants.

As highlighted in the Chief Executive's overview and Chairman's statement, strong performance in some areas has been offset by weaker than expected performance in others. The Company ended the year on target against two of its key transformational targets, PR19 readiness and the health and safety improvement plan, and achieved 22 of 26 Performance Commitments; the Committee also recognised the progress made towards delivering our GDPR plans. EBITDA performance was ahead of target at £586.4m. These performance factors were reflected in annual bonus payments to Executive Directors equivalent to 63.70% of the maximum, before consideration of individual performance.

Pay increases to Executive Directors reflected movements in the wider market as indicated by external benchmarking for specific roles, as well as individual performance and the overall budgeted award of 2.5% to other employees.

For the first time, this year we are publishing a ratio to show the difference between the remuneration of the Chief Executive and the average for all other employees. This currently stands at 32:1, and further details can be found in this remuneration report.

The Committee has also agreed to consider its approach towards workforce representation and aims to introduce appropriate measures to enhance the voice of the workforce in the current year.

This report is divided into the remuneration policy and an annual report on remuneration which sets out and explains how this policy was implemented during 2017/2018 and its proposed application in the current financial year.

Julia Unwin
Chair of the Remuneration Committee
13 July 2018

Remuneration Policy Report

The Remuneration Committee determines the remuneration and conditions of employment of the Executive Directors and the next most senior category of Executives.

The Company's remuneration policy is set out in detail below and continues to ensure that we attract and retain key talent with the skills and experience necessary to lead and manage a business of Yorkshire Water's size and complexity.

Remuneration packages for Executives are designed to align with the interests of customers and enable the creation of sustainable long-term value for shareholders. Accordingly, a significant proportion of Directors' remuneration is tied to performance through annual and long-term incentive plan awards. Additionally, remuneration packages are structured to enable Executive Directors to receive remuneration which is positioned in the upper quartile of the market for upper quartile performance, considering the relevant market and industry comparators, individual performance, responsibilities and experience.

To help guide and inform the Remuneration Committee, total remuneration is benchmarked periodically against the Water Industry and/or Utilities companies of a similar size, complexity and geographic scope when determining competitive remuneration levels.

The current remuneration package for Directors comprises the elements set out in the table below and remains unchanged from that disclosed in the 2016/2017 remuneration report (other than references to financial years and pay scenario figures, which have been updated where appropriate).

The Remuneration Committee commits to:

- Promoting the maintenance of a robust remuneration policy aligned with the Company's strategic priorities.
- Ensuring the Board's approved business strategy is supported by the incentive plans in operation.
- Rewarding the Executive Directors' on Company success by linking a significant proportion of their remuneration opportunity to Company performance.
- Monitoring the ongoing effectiveness of the remuneration policy to ensure that it achieves its aim of attracting, motivating and retaining the leaders and talent required to deliver exceptional customer and shareholder value.

The following table sets out each element of reward and how it supports the Company's short and long-term strategic objectives.

Board Executive Directors (Chief Executive Officer and Director of Finance, Regulation and Markets) and other Directors

Component of remuneration	Purpose	Operation	Potential	Performance metrics
Base salary	To provide competitive pay to enable attraction and retention. Basic pay is generally held at or below market median. Level of pay considers experience and contribution to Company strategy.	Typically reviewed annually on 1 April. A review does not guarantee any increase.	Any increases are determined by the Remuneration Committee.	None.
Annual incentive	To drive the delivery of in-year targets. Targets link to a range of both short and long-term business priorities. This incentivises overall Company performance and personal contribution.	Performance measures and targets are established at the start of the business plan year. All targets are clear, stretching and measurable. There is a balance of financial and non-financial measures. Incentive payments are subject to clawback in the event of misstatement of performance, errors in the assessment of performance conditions, or misconduct.	Maximum of 100% of base salary (CEO and Director of finance, regulation and markets) or 70% (other Directors). Incentive payments are non-consolidated and non-pensionable.	Performance is assessed on an annual basis, using a combination of the Group's main KPIs for the year and progress on transformational projects. The KPIs include financial non-financial metrics.
Long-term incentive plan (LTIP)	To ensure focus on the long-term sustainability of the business for customers and shareholders. This is a significant element of the overall remuneration package and incentivises outperformance against targets.	A three-year scheme awarded on 1 April. The range of measures ensures Executives are focused on customer service, managing assets responsibly and providing appropriate returns to shareholders. Claw back provisions apply for up to two years from the date of vesting of any award, in the event of misstatement of performance, errors in the assessment of performance conditions or misconduct.	Maximum award is equal to 200% of base salary (CEO and Director of finance, regulation and markets) or 150% (other Directors). Award vests following the three-year period subject to performance conditions. Incentive payments are non-consolidated and non-pensionable.	Based on three performance conditions - SIM, Stability and Reliability, and Cash Available for Distribution.

Component of remuneration	Purpose	Operation	Potential	Performance metrics
Pension	To provide a fair and affordable pension benefit that broadly fits with the market.	The Defined Benefit Scheme - Kelda Group Pension Plan was closed to new entrants from 2007. In 2013 the scheme was changed, reducing member benefits and increasing member contributions. A stakeholder scheme is available for all new employees including Executives.	Choice of a Company contribution into the defined contribution stakeholder scheme of a maximum of 30% (CEO and Director of finance, regulation and markets) or 24% (other Directors); or a cash allowance of up to 25% (CEO and Director of Finance, regulation and markets) or 20% (other Directors); or a combination of both approaches, providing this is cost neutral to the Company.	None.
Other benefits	To provide market competitive benefits.	Private healthcare provision for self and spouse. Choice of Company lease car (four years) or cash allowance. Optional private fuel provision.	Healthcare is based on self and spouse cover. Car benefit is based on individual circumstances for the CEO and Director of Finance, regulation and markets. Cash allowance is capped at £7,500 for other Directors.	None.

Notes to the policy table

Annual incentive plan opportunity 2017/2018

Under this plan the annual incentive award for the Chief Executive, Director of Finance, regulation and markets and other Executive Directors on the Board was calculated as a percentage of basic salary as at 31 March as follows:

COMPANY PERFORMANCE 80%

80% of the maximum annual bonus payable is dependent upon delivery of agreed Corporate Objectives set at the start of the financial year.

Within the agreed Corporate Objectives, the weighting given to financial measures is 60%.

+

INDIVIDUAL PERFORMANCE 20%

20% of the maximum annual bonus payable is dependent upon delivery of agreed personal / individual objectives set at the start of the financial year.

Incentive bonus payments are made in July based on performance in the year ending on the preceding 31 March.

Performance measures and target setting approach

The annual incentive plan is designed to reward the delivery of in-year targets. Performance measures are based on a balanced set of performance measures which are linked directly to the corporate strategy. We describe our strategy in the Strategic Report of this ARFS.

Annual incentive payments are subject to the achievement of stretching performance hurdles for each measure, which are determined at the outset of the financial year.

Each measure is considered separately, as well as collectively, with targets set to ensure that the potential outcomes are affordable and aligned with the annual budget agreed by the Board. Annual targets are determined based on the approved five-year business plan which took effect from 2015/2016 and are material in determining actual performance and therefore any incentive bonus payable.

Annual incentive (bonus) plan objectives 2017/2018

Objectives	Objectives weighting	Overall weighting
Corporate objectives (80%)		
• Driving efficient financial performance	60%	48%
• Delivering for customers	25%	20%
• Ensuring everyone, everywhere is safe and well	10%	8%
• Investing in our people	5%	4%
Personal objectives – role specific (20%)		
Transformational		
• Company-wide projects of strategic importance driven by CEO with clear Kelda Management Team accountability for delivery		
Departmental		
• Key area of performance with clear departmental accountability for delivery	75%	15%
Individual		
• Individual objectives more development focused	25%	5%

Annual incentive (bonus) plan performance targets 2017/2018

Corporate objectives (80% of overall bonus opportunity)

Objectives	% weighting within the Corporate Objectives	Performance measure	Threshold[1]	On-target[2]	Stretch[3]	Commentary
Driving efficient financial performance	60%	EBITDA*.	97% of planned EBITDA* delivered.	100% of planned EBITDA* delivered.	104% of planned EBITDA* delivered.	% financial element triggered/ generated. - EBITDA* target exceeded = up to 100% bonus - EBITDA* target met = 85% bonus maximum - EBITDA* target minus 1% = 56.66% bonus maximum - EBITDA* target minus 2% = 28.33% bonus maximum - EBITDA* target minus 3% = 0%
Delivering for our customers	25% (Financial PCs 15% Non-financial PCs 10%).	Financial Performance Commitments (PCs). Non-financial PCs.	"Downside Scenario 1" in the Blueprint 2020 April 2017-2020 Yorkshire Water Business Plan (YW BP), is achieved. 8 out of 12 Non-financial PCs are met.	No net penalty. "Plan Scenario" in Blueprint 2020 April 2017-2020 YW BP, or equivalent, is achieved. 10 out of 12 Non-financial PCs are met.	"Upside Scenario" in Blueprint 2020 April 2017-2020 YW BP, or equivalent, is achieved. All 12 Non-financial PCs are met.	Downside scenario, plan and upside scenarios, taken from Blueprint 2020 April 2017-2020 YW BP, or financial impact equivalent scenarios, are used to set and assess achievement of threshold, target and stretch performance of the Financial PCs.
Ensuring everyone, every day is safe and well	10%	Lost time injury incident rate (LTIIR).	LTIIR = 0.49 (16/17 actual).	LTIIR = 0.42 (17/18 business plan target).	LTIIR = 0.34 (18/19 target.	Straight line % between LTIIR threshold and on-target and between the latter and stretch.
Investing in our people	5%	Employee engagement score (EE).	EE score = 78% (16/17 actual).	EE = 79% (1% year-on-year improvement).	EE score = 80% (18/19 target).	Straight line % between EE score threshold and on-target and between the latter and stretch.

*Adjusted EBITDA of £577.1m is reconciled to operating profit in note 3. In addition, professional fees of £1.1m, accelerated upper quartile costs of £5.1m and costs relating other corporate restructuring activities of £3.1m have been added back for the purpose of calculating remuneration.

1. Threshold - performance level above which annual bonus payments start to be made.
2. On-target - level of performance in the business plan - generates 85% of maximum bonus.
3. Stretch - level of performance that cumulatively generates the maximum bonus payment.

Annual incentive (bonus) plan performance targets 2017/2018

Personal Objectives (20% of overall bonus opportunity)

Transformational programmes and/ or departmental objectives (0- 15%)	Performance measure	Threshold[1]
Transformational programmes Company-wide projects of strategic importance driven by CEO with clear accountability for delivery. 1. Creating a frontier PR19 submission & delivery plan. 2. Delivering a new SAP experience. 3. Protecting our data and ensuring business resilience. 4. Delivering H&S improvement plan. 5. Corporate restructuring.	PR19. SAP. General Data Protection Regulations 2018. Business continuity and cyber security. H&S improvement plan. Poseidon/ Atlantic (planned corporate projects).	PR19 submission is on track and no more than 3 of the 6 listed programmes are off-track in plan delivery terms. The 3 other transformation programmes / projects including PR19 are appropriately resourced, on track, on budget and there is a high confidence level in key stakeholders that programmes/projects will be delivered on time and to budget, with their business benefits ensuing.
Departmental Key area of performance with clear departmental accountability for delivery.	Departmental objectives. Departmental Employee Engagement.	Subjective but evidence-based CEO judgement Dept. EE score = 78%.
Individual (5%) Individual development objectives.	Teamwork & collaboration. CEO agreed PDP in place.	CEO judgement. Personal Development Plan (PDP) progressing.

