

Yorkshire Water Services Ltd

Annual Performance Report (APR)

For the 12 months ended 31 March 2016



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About this Annual Performance Report

Directors Overview

This document has been prepared to demonstrate how Yorkshire Water Services Limited (YW or the Company) is performing relative to the Final Determination (FD) approved by Ofwat in December 2014. It has been produced alongside the Annual Report and Financial Statements and replaces the Regulatory Accounts that were previously published with the Financial Statements. The preparation of an Annual Performance Report (APR) is a requirement under the conditions of appointment of the Company under the Water Industry Act 1991. In addition a Customer Performance Report has also been produced as a separate document to allow customers and other stakeholders to review our performance against our stated commitments.

The directors who served during the year and up to the date of signing this Annual Performance Report, including any changes, are shown below. The biographies of the Board can be found within the Annual Report and Financial Statements.

Executive Directors

Richard Flint
Liz Barber
Charlie Haysom
Nevil Muncaster

Non-executive Directors

Richard Parry-Jones (resigned 31 May 2016)
Martin Havenhand
Ray O'Toole
Kath Pinnock
Anthony Rabin

The Annual Performance Report includes the following:

1. A Compliance & Risk Statement;
2. A Data Assurance Summary that provides evidence that the information contained herein is accurate and complies with all statutory, licence and regulatory obligations and;
3. An Accounting Separation Methodology Statement which shows the alignment of the tables and ensures consistency with the current regulatory reporting requirements.

Commentaries for variances are included with the data table displayed.

Ofwat has also specified the requirement of certain disclosures which are included within this report. Some disclosures are the same as the Annual Report and Finance Statement but are shown in full within this document to enable this report to be a standalone document.

External Audit and Assurance

Financial auditors' opinion

In our opinion, Yorkshire Water Services Limited's Regulatory Accounting Statements within the Annual Performance Report:

- fairly present in accordance with Condition F, the Regulatory Accounting Guidelines issued by the WSRA (RAG1.06, RAG2.05, RAG3.08, RAG4.05 and RAG5.06) and the accounting policies set out on pages 77 to 83 (including the Accounting Separation Methodology), the state of the Company's affairs at 31 March 2016 and its profit and its cash flow for the year then ended; and
- have been properly prepared in accordance with Condition F, the Regulatory Accounting Guidelines and the accounting policies (including the accounting separation methodology).

Basis of preparation

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 Annual Performance Report is separate from the statutory financial statements of the Company and has not been prepared under the basis of United Kingdom Generally Accepted Accounting Practice ("UK GAAP").

In forming our opinion on the Regulatory Accounting Statements within the Annual Performance Report, which is not modified, we draw attention to the fact that the Annual Performance Report has been prepared in accordance with Condition F, the Regulatory Accounting Guidelines, the accounting policies (including the accounting separation methodology) set out in the statement of accounting policies and under the historical cost convention.

The Regulatory Accounting Statements on pages 12 to 39 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.

What we have audited

The tables within Yorkshire Water Services Limited Annual Performance Report that we have audited ("the Regulatory Accounting Statements") 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) and the revenue analysis by customer type (table 2I) and the related notes.
- additional regulatory information tables (excluding the non-financial information), wholesale totex analysis (table 4B), forecast impact of performance on RCV (table 4C), wholesale totex analysis - water (table 4D), wholesale totex analysis - wastewater table 4E), operating cost analysis -

household retail (table 4F), wholesale current cost financial performance (table 4G), financial metrics (table 4H), financial derivatives (table 4I).

The financial reporting framework that has been applied in their preparation comprises the basis of preparation and accounting policies set out in the notes to the Annual Performance Report.

In applying the financial reporting framework, the directors have made a number of subjective judgements, for example in respect of significant accounting estimates. In making such estimates, they have made assumptions and considered future events.

We have not audited the Outcome performance table (table 3A) and the additional regulatory information in table 4A, the non-financial information in table 4D and 4E and the Directors remuneration report.

This report is made, on terms that have been agreed, solely to the Company and the WSRSA 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 WSRSA 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 WSRSA 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 WSRSA, for our audit work, for this report or for the opinions we have formed.