*Adjusted EBITDA of £577.1m is reconciled to operating profit in note 3. In addition, professional fees of £1.1m, accelerated upper quartile costs of £5.1m and costs relating other corporate restructuring activities of £3.1m have been added back for the purpose of calculating remuneration.

1. Threshold - performance level above which annual bonus payments start to be made.
2. On-target - level of performance in the business plan - generates 85% of maximum bonus.
3. Stretch - level of performance that cumulatively generates the maximum bonus payment.
4. Poseidon/Atlantic - planned corporate projects.

On-target[2]	Stretch[3]	Commentary
PR19 submission is on track and no more than 2 of the 6 listed programmes are off-track in plan delivery terms. The 4 other transformation programmes /projects are appropriately resource including PR19 are on track, on budget and there is a high confidence level in key stakeholders that programmes/projects will be delivered on time and to budget, with their business benefits ensuing.	PR19 submission is on track and no more than 1 of the other 6 listed are off-track in plan delivery terms. The 5 other transformation programmes / projects including PR19 are appropriately resourced, on track, on budget and there is a high confidence level in key stakeholders that programmes/projects will be delivered on time and to budget, with their business benefits ensuing.	Between 0 and 15% depending on mix of accountabilities for transformation programmes and the balance with departmental objectives. Assessment of threshold/ on-target/ stretch performance at the end of FY 17/18 will be done with reference to the normal progress reporting to KMT and the Board throughout the year.
Subjective but evidence-based CEO judgement. Dept. EE score = 79%.	Subjective but evidence-based CEO judgement. Dept. EE score = 80%.	Between 0 and 15% depending on mix of accountabilities for transformation programmes and the balance with departmental objectives.
CEO judgement. PDP progressing as expected.	CEO judgement. PDP making strong progress.	Between 0 and 5%. Allows CEO to develop team members and flex level of bonus to reflect individual contribution.

Long-term incentive plan (LTIP) opportunity

The LTIP is a rolling three-year plan based on the achievement of specific performance conditions with targets set at the start of the performance period.

The proportion of the award that will vest following the performance period is dependent upon the Company's performance during the three-year period. Benefits under the plan are non-pensionable.

Awards will not vest unless the Committee is satisfied that underlying financial performance has been satisfactory over the performance period, considering the Company's circumstances, including the regulatory regime in place over the period. The Committee can scale back vesting to any extent considered appropriate.

The LTIP rules provide that in prescribed circumstances such as death, injury, disability, retirement, business transfer or any other circumstances at the discretion of the Committee, outstanding awards will vest as normal on the original vesting date to the extent that the performance conditions are satisfied. At the end of the performance period and unless the Committee decides otherwise, the award would normally be reduced on a pro-rata basis to reflect the period between the award date and the date on which the participant ceases to be employed by the Company.

The LTIP rules also provide for clawback for up to two years from the date of vesting in the event of a material misstatement of financial results; errors in the assessment of performance conditions; and dismissal for misconduct.

A summary of each of the performance conditions for the 2017 LTIP award is provided in the table below.

LTIP 2017 design and performance measures

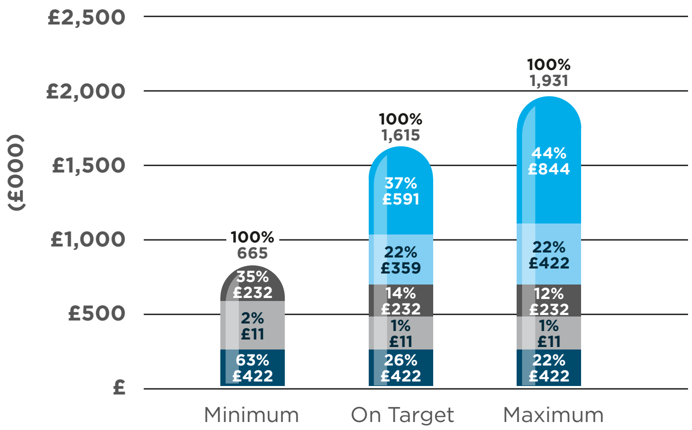
Design element	Plan summary
Plan structure	• A cash based award made subject to achievement of performance conditions and based on a percentage of each participant's salary
Performance period	• 3 years • Subject to the attainment of the performance measures noted below, 100% of the award will vest at the end of this 3-year period
Performance measures	• The "gateway" performance condition is Cash Available for Distribution (CAFD) • Subject to attainment of between 90-120% of CAFD target, between 70% and 100% of the award becomes potentially able to vest ("Potential Amount") • The Potential amount will vest as follows: • 20% based on SIM Measure (if improving and target met or exceeded) • 20% based on Stability and Reliability – water infrastructure • 20% based on Stability and Reliability – water non-infrastructure • 20% based on Stability and Reliability – sewage infrastructure • 20% based on Stability and Reliability – sewage non-infrastructure

Details of the performance conditions for the 2015 LTIP award which vested in 2017/2018 are provided in the section below entitled Annual Report on Remuneration.

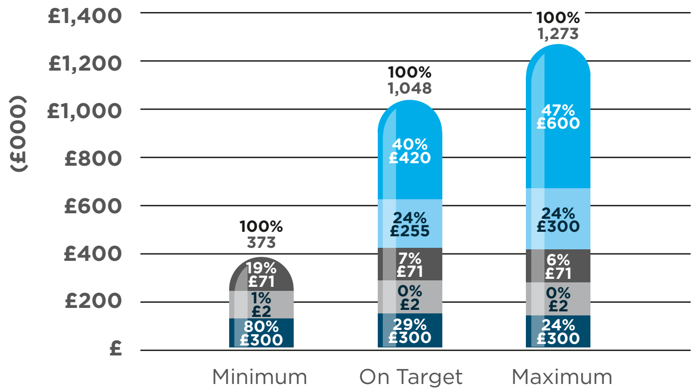
Pay for performance scenarios

A significant proportion of executive remuneration is performance related and therefore “at risk”. The figures below provide an illustration of the potential future reward opportunities for the Executive Directors, and the potential split between the different elements of remuneration, under three different performance scenarios: ‘Minimum’, ‘On-target’ and ‘Maximum’.

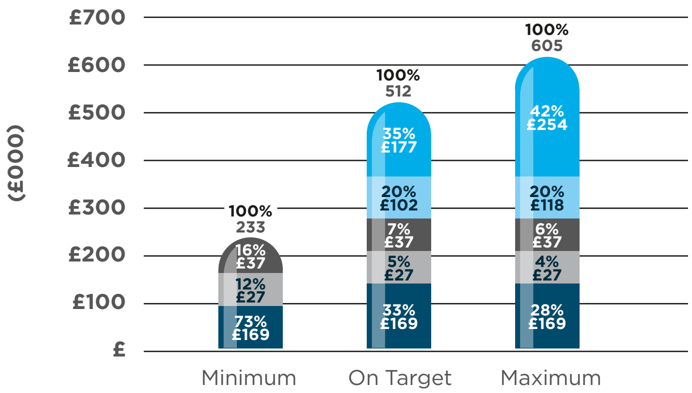
Richard Flint



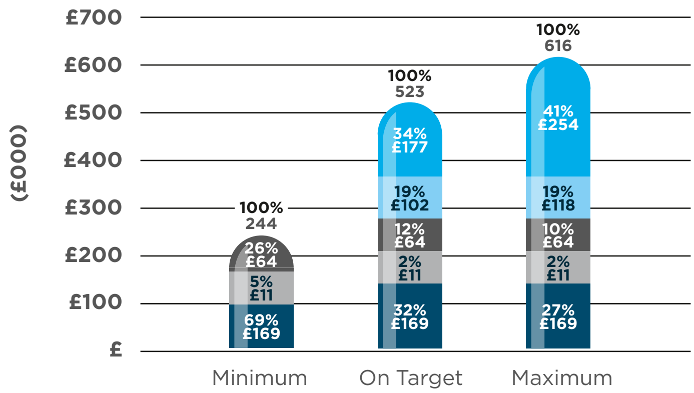
Liz Barber



Nevil Muncaster



Pamela Doherty



Base Salary | Taxable Benefits | Pension | Bonus | LTIP

The ‘Minimum’ scenario reflects fixed remuneration, (salary from 1 April 2018 plus taxable benefits and pension), which are the only elements of the Executive Directors’ remuneration packages not linked to performance. Taxable benefits are the value of benefits provided by the Company, which include healthcare provision, company car or the cash equivalent and fuel, for the year 2017/2018. Pension values represent the value of all pension benefits accrued, or the value of contributions and/or the value of any cash supplements in lieu of pension, as appropriate, for the year 2017/2018.

The ‘On-target’ scenario for Richard Flint and Liz Barber reflects their fixed remuneration plus an annual incentive pay out of 85% of the maximum bonus payable as well as the vesting of the LTIP at 70% of the maximum award. For Nevil Muncaster and Pamela Doherty, the ‘On-target’ scenario reflects their fixed remuneration plus an annual incentive of approximately 86% of the maximum bonus payable as well as the vesting of the LTIP at 70% of the maximum award.

The ‘Maximum’ scenario reflects fixed remuneration, plus full pay out of all incentives.

Remuneration Committee discretion

The Remuneration Committee may exercise discretion in four 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 or long-term incentive plan payment within the limits of the relevant plan rules.
- 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.
- 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 use of discretion by the Committee during the financial year will be detailed in the relevant Annual Report on Remuneration.

Consideration of pay and conditions elsewhere in the Group

When making decisions on executive Director remuneration, the Committee considers the levels of remuneration and pay awards made to the wider employee population (see the remuneration policy for other employees in the section below).

Prior to the annual salary review, the HR Director provides the Committee with a summary of the proposed level of increase for overall employee pay, which forms a part of the analysis by the Committee on the appropriateness of any salary changes.

Remuneration policy for other employees

Our approach to remuneration considers affordability, levels of responsibility, individual performance and salary levels in comparable companies for all senior employees. Most employees are covered by collective agreements which are negotiated based on our principles of affordability, fairness and transparency.

All employees can participate in an incentive plan. Senior Managers (employees as at April 2017) participate in the LTIP. All Managers participate in an annual incentive scheme with potential bonuses of up to 10, 15 or 30% of salary based on seniority. All other employees participate in a quarterly bonus scheme, with payments that vary depending on Company performance in that quarter.

In accordance with our principles of fairness and transparency, we pay all employees, contract partners and service providers minimum salaries equivalent to the voluntary Living Wage.

Pension scheme eligibility is consistent for all employees. The defined benefit scheme Kelda Group Pension Plan (KGPP) is closed to new members. All new employees have the option (subject to auto-enrolment provisions) to join the Company's stakeholder scheme which is a defined contribution scheme.

Non-Executive Director remuneration

The table below sets out the remuneration policy for Non-Executive Directors.

Component of remuneration	Purpose	Operation	Potential	Performance metrics
Fee	To provide competitive pay to enable attraction and retention.	Reviewed when required subject to market trends.	Non-Executive Director fees, are set at levels that are considered appropriate in light of relevant market practice and the size/complexity of each role. Any increases are determined by the Board.	None

Recruitment of Executive Directors

In the cases of hiring or appointing a new Executive Director, the Remuneration Committee may make use of all the existing components of remuneration detailed in the Remuneration Policy including the following:

- Basic pay is generally held at or below market median for the role when benchmarked across the Water Industry and/or Utilities.
- A short-term review of basic pay may be agreed on appointment subject to performance for example, following up to 12 months in the role.
- The annual incentive and LTIP offered subject to approval of the Committee.
- All other benefits apply in accordance with the contractual and non-contractual terms of the role.

Service contracts

In respect of Executive Directors, the Company's policy on the duration of service contracts is that they should not normally be of fixed duration, should be subject to twelve months' notice by the Company and six months' notice by the Director. Notice periods are consistent with current corporate governance best practice. Termination payments are made in accordance with the terms of the contract.

The Executive Directors service agreement dates are set out in the table below based on the policy outlined above. The agreements do not contain any specific provision for compensation payable on early termination. Any termination payment would be calculated to take account of the contractual notice period and any annual or long-term incentive payment due, subject to the achievement of performance objectives, and considering the period worked

Executive Director	Title	Date of current service agreement	Date appointed
Richard Flint	Chief Executive	11 November 2009	31 July 2003
Liz Barber	Director of Finance, Regulation & Markets	30 April 2010	24 November 2010
Nevil Muncaster	Director of Asset Management	13 March 2013	29 May 2013
Pamela Doherty	Director of Service Delivery	6 March 2012	13 September 2017

Non-Executive Directors

The Company's policy in respect of Non-Executive Directors is to make appointments generally of two years' duration, the terms of which do not contain any express provision for notice periods or termination payments in the event of early termination of their appointment. Appointments may be renewed by mutual agreement for up to a further two-year period subject to a total period of nine years' service with the Company.

Non-Executive Directors are not eligible to participate in the Company's performance related incentive plans or pension arrangements. Fees for the year under review and the coming year are set out in the section below entitled Annual report on remuneration.

Non-Executive Director	Date of current service agreement	Appointed
Raymond (Ray) O'Toole	28 July 2016	June 2014
Teresa Robson-Capps	5 January 2017	January 2017
Julia Unwin	5 January 2017	January 2017
Anthony Rabin	10 November 2016	August 2013
Andrew Wyllie	11 July 2017	September 2017

Kathryn Pinnock was a Non-Executive Director during 2016/2017 and stepped down on 31 August 2017.

The following were appointed as Non-Executive Directors in accordance with Clause 4 of the Shareholders Agreement dated 2008 (subsequently amended in 2010). This permits investors to appoint representatives to the Company in accordance with their holdings.

Non-Executive Director	Appointed
Scott Auty	September 2017
Andrew Dench	September 2017
Mike Osborne	September 2017

Statement of policy for 2018/2019

Overall remuneration policy as detailed in the Policy Table remains unchanged. The structure and performance targets for the 2018/2019 bonus scheme and 2018/2021 LTIP for Executive Directors and other Directors are currently under review. The Committee wishes to ensure that LTIP performance conditions in particular take account of the crossover between AMP6 and AMP7. A full disclosure of each scheme's structure, performance targets, weightings and quantum will be made on the Company's website and in the 2018/2019 ARFS, once agreed by the Committee.

Annual report on remuneration

Implementation of remuneration policy for the year ended 31 March 2018

This part of the Directors' Remuneration Report sets out a summary of how the Directors' Remuneration Policy was applied over the financial year ended 31 March 2018. Details of the remuneration earned by executive and Non-Executive Directors and the outcomes of the incentive plans, together with the link to Company performance, are provided in this section.

The disclosures about the Directors' remuneration set out below have been audited by Deloitte. Where information has been audited, this has been clearly indicated. Directors' remuneration is disclosed in the Statutory Financial Statements note 5.

Table of Directors' emoluments - Single total figure of remuneration for each Executive Director (Audited)

Director's name	Year	Salary	Taxable benefits (Note 1)	Annual bonus	LTIP (Note 2)	Pension (Note 3)	Total remuneration
		£'000					
Richard Flint	2017-18	412	9	279	0	232	932
	2016-17	408	9	300	388	223	1,328
Liz Barber	2017-18	287	10	195	0	72	564
	2016-17	284	10	203	276	71	844
Nevil Muncaster	2017-18	165	27	77	0	37	306
	2016-17	163	25	89	119	39	435
Charlie Haysom (Note 4)	2017-18	81	2	38	0	42	163
	2016-17	162	14	97	116	48	437
Pamela Doherty (Note 5)	2017-18	89	6	42	0	64	201

1. Taxable benefits include private medical cover, company car or cash allowance and fuel paid for by the Company.
2. LTIP payments relate to the 2015 award which is for a three-year period to March 2018.
3. The pensions figure for KGPP members for 2017/2018 is calculated as the change in value of the pension, net of inflation, over the year less the employee's contributions, and is subject to a minimum of zero. The pensions figure for Kelda Stakeholder+ members for 2017/2018 is calculated as the contributions made on their behalf by the Company.
4. Charlie Haysom stepped down on 12 September 2017. Salary, taxable benefit and bonus figures are shown pro rata.
5. Pamela Doherty succeeded Charlie Haysom with effect from 13 September 2017. Salary, taxable benefit and bonus figures are shown pro rata.

Base pay

The table below sets out the base salary levels for Executive Directors which were in effect during the year and their revised annual salaries as at 1 April 2018.

Director's name	2018/2019	2017/2018	Increase %
Richard Flint	£422,380	£412,080	2.50%
Liz Barber	£300,000	£287,198	4.46%
Nevil Muncaster	£168,620	£164,507	2.50%
Charlie Haysom (Note 1)	N/A	£163,929	N/A
Pamela Doherty	£168,620	£162,105	4.02%

1. Charlie Haysom stepped down on 12 September 2017.

Incentive plans

Outcomes for annual incentive plan 2017/2018

The annual incentive plan policy was amended for the year ended 31 March 2018, with Company performance now accounting for 80% of the total opportunity and individual performance 20%. The table below shows the 2017/2018 incentive plan targets against actual Company performance including bonus payable for Company performance in 2017/2018.

Annual incentive plan targets and actual company performance 2017/2018

Objective	Measure	Business plan to 31/03/2018	Actual to 31/03/2018	Bonus % (max)	2017/2018 bonus payable
Corporate objectives (80%)					
Driving efficient financial performance	EBITDA*	£582.1m	£586.4m*	48%	42.13%
Delivering for Customers	PC	No net penalty. "Plan Scenario" in Blueprint 2020 April 2017-2020 YW BP, or equivalent, is achieved.	Passed 11 of 14 financial PCs and achieved cumulative ODI reward of £12.96m.	20%	17.60%
	Non-financial PCs	10 out of 12 Non-financial PCs are met.	11 of 12 non-financial PCs achieved.		
Ensuring everyone, everywhere is safe and well	Lost time injury incident rate (LTIIR)	LTIIR = 0.42	LTIIR outcome 0.53	8%	0%
Investing in our people	Employee engagement score (EE)	EE score = 79%	73%	4%	0%

*Adjusted EBITDA of £577.1m is reconciled to operating profit in note 3. In addition, professional fees of £1.1m, accelerated upper quartile costs of £5.1m and costs relating other corporate restructuring activities of £3.1m have been added back for the purpose of calculating remuneration.

The 2017/2018 scheme design allocates 20% of the total opportunity to personal objectives. Of this, 0-15% may be allocated to transformational objectives; 0-15% may be allocated to departmental objectives; and the balancing 5% is allocated to an assessment of individual performance. The Committee determined that 15% should be allocated to transformational projects and 0% should be allocated to departmental, given the importance of delivering each transformational goal.

The Committee further determined that, while significant progress was made in achieving the Company's PR19 objective, good progress was made in delivering the health and safety plan, and GDPR was on track against its planned completion date of November 2018, other transformational objectives were not fully on track at year end. Consequently, the Committee determined that a 4% payment (of a maximum 15%) should be allocated to transformational objectives.

Following the above determination of Company performance against targets and an assessment of individual contribution (up to 5% of the overall bonus opportunity), the Committee approved the annual incentive awards for each Director as follows:

Director's name	Maximum bonus opportunity	Bonus 2016/2017		Bonus 2017/2018	
	%	% of salary	£	% of salary	£
Richard Flint	100%	73.5%	**£299,880**	67.7%	**£279,100**
Liz Barber	100%	71.5%	**£203,314**	68.0%	**£195,236**
Nevil Muncaster	70%	54.6%	**£89,013**	47.1%	**£77,419**
Charlie Haysom (Note 1)	70%	59.7%	**£96,816**	46.4%	**£38,372**
Pamela Doherty (Note 2)	70%	N/A	**N/A**	47.4%	**£42,270**

1. Charlie Haysom's bonus value is shown pro rata for the period to 1 April 2017 to 12 September 2017
2. Pamela Doherty's bonus value is shown pro rata for the period from 13 September 2017 to 31 March 2018

These payments were approved by the Committee on 6 June 2018 and are due to be paid in July 2018. All payments are based on 31 March 2018 salaries.

Richard Flint and Liz Barber were Executive Directors of Kelda Holdings Limited during 2017/2018. Their bonuses are shown in full, however they carry out other Group responsibilities and an appropriate portion of their remuneration is recharged from the regulated business.

Outcomes for LTIP 2015

On 1 April 2015, the Chief Executive and the Director of Finance, regulation and markets received awards equivalent to 200% of base salary. Other Executive Directors received awards equivalent to 150% of salary. Payments under the plan are at the discretion of the Remuneration Committee.

The awards made in 2015 were subject to the following performance conditions.

Step 1 – SIM Performance Condition

The SIM Performance Condition is met only if the Company SIM performance for 2017/2018 is at or above 85 points. If SIM performance is below 85 points in 2017/2018 then the SIM Performance Condition shall not be met and the 2015 Award shall not vest. If SIM performance is 85 points or higher, the Award shall vest in accordance with the following table.

Performance in 2017/2018	Vesting
Less than 85 points	Gateway is closed, therefore LTIP will not vest.
85 points and less than 86 points	Gateway is open, but overall vesting is capped to maximum of 50% of award once the calculation of performance conditions has been carried out.
86 points and less than 88 points	Gateway is open, but overall vesting is capped to maximum of 75% of award once the calculation of performance conditions has been carried out.
88 points or higher	Gateway is open and the LTIP will vest in accordance with the remaining performance conditions. No cap will be applied.

Step 2 – Cashflow Performance Condition

The cashflow Performance condition is that, subject to the Stability and Reliability Performance Condition set out in step 2 below, a percentage for vesting of the 2015 Award shall be determined in accordance with the following table.

Cashflow Measure	Percentage Determined
Targeted Cashflow is at least 120%	100%
Targeted Cashflow is at least 100% but less than 120%	Pro rata between 70% and 100%
Targeted Cashflow is at least 90% but below 100%	Pro rata between 1% and 70%
Targeted Cashflow is less than 90%	0%

Step 3 – Stability and Reliability Performance Condition

The Stability and Reliability Performance Condition is that 25% of the Percentage Determined shall vest in respect of the 2015 Award for each Stability and Reliability Measure as assessed in the OFWAT Report (or where replaced by such regulatory and reporting procedures that are compliant with OFWAT guidance and assessed by those regulatory and self-reporting procedures for performance in the financial year 2017/2018) as "stable" or "improving".

Step 4 – SIM Ranking bonus

In the event that the OFWAT Ranking of the Company is 1st amongst the OFWAT Comparator Group for the OFWAT SIM Measure as ranked in the OFWAT Report (or in the event of such ranking not being published by OFWAT as ranked by such other comparative assessment as adopted by the Committee for performance in the financial year 2017/2018) then a further 10% will be added to the amount to vest in respect of the 2015 Award, i.e. the amount to vest would be 110% of the value derived after step 3.

In the event that the OFWAT Ranking of the Company is 2nd or lower amongst the OFWAT Comparator Group for the OFWAT SIM Measure as ranked in the OFWAT Report (or in the event of such ranking not being published by OFWAT as ranked by such other comparative assessment as adopted by the Committee for performance in the financial year 2017/2018) then no SIM bonus will be paid and the amount to vest would be as derived after step 3.

Summary of performance

The table below summarises performance against each step.

Step	Performance	Commentary
1 – SIM Performance Condition	84.27	The SIM Performance Condition has not been met, therefore the LTIP does not vest
2 – Cashflow Performance Condition	Ratio of actual to targeted distributions = 100.4%	Subject to the SIM performance condition, CAFD performance would have resulted in a vesting of 70.5%
3 – Stability and Reliability Performance Condition	Water Infrastructure – Stable Water non-infrastructure - Stable Sewerage infrastructure – Stable Sewerage non-infrastructure - Stable	The condition is met and would have resulted in 25% of the % determined above vesting for each measure.
4 – SIM Ranking bonus	Not applicable	Not applicable

The threshold level of SIM performance was not achieved. This means that the 2015 LTIP did not vest and no payments were made to Executive Directors and other participants.

LTIP Awards for 2017

Based on the remuneration policy set out in the Policy Report section, each Director received an LTIP award in 2017 as set out in the table below (Audited).

Director	Role title	Annual salary at 01/04/17	Effective award date	Earliest vesting date	Max % of award	LTIP face value, £
Richard Flint	Chief Executive	£412,080	01/04/17	01/05/20	200%	£824,160
Liz Barber	Director of Finance, Regulation and Markets	£287,198	01/04/17	01/05/20	200%	£574,396
Nevil Muncaster	Director of Asset Management	£164,507	01/04/17	01/05/20	150%	£246,761
Charlie Haysom	Director of Service Delivery	£163,929	01/04/17	01/05/20	150%	£245,894
Pamela Doherty	Director of Service Delivery	£162,105	01/04/17	01/05/20	150%	£243,158

Other LTIP awards not yet vested

The 2016 LTIP award is due to vest in 2019. Based on the remuneration policy set out in the Policy Report section, each Director received an LTIP award in 2016 as set out in the table below.

Director	Role title	Annual salary at 01/04/16	Effective award date	Earliest vesting date	Max % of award	LTIP face value, £
Richard Flint	Chief Executive	£408,000	01/04/16	01/05/19	200%	£816,000
Liz Barber	Director of Finance, Regulation and Markets	£284,355	01/04/16	01/05/19	200%	£568,709
Nevil Muncaster	Director of Asset Management	£162,879	01/04/16	01/05/19	150%	£244,319
Charlie Haysom	Director of Service Delivery (to September 12 2017)	£162,307	01/04/16	01/05/19	150%	£243,460
Pamela Doherty	Director of Service Delivery (from September 13 2017)	£160,500	01/04/16	01/05/19	150%	£240,750

Pension

Kelda Group Pension Plan (Audited)

Richard Flint

Membership of the Kelda Group Pension Plan an unregistered arrangement, giving (from April 2013) pension of 1/40th of pensionable Pay for each year of service plus additional lump sum based on 3/40ths of Pensionable Pay for each year of service. Normal retirement age is 65 but 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. At 31 March 2018 total pension was £146,810 p.a. plus an additional lump sum of £150,739.

The table below shows the value of all pension related benefits for Mr Flint for the last seven years.

Value of all pension related benefits accrued to 31st March in each year

	2018	2017	2016	2015	2014	2013	2012
Director undertaking role of CEO[1]	£231,883	£223,135	£199,126	£184,025	£165,700	£197,909	£186,253

1. The figures shown are net of contributions paid by the CEO which were 6% p.a. of Pensionable Pay before the benefits changes which came into effect 1 April 2013 and 8.5% p.a. thereafter. These contributions were made by salary sacrifice.

Charlie Haysom

Membership of the Kelda Group Pension Plan, giving (from April 2013) pension of 1/77th of pensionable pay for each year of service plus additional lump sum based on 3/77ths of pensionable pay for each year of service. Normal retirement age is 65 but 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.

Mr Haysom started drawing his Plan pension on 18 January 2017 (his 60th birthday). The pension benefits built up after 31 March 2013 were actuarially reduced to reflect taking his benefits at age 60 (i.e. 3 years earlier than age 63). The total Plan pension (before any commutation) was £74,196 p.a. plus an additional lump sum of £5,416 after reflecting the appropriate early retirement reductions.

He is also entitled to benefits under the Employer Financed Retirement Benefits (“EFRBs”) Arrangement. Mr Haysom has been accruing pension benefits in the EFRBs (instead of the Plan) since April 2014. These benefits are not yet in payment and continuing to accrue going forwards. His remaining benefits that are not yet in payment (all in relation to EFRBs benefits) at 31 March 2018 are a pension of £17,304 p.a. plus an additional lump sum of £25,913.

To calculate the value of benefits accrued in the period 1 April 2017 to 31 March 2018, we have taken the start of the year and end of the year benefits to be the accrued EFRBs benefits only.

Pamela Doherty

Membership of the Kelda Group Pension Plan, giving (from April 2013) pension of 1/67th of Pensionable Pay for each year of service plus additional lump sum based on 3/67ths of Pensionable Pay for each year of service. Normal retirement age is 65 but 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.

As at 31 March 2018 Ms Doherty’s total pension is £54,578 p.a plus an additional lump sum of £32,428.

Other pension arrangements

Nevil Muncaster

Mr Muncaster received contributions to the Kelda Stakeholder plan totalling £26,321 for the period March to November 2017. He received a cash sum of £10,967 for the period December 2017 to March 2018.

Liz Barber

Mrs Barber opted for a full salary supplement instead of contributions to the Kelda Stakeholder plan. She received a cash sum of £71,799 in 2017/2018.

Chief Executive's pay in the last five financial years

Year	Base salary (£'000)	% change in base salary	Single figure/total emoluments (£'000)	Bonus[1] (£'000)	% of maximum award	LTIP[2] (£'000)	% of maximum award3
2018/2019	422	2.5%					
2017/2018	412	1.00%	932	279	67.7%	0	0%
2016/2017	408	2.00%	1,328	300	73.5%	388	50%
2015/2016	400	3.20%	1,231	240	60.0%	380	50%
2014/2015	388	2.00%	1,291	337	87.0%	555	75%

1. Bonus for 2018/2019 is paid in 2019/2020.
2. LTIP award for 2018 vests in 2021. The 2015 LTIP award did not vest in 2017/2018.
3. LTIP payments are based on salary in the year of award.

The ratio of Chief Executive's pay to that of the average of all other employees is 32:1. This has been calculated based on the gross pay (salary, bonus, LTIP) of the Chief Executive in the financial year 2017/2018 relative to the average gross pay of all other employees in employment for the whole of the 2017/2018 financial year. It should be noted that the calculation may be amended in future years in the light of developing regulation and good governance practice.

Percentage change in Chief Executive's remuneration

The change in remuneration (base salary, benefits and annual bonus) for the Chief Executive compared to the average for all other employees earned between the year ended 31 March 2017 and 31 March 2018 is as follows:

Director's name	% increase in element between 2016/2017 and 2017/2018		
	Salary	Taxable benefits	Annual bonus
R Flint	1%	13%	(5.8%)
Managers	1%	7%	(0.2%)
All employees	3%	10%	0%

1. The values are shown on a per capita basis. Salary for all Yorkshire Water employees includes employees who were employed at both 31 March 2017 and 31 March 2018 and are based on their salary at those two points.
2. Annual bonus relates to the 2017/2018 financial year.
3. Taxable benefits include healthcare, car allowance and fuel provision for employees who receive such benefits.

Relative importance of spend of pay

In respect of the year ending 31 March 2018 and the preceding financial year, the table below shows the actual expenditure of the Company, and the difference in spend between those years, on:

- Remuneration paid to or receivable by all employees of the Company.
- Distributions both to shareholders by way of dividend and to repay interest and loans to the Company.

	2017/2018 £m	2016/2017 £m	2015/2016 £m
Total spend on remuneration for all employees	118.1	110.8	98.3
Wages and salaries	98.4	91.9	83.0
Social security costs	10.3	9.7	7.4
Other pension costs	9.4	9.2	7.9
Total distributions made	88.9	139.1	90.9
Distributions made to allow Kelda Holdco Limited to repay interest and loans to Yorkshire Water	60.3	69.3	70.7
Other distributions	28.6	69.8	20.2

Non-Executive Directors

The Chairman of the Board is paid an annual fee in respect of his role on the Board of Yorkshire Water, Kelda Holdings Limited and any other Group companies where applicable. The Non-Executive Directors do not participate in the annual incentive scheme, the LTIP or Group pension plans.

Single total figure of remuneration for each Non-Executive Director

The total annual fees paid to each Non-Executive Director are shown below.

Non-Executive Director	2016/2017 fees £000	2017/2018 fees £000[4]
Kathryn Pinnock[1]	50	21
Raymond O'Toole	50	56
Julia Unwin CBE	50	56
Teresa Robson-Capps	50	56
Anthony Rabin[2]	243	275
Andrew Wyllie[3]	-	29

1. Kathryn Pinnock stepped down from the Board on 31 August 2017 and as a result received a pro rata fee.
2. Anthony Rabin was appointed as interim Chairman from 1 June 2016, then appointed as Chairman of the Boards of Kelda Holdings Limited, Kelda Eurobond Co Limited and Yorkshire Water Services Limited for a three-year period commencing on 9 September 2016. The figure above represents the total fees paid to him for 2017/2018.
3. Andrew Wyllie was appointed to the Board from 1 September 2017 and received a pro rata fee.
4. Following a market benchmarking exercise, increases to Non-Executive Director fees were implemented where necessary, with effect from 1 September 2017, to ensure alignment with market rates. Specifically, fees to Committee Chairs were increased by £10,000 per annum.

The above listed Directors emoluments are shown here in full, however they carry out other responsibilities within Kelda Group. The proportion of their time spent on activity other than for Yorkshire Water Services Limited is recharged to the relevant Group Company. This is explained in more detail in note 5 of the Statutory Financial Statements.

No fees or other emoluments were paid to Shareholder Directors.

There are no changes to Non-Executive Director fees for 2018/2019.

Other Directorships

Executive Directors are not permitted to hold external Non-Executive Directorships unless specifically approved by the Committee. Directors are permitted to retain the remuneration they receive in connection with any approved Non-Executive appointments.

Payments for loss of office (Audited)

Our policy is to limit severance payments on termination to contractual arrangements in force at the time. If the employment of an executive Director is terminated, any compensation payable will be determined having regard to the terms of the service contract between the Company and the employee, as well as the rules of any incentive plans. Except in circumstances of gross misconduct or voluntary termination, the Company retains discretion to make ex-gratia payments where considered reasonable and fair in the Committee's opinion, and to cover costs solely relating to termination of employment by the Company. Example costs may include legal, tax and outplacement services subject to such fees being minimal in nature and in the best interests of the Company.

Under normal circumstances, good leavers who do not serve notice are eligible to receive termination payments in lieu of notice based on base salary and contractual benefits. Normally, we expect Executive Directors to mitigate their loss upon departure. In any specific case that may arise, the Committee will consider carefully any compensatory payments, having regard to performance, service, health or other circumstances that may be relevant.

Good leaver provisions are incorporated into LTIP and other incentive plans as appropriate, at the discretion of the Committee.

There were no payments for loss of office to Executive Directors in 2017/2018

Payments to past Directors (Audited)

There were no payments to past Directors.

The role of the Remuneration Committee

The members of the Remuneration Committee are all Non-Executive Directors and the Committee is chaired by Julia Unwin. The Committee is responsible for:

- Making recommendations to the Board on the Company's framework of executive remuneration and its cost.
- Determining on behalf of the Board specific remuneration packages and conditions of employment (including annual incentive payments, long-term incentive awards and pension rights) for the Executive Directors and the next most senior category of Executives.
- Ensuring on behalf of the Board that systems and processes are in place for review of the succession, evaluation and remuneration packages of the Chief Executive, other Executive Directors, and other key members of senior management.
- Approval of any contract of employment or related contract on behalf of the Company with Executive Directors.
- Determining the terms of any compensation package in the event of early termination of contracts of any executive Director, and endeavour to ensure that such terms are fair to the individual and the Company, that poor performance is not rewarded, and that duty to mitigate loss is considered.
- Ensuring that all provisions regarding disclosure of remuneration, including pensions, as set out in regulations made under the Companies Act 2006 and the Code are fulfilled.
- Approving the design and operation of the Company's long-term incentive plan.
- Approving the design of any annual incentive plan applicable to Directors.
- Approving the provision of any pension benefit which is additional to, or in excess of the benefits available under the Company's pension scheme.

Consideration of shareholders' views

The appointment of three Directors representing Shareholder Investors in September 2017 enabled a direct flow of communication and sharing of views by shareholders to the Board. Two Directors representing Shareholder Investors are appointed to the Remuneration Committee.

Remuneration Committee membership

The Committee is made up exclusively of Non-Executive Directors.

Details of the membership of the Remuneration Committee is shown in the table below.

The Chief Executive, Director of Finance, regulation and markets, the HR Director and the Company Secretary attend meetings by invitation. The Committee's full terms of reference are available on the Company's website and on request from the company secretary: **www.yorkshirewater.com/about-us/what-we-do/corporate-governance-and-structure**

Non-Executive Director	Role	Appointed
Julia Unwin	Chair	January 2017
Anthony Rabin	Member	August 2013
Teresa Robson-Capps	Member	January 2017
Andrew Dench	Member	September 2017
Scott Auty	Member	September 2017
Ray O'Toole	Member	June 2014

Kathryn Pinnock was a member of the Committee until 31 August 2017.

Advisors to the Committee

In 2017/2018 Aon Hewitt provided market benchmarking services to assist management in the assessment of relative pay, short and long-term incentives; Aon Hewitt received a fee of £23,227. KPMG LLP provided additional support at the Committee's request. Representatives of KPMG attended one Committee meeting and received a total fee of £15,000. The Company did not use Aon Hewitt or in any other capacity, while KPMG assisted with a number of activities unconnected to executive remuneration.

Approval

This report was approved by the Board of Directors on 13 July 2018.

Statement as to disclosure of information to auditors

Each Director in office at the date of this report confirms, 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 as 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 £88.9m was paid in the year (2016/2017: £139.1m), broken down as follows:

	2018 £m	2017 £m
Gross dividends	**88.9**	139.1
Dividends used to make inter-company interest payments	**(60.3)**	(69.3)
Dividends used by Kelda Group to pay head office costs and Kelda Finance interest	**(28.6)**	(24.4)
Net distributions available to shareholder (Kelda Group)	**-**	45.4

No final dividend for the year is proposed.

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 Directors consider that the dividends paid in the year are in accordance with these principles.

The dividend policy is currently under review, to ensure greater transparency and compliance with regulatory guidelines.

An 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) household and non-household customers, one for wholesale water services and one for wholesale waste water 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

There is no difference between statutory and regulatory policy on revenue recognition. There is no turnover recognised for unoccupied properties. Yorkshire Water do 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	• Occupied and benefiting from supply. • Unoccupied and benefitting 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	• Metered standing charges, payable on unoccupied, 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)	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: • A property is not benefitting from a water supply. • A new property has been connected but is empty and not benefitting from supply. • The company has been informed that the customer has left the property, it is not benefitting 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 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 £571.0m (2016/2017: £511.2m) has been billed (in arrears) to customers in the year. The measured income accrual of £61.5m (2016/2017: £59.4m) is an estimation of the amount of water and waste water charges un-billed 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 2017/2018 the review indicated an underestimation of the measured accrual of £0.9m (2016/2017 £1.1m overestimation).

A consistent approach has been taken in this area. Considering the net of the over accrual in 2016/2017 with the under accrual in 2017/2018 amounts to £0.2m, this gives comfort in the accuracy of the approach adopted.

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.

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.

There has been no change in this policy during the year.

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 recovery rates to debts outstanding at the end of the accounting period. These recovery rates take into account the age of the debt, payment history and type of debt.

Higher provisioning percentages are applied to categories of debt which are considered to be of greater risk, including those with a poor payment history as well as to those of greater age. Bad debt provisioning rates are updated annually to reflect the latest collection performance data from the company's billing system. For unmeasured (direct billing) customers, all debt greater than three years old is fully provided against. For measured customers, all debt greater than 4 years old is fully provided against.

A provision of £35.0m is held at 31 March 2018 (31 March 2017: £31.9m). The main elements of the provision are as follows:

- £25.0m Unmeasured debtor provision (direct billing). Calculated using information based on the age of debts. Percentages are applied to each year's arrears, based on unmeasured tracked debts, to arrive at the provision figure. The provision is applied as follows:
  - Up to 1 year 25%
  - 1-2 years 30%
  - 2-3 years 50%
  - Over 3 years 100%
- £8.7m Measured debtor provision. The provision is calculated using information based on the age of debts. Percentages are applied to each year's arrears, based on measured tracked debts, to arrive at the provision figure as follows:
  - Up to 1 year 10%
  - 1-2 years 45%
  - 2-4 years 65%
  - Over 4 years 100%
- £0.8m Local Authority provision: The provision for Local Authority debt is based on estimating the potential bad debt should the contract terminate which, based on previous experience, equates to 58% of debt aged greater than one year.

There has been no change in this policy from 2016/2017 and it is still considered appropriate. 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 Yorkshire Water's guide to debt recovery services.

www.yorkshirewater.com/sites/default/files/YWSCOP_2082%2010.2017%20What%20if%20paying%20your%20bill%20is%20a%20problem%20%28COP%20leaflet%29.pdf

Movement in trade debtor balance

The movement between the 2 years is as follows:

	2016/2017 £m	2017/2018 £m	Movement £m
Trade Debtors	197.2	208.8	11.6
Bad Debt Provision	-31.9	-35.0	-3.1
Total	**165.3**	**173.8**	**8.5**

Statement on Condition K compliance

The Directors declare that in their opinion:

1. The Appointee has retained sufficient rights and assets for the purpose detailed below.

2. That the best price is received from disposals of land to which this Condition applies so as to secure benefits to customers through the application of the proceeds of such disposals to reduce charges as provided in.

The Appointee shall at all times ensure, so far as reasonably practicable, that if a special administration order were made in respect of the Appointee, the Appointee would have available to it sufficient rights and assets (other than financial resources) to enable the special administrator so to manage the affairs, business and property of the Appointee that the purposes of such order could be achieved, provided that this paragraph shall not require the Appointee to seek to re-negotiate the terms of any contract or obligation which, in accordance with a scheme under Schedule 2, is transferred to the Appointee.

Statement on Condition F compliance

Condition F of the company's Instrument of Appointment as a water and sewerage undertaker requires the company to publish regulatory accounting information in a prescribed format in addition to that required for the Statutory Financial Statements.

The Directors declare that in their opinion:

i. Yorkshire Water Services Ltd ("the Company") will have available to it sufficient financial resources and facilities to enable it to carry out, for at least the next 12 months, its regulated activities (including the investment programme necessary to fulfil the Company's obligations under its Appointments); and

ii. the Company will, for at least the next 12 months, have available to it

a) management resources; and

b) systems of planning and internal control which are sufficient to enable it to carry out those functions referred to at (i) above.

In making this declaration, the Directors have taken into account:

a) the net worth of the Company and the strength of key performance indicators as shown in the audited accounts for the year ended 31 March 2018 and the Company's business plan for 2018/2019

b) borrowing facilities which include significant committed undrawn bank facilities

c) parental support provided by the holding company which will provide financial support to the Company to enable it to meet its liabilities as they fall due

d) the Company's formal risk management process which reviews, monitors and reports on the Company's risks and mitigating controls and considers potential impact in terms of service, compliance, value, people, society and partners

e) the Company's employment policies and strategy as described in detail in the Director's report for the year ended 31 March 2018 within the Annual Report and Financial Statements.

The Directors also declare that in their opinion all contracts entered into with any Associated Company include all necessary provisions and requirements concerning the standard of service to be supplied to the Company to ensure that it is able to meet all its obligations as a water and sewerage undertaker, as required in Section 6A.2A (3) of Condition F of the Instrument of Appointment.

Condition F Certificate

The Directors declare that in their opinion:

(i) Yorkshire Water Services Ltd ("the Company") will have available to it sufficient financial resources and facilities to enable it to carry out, for at least the next 12 months, its regulated activities (including the investment programme necessary to fulfil the Company's obligations under its Appointments); and

(ii) the Company will, for at least the next 12 months, have available to it management resources; and systems of planning and internal control which are sufficient to enable it to carry out those functions referred to at (i) above.

In making this declaration, the Directors have taken into account:

a) the net worth of the Company and the strength of key performance indicators as shown in the audited accounts for the year ended 31 March 2018 and the Company's three-year business plan for 2017/2018, 2018/2019 and 2019/2020;

b) borrowing facilities which include significant committed undrawn bank facilities;

c) parental support provided by the holding company which will provide financial support to the Company to enable it to meet its liabilities as they fall due;

d) the Company's formal risk appetite and management processes which review, monitor and reports on the Company's risks and mitigating controls and considers potential impact on the long-term viability of the company. The long-term viability statement as at 31 March 2018 covers an 8-year period.

e) the Company's employment policies and strategy as described in detail in the Directors' Report for the year ended 31 March 2018.

The Directors also declare that in their opinion all contracts entered into with any Associated Company include all necessary provisions and requirements concerning the standard of service to be supplied to the Company to ensure that it is able to meet all its obligations as a water and sewerage undertaker, as required in Section 6A.2A of Condition F of the Instrument of Appointment.

Yours sincerely

Richard Flint
Chief Executive

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

Statement on diversification and protection of the core business

The principal activity of the Company is to manage the collection, treatment and distribution of water in Yorkshire. At the same time, we also collect, treat and dispose of about one billion litres of waste water safely back into the environment.

In the opinion of the Directors all contracts entered into with any associated company include all necessary provisions and requirements concerning the standard of service to the company, to ensure that Yorkshire Water is able to meet all its obligations as a water and sewerage undertaker.

As detailed previously, during the year ended 31 March 2018 Yorkshire Water has created an incumbent retailer that is vertically integrated within Yorkshire Water to serve the interests of non-household customer following retail separation that applied to the industry. The Kelda Group in which Yorkshire Water operates has made the strategic decision to sell certain non-regulated businesses. Four of these businesses have been sold.

Tax strategy for the appointed business

Tax strategy for the appointed business

Yorkshire Water is committed to acting with integrity and transparency in all tax matters.

Yorkshire Water's Board has agreed to adhere to the tax strategy and policies adopted by the Kelda Group of which Yorkshire Water is the principal subsidiary. A copy of the Kelda Group tax strategy is publicly available at:

www.keldagroup.com/corporate-responsibility

and is included below.

Kelda Group Tax Strategy and Policies

Adopted by the Board of Kelda Holdings Limited on 8 June 2017
This strategy applies to the group of companies headed by Kelda Holdings Limited ("the Group") in accordance with Schedule 19 to the Finance Act 2016.

The Group's approach to management of its tax affairs is driven by the following Strategic Business Objectives ("SBOs"):

- Trusted Company – the way we do business means our products, services and promises are trusted by all our stakeholders, now and in the future.
- Strong Financial Foundations – we deliver services to customers at a price they are willing and able to pay, while providing investors with returns that attract long term investment.

Such SBOs mean that the Group has a tax strategy and policies that address the need to build and maintain trust with stakeholders while also generating a fair and sustainable return for investors.

Trusted Company

The Group is committed to acting with integrity and transparency in all tax matters as part of our Trusted Company SBO. 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, and as a Trusted Company, our policy is:

- Not to enter into transactions that have a main purpose of gaining a tax advantage.
- 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 the Group's tax liabilities. Our small handful of overseas companies have arisen as a result of non-tax driven business decisions and are either in the process of being wound down or are wholly and exclusively resident for tax purposes in the UK. A full explanation of our overseas companies is included within the statutory accounts of Yorkshire Water Services Limited a copy of which can be found on the Yorkshire Water website at;

www.yorkshirewater.com/reports

Relationship with HM Revenue & Customs
An important part of our tax strategy and policies, and to support Trusted Company status, 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.

Strong Financial Foundations

Managing the Group's 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).

In line with the Group's Strong Financial Foundations SBO, the Group's tax strategy and policies seek to make use of such appropriate reliefs and to control the Group's tax costs. Decisions regarding such reliefs are taken using a decision-making framework that addresses the Trusted Company and Strong Financial Foundations SBOs.

Whilst seeking to manage tax liabilities for the benefit of customers and investors, the Group's policy is not to take an aggressive interpretation of tax legislation or use artificial tax avoidance schemes in line with the Trusted Company SBO.

Tax governance
Tax is part of the Finance & Regulation function of our Group and is the ultimate responsibility of the Group Director of Finance, Regulation & Markets who is responsible for the Group's tax strategy and policies.

Tax strategy and policies are reviewed on an on-going basis by the Group's Audit Committee and Board of Directors. Our tax status is reported regularly through the Group's Tax & Treasury Review Group which reports to the Financeability Governance Group, chaired by the Director of Finance, Regulation & Markets. Tax status is also reported via the Audit Committee through the Group's 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 Group Director of Finance, Regulation & Markets in conjunction with the Group Chief Executive.

Day-to-day tax matters are delegated to the Head of Tax & Treasury and a team of in house professionals who hold a combination of accounting and tax qualifications.

Tax reconciliations

Current tax reconciliation

The appointed current tax charge for the year ended 31 March 2018 is lower than if the standard rate of corporation tax in the UK of 19% was applied to the profit before tax for the year. The differences are explained below:

	£m
Profit before tax in relation to appointed activities	90.5
Tax charge at the standard rate of corporation tax in the UK of 19%	**17.2**
Adjustments in relation to fixed assets	
Non-deductible accounting depreciation on fixed assets	41.3
Potential capital allowances available to claim on fixed assets (1)	(41.9)
Capital allowances waived and deferred to future years (1)	7.7
Adjustments in relation to financial instruments	
Fair value losses on financial instruments that are disregarded for tax purposes and replaced by an accruals basis of accounting	(10.7)
Other adjustments	
Chargeable gain crystallising in the year	1.8
Deductible payments to pension scheme	(0.8)
Appointed current tax charge (2)	**14.6**

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. 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.

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)	8.8
Tax effect of differences due to:	
Lower actual corporation tax rate (19%) than that estimated when setting prices (20%)	(0.8)
Lower operating profit	(3.6)
Reduced interest cost resulting in higher profit before tax	2.2
Fixed assets	
Assumptions regarding allowable depreciation and potential capital allowance claims	0.2
Capital allowances waived and deferred to future years (1)	8.2
Other	
Tax deductible expenditure in relation to refinancing of derivatives	(3.1)
Chargeable gain crystallising in the year	1.9
Assumptions regarding non tax-deductible expenses (2)	0.8
Appointed current tax charge (3)	**14.6**

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.

Information on transactions with associates and the non-appointed business

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 Services Finance Limited

Yorkshire Water Services Finance Limited (YWSFL) is a subsidiary of Yorkshire Water. YWSFL is the issuer of bonds that have been lent to (and guaranteed by) Yorkshire Water. YWSFL has not issued any bonds since 2007/2008 and will not issue any bonds in the future.

2. Yorkshire Water Services Odsal Finance Limited

Yorkshire Water Services Odsal Finance Limited (YWSOFL) is a subsidiary of Yorkshire Water. YWSOFL is the issuer of bonds that have been lent to (and guaranteed by) Yorkshire Water. These bonds were initially issued by YWSFL but were exchanged for new bonds issued by YWSOFL on different terms to the original YWSFL bonds in 2009/2010. YWSOFL has not issued any bonds since 2009/2010 and will not issue any bonds in the future.

3. Yorkshire Water Services Bradford Finance Limited

Yorkshire Water Services Bradford Finance Limited (YWSBFL) is a subsidiary of Yorkshire Water. YWSBFL is the issuer of bonds that have been lent to (and guaranteed by) Yorkshire Water. YWSBFL has not issued any bonds since 2016/2017 and will not issue any bonds in the future.

As at 31 March 2018 Yorkshire Water has guaranteed the following bonds issued by its subsidiaries:

	Nominal £m	Coupon %	Maturity Date Year	Liability at 31 March 2018 £m
Yorkshire Water Services Finance Limited	6.703	5.375	2023	5.204
Yorkshire Water Services Finance Limited	7.400	5.500	2027	6.587
Yorkshire Water Services Finance Limited	0.100	6.625	2031	0.773
Yorkshire Water Services Finance Limited	200.000	5.500	2037	195.562
Yorkshire Water Services Odsal Finance Limited	29.900	6.588	2023	29.898
Yorkshire Water Services Odsal Finance Limited	180.800	6.588	2023	180.794
Yorkshire Water Services Odsal Finance Limited	135.500	6.454	2027	135.476
Yorkshire Water Services Odsal Finance Limited	255.000	6.601	2031	254.974
Yorkshire Water Services Bradford Finance Limited	275.000	6.000	2019	274.685
Yorkshire Water Services Bradford Finance Limited	200.000	6.375	2039	202.500
Yorkshire Water Services Bradford Finance Limited	100.000	6.375	2039	101.250
Yorkshire Water Services Bradford Finance Limited	260.000	6.000	2017	-
Yorkshire Water Services Bradford Finance Limited	8.900	3.180	2018	21.270
Yorkshire Water Services Bradford Finance Limited	9.400	3.180	2019	10.629
Yorkshire Water Services Bradford Finance Limited	72.300	3.770	2021	80.317
Yorkshire Water Services Bradford Finance Limited	25.100	3.770	2022	27.932
Yorkshire Water Services Bradford Finance Limited	94.300	3.870	2023	104.791
Yorkshire Water Services Bradford Finance Limited	18.800	3.870	2024	20.952
Yorkshire Water Services Bradford Finance Limited	47.200	5.070	2022	52.354
Yorkshire Water Services Bradford Finance Limited	250.000	3.625	2029	273.741
Yorkshire Water Services Bradford Finance Limited	90.000	4.965	2033	103.441
Yorkshire Water Services Bradford Finance Limited	33.800	5.875	2033	29.593
Yorkshire Water Services Bradford Finance Limited	90.000	3.540	2029	100.837
Yorkshire Water Services Bradford Finance Limited	200.000	3.750	2023	191.893
Yorkshire Water Services Bradford Finance Limited	60.000	2.030	2028	59.781
Yorkshire Water Services Bradford Finance Limited	50.000	2.140	2031	49.811
Yorkshire Water Services Bradford Finance Limited	50.000	2.210	2033	49.808
Yorkshire Water Services Bradford Finance Limited	40.000	2.300	2036	39.844
Yorkshire Water Services Bradford Finance Limited	50.000	2.300	2036	49.804
Total fixed				**2,654.500**
Index linked				
Yorkshire Water Services Finance Limited	0.100	3.048	2033	(0.879)
Yorkshire Water Services Finance Limited	65.000	1.823	2050	87.308
Yorkshire Water Services Finance Limited	125.000	1.462	2051	172.732
Yorkshire Water Services Finance Limited	85.000	1.758	2054	114.330
Yorkshire Water Services Finance Limited	125.000	1.460	2056	172.661
Yorkshire Water Services Finance Limited	100.000	1.709	2058	134.295
Yorkshire Water Services Odsal Finance Limited	127.800	3.306	2033	161.480
Yorkshire Water Services Bradford Finance Limited	175.000	2.718	2039	234.502
Yorkshire Water Services Bradford Finance Limited	85.000	2.718	2039	113.901
Yorkshire Water Services Bradford Finance Limited	50.000	2.160	2041	57.782
Yorkshire Water Services Bradford Finance Limited	50.000	1.803	2042	57.545
Total index linked				**1,305.655**

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.

Loans between Yorkshire Water and its parent companies

Loans between Yorkshire Water and its parent companies are as follows:

1. Loan 1 from Yorkshire Water to Kelda Eurobond Co Limited.

A long-term loan was made by Yorkshire Water during 2008/2009 to reflect the market value of certain inflation linked swaps that were novated to Yorkshire Water at that point in time. During the year ended 31 March 2015 a legal entity reduction exercise removed a number of surplus companies within the Kelda Group that included the removal of Kelda Holdco Limited. As a result, the counterparty for this loan was moved from Kelda Holdco Limited to Kelda Eurobond Co Limited on the same terms as the original loan.

As at 31 March 2018 the balance outstanding on this loan was £231.7m (2017: £239.8m). The outstanding amount has reduced during the financial year due to the annual repayment of £8.1m of principal of the loan. Interest on this loan is payable at market rates.

2. Loan 2 from Yorkshire Water to Kelda Eurobond Co Limited.

A long-term loan was made by Yorkshire Water to Kelda Holdco Limited during 2009/2010 to enable the refinancing of acquisition debt held by Kelda Holdco Limited at that time. During the year ended 31 March 2015 a legal entity reduction exercise removed a number of surplus companies within the Kelda Group that included the removal of Kelda Holdco Limited. As a result, the counterparty for this loan was moved from Kelda Holdco Limited to Kelda Eurobond Co Limited on the same terms as the original loan.

As at 31 March 2018 the balance outstanding on this loan was £768.8m (2017: £1,009.0m). The outstanding amount has reduced during the financial year due to the following:

- Kelda Eurobond Co Limited repaid £191.9m of the outstanding loan with Yorkshire Water using proceeds that it had received from Kelda Finance (No.2) Limited (a subsidiary of Kelda Eurobond Limited and a parent company of Yorkshire Water).
- Kelda Eurobond Co Limited repaid £49.1m of the outstanding loan with Yorkshire Water using proceeds that it had received from the sale of certain Kelda Water Services businesses.

Interest on this loan is payable at market rates.

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.

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 & KTM.

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 business	Associate Company	Turnover of Associate £m	Terms of Supply	Value £m regulated
Corporate charges	Kelda Group Limited	7.864	Cost allocation	6.059
Customer services (HH)	Loop Customer Management Limited	33.704	Cost allocation	25.786
Customer services (NHH)	Three Sixty Water Limited	7.911	Fixed contract price	7.911
Property services	Keyland	7.746	Cost allocation	0.114
Transport Management	KTML	0.000	Management charge	0.838

Yorkshire Water also charge Kelda Group / associates for any support service function activity this includes functions such as IT, facility 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 table below shows these recharges.

Services charged by regulated business	Associate Company	Value £m
Business Support Services	Kelda Group Limited	0.985
	Kelda Water Services	0.711
	Keyland	0.249
	Loop Customer Management Limited	2.091
	Three Sixty Water Limited	0.216

Dividends paid to associated undertakings

Amounts paid to the parent company and the underlying dividend policy, are disclosed within the dividend policy in this report.

Guarantees / securities

Yorkshire Water has a cash pooling arrangement with YWSFL whereby both company's debit and credit balances are pooled with interest charged on the net balance. This facility is subject to a provision of a cross guarantee between Yorkshire Water and YWSFL whereby each company guarantees the other's current account liabilities with the account bank. This pooling arrangement states that the aggregate of the cleared debit balances, less the aggregate of the cleared credit balances (i.e. the net amount) must not exceed £5.0m. In addition, the aggregate of the cleared debit balances must not exceed £10.0m.

Transfer of assets or liabilities by or to the Appointee

During the financial year ended 31 March 2018, 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.

1. Lower Dunsforth **£17,000**

2. Land at Knostrop (Opposite Pontefract Lane) **£27,000**

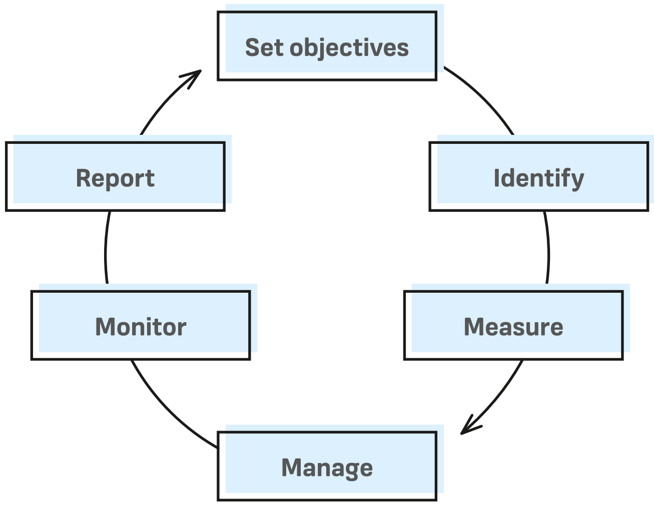
Transfer of any corporation tax group losses by or to the Appointee

Charges are made between UK tax resident entities for the receipt of tax losses within the Kelda Group at the prevailing corporation tax rate in the period (FY18 – 19%)

	Corporation tax group relief received by regulated business £m	Associate surrendering the group relief	Turnover of the associate £m	Means by which the payment for the group relief has been established	Value of group relief. £m
	0.006	Loop Customer Management Limited	33.703	Cost based on the prevailing corporation tax rate	0.001
	60.754	Kelda Eurobond Co Limited	nil		11.543
	3.452	Yorkshire Water Services Odsal Finance Limited	nil		0.656
	14.452	Kelda Finance (No2) Limited	nil		2.746
	0.533	Kelda Finance (No3) Limited	nil		0.101
Total	**79.197**				**15.047**

Managing key risks to the business

Yorkshire Water provides a critical service to the 5.4 million people who live in Yorkshire, the millions of people who visit each year as well as 140,000 businesses. Effective risk management is central to ensuring we meet customer expectations all day, every day. Our framework for identifying and managing risk to acceptable levels is embedded in our normal business process and culture and overseen by the Risk Committee. It improves our ability to predict and prepare for challenges to the achievement of our priorities and supports the creation and protection of value in the Company.



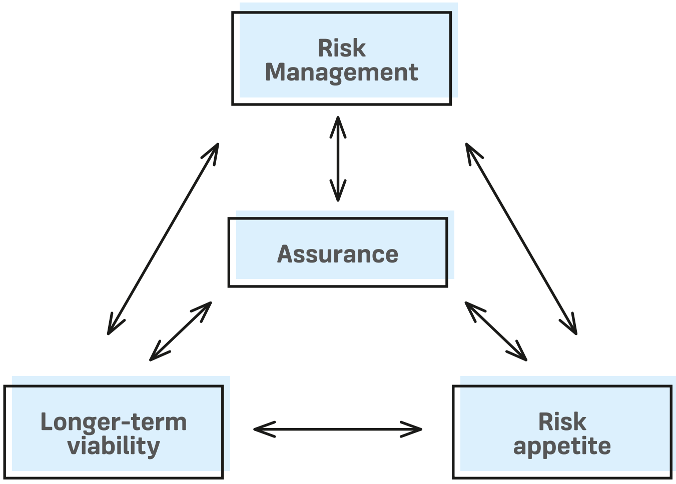
Our approach to risk management

Our operating environment is subject to constant and sometimes rapid change. We must be able to respond to this change to maintain customer service and achieve our strategic goals.

Our risk management approach applies to all activities, decisions and processes.

Set objectives	Identify	Measure	Manage	Monitor	Report
The Board sets our strategic goals and our corporate risk appetite. We tolerate a low residual risk.	Risk identification is embedded in all our operational management systems.	A standard risk scoring matrix ensures consistent measurement.	We tolerate a low residual risk with a strong control environment.	Coordinated three lines of assurance assess the effectiveness of controls.	We have a monthly risk reporting cycle to Risk Committee and Board.
We balance the cost of control with risk appetite and the long-term viability of the business.	Risk owners determine the tolerable level for each risk.	Risk champions aid escalation and consolidation.	Risk action plans manage risk to tolerance.		Risk reports inform business planning and resourcing decisions.

We balance the cost of control with the risk appetite and the long-term viability of the business.



We manage risk in line with the following key principles:

- **Transparent risk culture:** all risks are measured, managed, monitored and reported.
- **Proactive approach:** risk management is dynamic with risks and opportunities identified and escalated to be managed at the appropriate level in the business.
- **Risk governance:** all risks are subject to appropriate controls and governance.
- **Risk appetite:** a clearly defined risk appetite framework is aligned to the business strategy and reflects the Board's approach to risk taking.

Risk appetite

The Board sets the acceptable level of risk, our risk appetite, aligned to our business strategy and approach. During 2017/2018 we adopted a cautious approach to risk management. This means we tolerated a low residual risk managed through a strong control environment which is captured in documented processes. Deviations from these processes are tolerated only if formally agreed and the risk captured. This appetite is clearly set out for each of our risk assessment criteria, see below.

Impact	Appetite
Health and safety	Kelda Group and Yorkshire Water recognise the inherent water industry health and safety risk and is only prepared to tolerate risks that have been reduced to levels as low as reasonably practicable in line with Health and Safety Executive (HSE) guidance.
Value	Kelda Group and Yorkshire Water has no tolerance of any risk that may result in a breach of covenanted ratios. It will maintain headroom agreed by the Board.
Service	Kelda Group and Yorkshire Water will achieve performance that results in no net financial loss over the AMP and maintains our cautious appetite on reputation. Kelda and Yorkshire Water will not tolerate risk that results in an annual reduction in SIM score greater than two points.
Reputation	Kelda Group and Yorkshire Water want to be best in class, respected across the industry and region. It will only tolerate one-off or occasional national media, stakeholder, regulator or customer criticism over the achievement of objectives.
Compliance	Kelda Group and Yorkshire Water will be compliant, but will tolerate risks that have been reduced to levels as low as reasonably practicable. It will only tolerate one-off, planned breaches of regulation in the pursuit of guaranteed improvement in compliance.
People	Kelda Group and Yorkshire Water works hard to create the right environment, while maintaining good relations through robust consultation and engagement with all its colleagues.

Risk governance

The Risk Committee is chaired by the Director of Finance, Regulation and Markets. It monitors the overall level of risk in the business and assesses the tolerability of the risk profile. Assurance is provided over the adequacy of our risk management process by internal and external auditors.

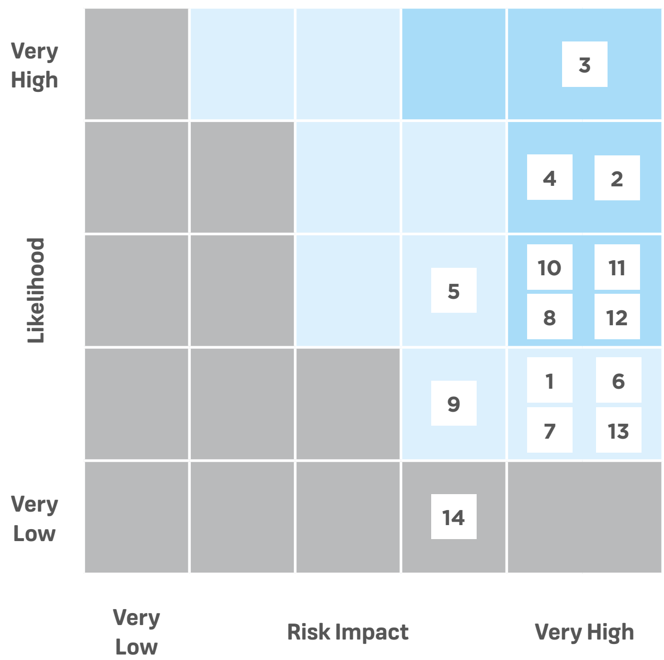
#	Principal Risk Summary	March 2017	March 2018
1.	Public and colleague safety		
2.	Enough clean, safe drinking water		
3.	Leakage		
4.	Protect our environment – including Flooding		
5.	Climate Change and Resilience		
6.	Customer and Stakeholder trust		
7.	Financial Sustainability		
8.	Security & Cyber resilience		
9.	Talent, culture & succession		
10.	Organisational Change		
11.	Data Protection and Privacy		
12.	Political, Legal and regulatory change - Brexit, Water Sector Reform, Nationalisation		
13.	New Market Implementation and competition		
14.	Open and Transparent governance		

Our principal risks at March 2018

Our principal risks are those individual or aggregated risk which have the potential to threaten viability or take the business significantly beyond risk appetite. The increased corporate ambition set out in our Upper Quartile plan inherently increases the risk to achieving our objectives. This is reflected in the rise in the number of Principal risks being actively managed by the Risk Committee and the Board from 13 in March 2017 to 14 in March 2018.

The new risks are:

- Leakage: this reflects our focus on achieving a stepped change in reducing water wastage and leakage.
- Business strategy and change: this recognises the level of organisational transformation the Board expects in the next two years.
- Political, Legal and regulatory change: this combines escalating risks to reflect the changes in our external political environment.
- Open and transparent governance: this reflects our AMP7 ambition to be a global benchmark for openness and transparency.



A summary of our principal risks is listed in our ARFS.

Assurance and oversight of risks

Our integrated assurance approach provides management with a clear view on whether the control framework effectively mitigates risk to the expected level. Our Risk and Assurance teams work together across the three lines of assurance to ensure that there is appropriate coverage across the whole control environment, including all corporate risks. The assurance outcomes are reported to the risk owners and, where appropriate, escalated through leadership teams to the relevant Committee, to support decision making. It helps Senior Managers understand our true risk profile, current levels of control and increasingly the culture in our business.

Statement on differences between statutory and RAG definitions

Differences between statutory and regulatory definitions has been provided within Section 7 of this Annual Performance Report. Line by line explanation of differences and narrative from tables 1A, 1B, 1C and 1D has been provided. Please see Section 7 of the Annual Performance Report for further information.

Long-term viability (LTV) statement

The Directors have assessed the viability of the company, taking account our current position, the potential impact of the principal risks facing the business in severe but reasonable scenarios, and the effectiveness of any mitigating actions. Based on this assessment, the Directors have a reasonable expectation that the business will be able to continue in operation and meet its liabilities as they fall due over the seven-year period to March 2025. This takes the company through the current five-year business plan and further to the end of the next Asset Management Period (AMP7).

To make this statement the company has assessed viability using the company's strategic planning process.

The Directors have considered the appropriate length of time over which to provide the viability statement. In making their assessment, they have taken account of the balance between time-scale and robustness of analysis, alongside advice from our regulator, Ofwat. The Directors now consider that a five to nine-year range is appropriate for a regulated entity depending upon where Yorkshire Water is within the current regulatory cycle at the point of assessment and the extent to which information is available on the direction of the subsequent AMP. As Yorkshire Water is now at the end of the third year of the current regulatory cycle and the Price Review 2019 (PR19) preparation is well underway, there is sufficient information available which could reasonably be considered to support a seven-year period. This time-frame falls well within our current strategic planning horizon and our whole business resilience framework and associated assessments. The strategic plan and modelling of AMP7 scenarios reflect the Directors' best view of future prospects. The assumptions used in arriving at the AMP7 forecasts are based upon the best information available currently available within this whole business resilience framework.

Furthermore, viability assessment is intrinsically linked to strong risk management processes. Aligned risk appetite, actual risk levels and both financial and operational plans are critical to the company understanding and managing its risks and remaining viable in the long-term.

As part of the annual update of our five-year business plan to 2020, alongside our long-term strategic planning, risk appetite was assessed in the context of the strategic risk register, plans to mitigate or tolerate risk and the financial resources available to manage the risks.

Underpinning the appetite assessment is a thorough risk review process which quantifies the impacts (e.g. financial, reputational, service) and likelihood of strategic risks materialising and makes appropriate provision with the financial forecasts within the business plan. These principal risks are detailed in our managing key risks to the business section in Appendix 4, and their impact and likelihood considered within the financial forecasts for the remainder of AMP6.

The AMP7 period, covering the period 1 April 2020 to 31 March 2025, is subject to significantly greater uncertainty than the current period. To understand future prospects and viability for that period, detailed scenario modelling has been undertaken.

The first step was to roll forward the AMP6 forecast financial and non-financial outcomes into AMP7 based on the current regulatory environment and the following assumptions:

- All AMP7 numbers are in line with our draft PR19 plan and operating costs reflect current experience plus foreseeable cost increases, less known efficiencies.
- AMP7 capital costs reflect the 25-year asset plan.
- Borrowing costs are adjusted for the expected re-financing strategy outcomes based on forecast expectations for RPI and LIBOR.
- Ofwat's treatment of ODIs, revenue correction and RCV log downs do not materially change from our current understanding of the regulatory framework.
- Weighted average cost of capital (WACC) is in line with the range of current market data.

A base case was then established which, together with the information above, was used to determine baseline regulated revenues. The company's out-performance, based on previous AMPs, was then overlaid on the base numbers, together with the dividend policy to determine base line sustainable distributions and associated financial leverage.

Several downside out-performance and regulated return sensitivities were then applied to the base case forecasts for the seven-year period to determine the impact on the core financial covenants. The stress tests have covered severe, plausible and reasonable scenarios. Where necessary, distribution levels were reduced to ensure the ongoing compliance of financial covenants.

The final step was to analyse the risk register and create severe but realistic downside plausible scenarios using the risks identified in the corporate risk management process detailed on page 43. At a summarised level those risks are shown in the table:

The final step was to analyse the risk register and create severe but realistic downside plausible scenarios using the risks identified in the corporate risk management process detailed in our managing key risks to the business section in Appendix 4. At a summarised level those risks are shown in the table below:

	LTV severe but plausible scenario summary to end of AMP7 (2025)			
	Principal risk		**Plausible scenario**	**# of Corporate risks in scenario**
1	Financial sustainability	**a**	Failure to deliver financial targets / outperformance / Economic volatility	**8**
2	New market implementation and competition	**b**	Impact of Brexit and low interest rate environment significantly impacts supply chain and programme delivery	**2**
3	Talent, culture and succession	**c**	Failure to effectively account for and or complete the non regulatory sales programme for KWS leading to material financial liability or misstatement	**1**
4	Open and transparent governance	**d**	Failure to deliver positive PR19 outcome and upper quartile plan for AMP7	**1**
		e	Excessive chemical or energy cost inflation due to global supply chain disruptions or changes to market conditions	**1**
5	Enough clean safe drinking water	**f**	Severe Dry Spring / Summer leads to drought and supply restrictions	**8**
		g	Major WQ contamination failure	**3**
6	Leakage	**h**	Severe Winter followed by thaw combines leading to an inability to meet stretching Leakage targets	**3**
7	Climate change and resilience	**i**	Widespread flood inundation / coastal inundation / Significant Flood Event (2007/2015)	**2**
8	Protect our environment incl flooding	**j**	Severe Odour at key WWTW works leads to significant reputational and SIM impacts	**1**
		k	Pollution Incidents lead to loss of reputation with Ofwat & EA leading to ODI penalties	**3**
9	Public and colleague safety	**l**	Death or Serious Injury to colleague or member of the public	**2**
		m	Major Fire or Explosion due to process safety failure	**1**
10	Customer and stakeholder trust	**n**	Severe or continuous critical asset / service failure due to inability to effectively deliver business strategy & transformation	**4**
11	Organisational transformation			
12	Security and cyber resilience	**o**	Significant IT / Cyber Breach leading to major loss or Breach of NIS and SEMD obligations	**5**
13	Data protection and privacy	**p**	Loss of Loop and Loop-based services impacts YW service / billing provisions	**1**
14	Political, legal and regulatory change	**q**	Major breach of GDPR / DPA 2018 including investigation & fine by ICO	**2**
		r	Failure to comply with Regulatory or Statutory changes	**2**
		s	Water Act / Competition Act - Failure to comply	**2**

The probability of each of the risks was assessed to create an expected impact on the portfolio of severe downside risks. These plausible risk scenarios were then grouped into Long Term Viability Scenarios such as Climate Change and Resilience.

An estimate was made of a likely cost of each risk occurring and this was then multiplied by the probability of occurrence and the resulting products were then summed to give an Expected Value, which represents the anticipated loss for all risks each year.

The overall annualised expected impact, which incorporates risk-based sensitivities and regulatory sensitivities, resulted in a significant increase in total expenditure over the seven-year period. Yorkshire Water has not previously experienced adverse cost impacts over a prolonged period to this extent. To use that value of cashflow downside risk in each year of the seven-year assessment period is therefore considered very prudent and unlikely to occur. The cashflow risk values above were applied to each of the scenarios generated previously.

This is a prudent approach as the Expected Value method assumes that all major risk scenarios occur on an ongoing, albeit risk adjusted, basis. More usually one event would occur and would be mitigated before the next event hit.

We have also looked at the frequency and impact of historic examples of scenarios for Yorkshire Water, and across other water companies, and conclude that the above procedures and analysis produce a severe but realistic challenge to the ongoing health of the company, but this level of risk management is viable, given the strength of Yorkshire Water.

Ofwat have recently recommended that the variables which companies consider for stress testing should reflect the individual circumstances of each company and may include but are not limited to the following:

- Inflation
- Revenue
- Totex
- Impact of ODIs
- Unfunded costs
- Debt service requirements
- Unfunded pension liabilities
- Exceptional items e.g. regulatory fines and legal claims and we have reflected these in our modelling.

The financial modelling demonstrates that under a low Weighted Average Cost of Capital (WACC) scenario with the above expected values, Yorkshire Water does not reach default levels on financial covenants even if distributions are paid. However, due to the cumulative adverse cash-flows modelled, in this scenario financial ratios would be at a level which would jeopardise maintenance of an investment grade credit rating required under the water licence, without further mitigating action being taken.

In assessing the viability of Yorkshire Water, the Directors have taken account of:

- The detailed financial projections developed as part of the planning process which include investment obligations for AMP6 and the best available information about AMP7.
- The downside scenarios and stress testing linked to the risk management process described above.
- Yorkshire Water's robust solvency position, including its likely ability to raise new finance in most market conditions.
- The strength of mitigations available, including restricting dividend payments and the stability which exist under the regulatory model.

Taking account of this information, the Directors have concluded that there is a reasonable expectation that Yorkshire Water will be able to continue in operation and meet its liabilities as they fall due over the assessment period. The Directors also consider it appropriate to prepare the Financial Statements on a going concern basis, as explained in the basis of preparation paragraph in note 1 to the Financial Statements.

This statement has been reviewed by the company's auditor, Deloitte LLP to ensure there is no material inconsistency between this and the other contents of this document, as part of their audit opinion on the annual report and financial statements on page 116.

Statement explaining out/under performance of the return on regulated equity (RORE)

The RORE calculation is based on the cumulative position at the end of 2017/2018.

This is based on an average RCV figure of £16,541m at 2012/2013 average prices. A notional gearing of 62.5% has been used.

The base return for the 3 years has been calculated using the 5.65% equity return as included within the PR14 final determination.

All values have been included post tax.

Adjustment	Description	2017/2018 %	2017/2018 £m
	Base Return	5.65%	350
1	Totex outperformance	-	-
2	Retail underperformance	(0.23%)	(14)
3	ODI reward	0.35%	21
4	Financing impact	(1.16%)	(72)
	RoRE cumulative	4.61%	286

The adjustments are explained below:

1. Totex outperformance

We have included a cumulative outperformance against totex of £0m at 2012/2013 average prices.

The explanation of how this outperformance has been calculated is included within the commentary in Section 3, review of our performance.

2. Retail underperformance

We have included a cumulative underperformance against PR14 of (£14m) at 2012/2013 average prices.

This has been calculated by comparing the actual retail costs reported in table 2C to the operating cost allowances included within the PR14 final determination.

3. ODI reward

We have included a cumulative ODI reward of £21m at 2012/2013 average prices.

The explanation of how this has been calculated within Section 3.

4. Financing impact

We have included a cumulative financing impact of (£72m) 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 three years. This has been adjusted by the average RPI for both years using the Fisher formula.

This calculation provides a real cost of debt for 2015/2016 of 4.46%, 4.13% for 2016/2017 and 1.85% against the 2.59% cost of debt as included within the PR14 final determination.

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