Respective responsibilities of the WSRSA, the Directors and Auditors

As explained more fully in the Statement of Directors' Responsibilities set out on page 49, the directors are responsible for the preparation of the Annual Performance Report and for their fair presentation in accordance with the basis of preparation and accounting policies. Our responsibility is to audit and express an opinion on the Regulatory Accounting Statements within the Annual Performance Report in accordance with International Standards on Auditing (UK and Ireland) ("ISAs (UK & Ireland)"), except as stated in the section on 'What an audit of the Annual Performance report involves' below, and having regard to the guidance contained in Audit 05/03 'Reporting to Regulators of Regulated Entities' issued by the Institute of Chartered Accountants in England and Wales. Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

What an audit of the Annual Performance Report involves

An audit involves obtaining evidence about the amounts and disclosures in the Regulatory Accounting Statements sufficient to give reasonable assurance that the Regulatory Accounting Statements within the Annual Performance Report are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the directors; and the overall presentation of the Annual Performance Report. In addition, we read all the financial and non-financial information in the Company Annual Performance Report to identify material inconsistencies with the audited tables within the Annual Performance Report and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

We have not assessed whether the accounting policies are appropriate to the circumstances of the Company where these are laid down by Condition F. Where Condition F does not give specific guidance on the accounting policies to be followed, our audit includes an assessment of whether the accounting policies adopted in respect of the transactions and balances required to be included in the Annual Performance Report are consistent with those used in the preparation of the statutory financial

statements of the company. Furthermore, as the nature, form and content of Annual Performance Report is determined by the WSRA, we did not evaluate the overall adequacy of the presentation of the information, which would have been required if we were to express an audit opinion under ISAs (UK & Ireland).

The Company has presented the allocation of operating costs and assets in accordance with the accounting separation policy set out in note Price Control Segments and its Accounting Separation Methodology Statement published within the Annual Performance report which is on the Company's website on 15 July 2016. We are not required to assess whether the methods of cost allocation set out in the Methodology Statement are appropriate to the circumstances of the Company or whether they meet the requirements of the WSRA, which would have been required if we were to express an audit opinion under International Standards on Auditing (UK & Ireland).

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.

Other matters

The nature, form and content of the Annual Performance Report is 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.

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 2016 on which we reported on 12 July 2016, 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.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Leeds

11 July 2016

External Assurance

Independent Technical Assurance Statement

Halcrow Management Sciences has been appointed by Yorkshire Water to provide independent technical assurance of their regulatory submissions. Our work included:

- the technical information supporting the Company Compliance Certification 2016;
- the presentation of their performance commitments in Table 3A of the Annual Performance Report;
- non-financial data in tables 2F, 2G, 2H, 4A, 4D and 4E of the Annual Performance Report; and

Through a series of meetings and information exchanges, we have reviewed and tested the methodologies, processes and supporting evidence on which the statements in the Annual Performance Report 2016 are based, and we have considered the material accuracy of these statements, the performance data presented and the conclusions drawn by Yorkshire Water Services. Our detailed findings are presented in the 'APR16_Assurance Report'.

Based upon our assessment of Yorkshire Water Services' performance and the supporting information we have reviewed, we conclude that:

- the statements of non-financial numeric measures are consistent with our assurance of the CCC16 Tables and Commentaries and the Strategic Report 2016;
- the statements of progress against on-going business objectives reasonably represent the progress made; and
- the Company's explanations of where and why it was not able to meet its planned objectives are reasonably based.

Overall, the information provided in the Annual Performance Report 2016 provides a fair, balanced and understandable summary of the Company's 2015/16 circumstances and performance and of their future direction.

CWJ Turner

Director

Halcrow Management Sciences Limited

Chief Executive's Review

Annual Performance

Over the last financial year operational performance was good with the Company meeting all but two of its new 26 Performance Commitments. This performance was despite the business and many of its customers being impacted by some of the worst flooding ever seen in parts of Leeds, Bradford, York and the Calder Valley over the Christmas and New Year period. We maintained water services to all customers during the events, despite flooding of more than 100 of our works and pumping stations. Our thanks to the support provided by Wessex Water, Dŵr Cymru Welsh Water and Northumbrian Water for their help with the clean-up.

Excellent progress is being made towards repairing those assets damaged by the recent floods and we continue to work with other external agencies with a role in surface water management, to explore what more we can do to minimise the risk of events like this having such a devastating impact on local communities in the future.

Good progress has also been made by the Company to prepare for the introduction of non-household retail competition, with the Shadow Market due to open in October 2016.

Our continued investment in energy efficiency and renewables is proving its value, enabling operational cost savings and our lowest ever operational carbon emissions, down from a peak of nearly 450 kilo tonnes of Carbon Dioxide equivalent (KTCO₂e) when we started measuring in 2004/05, to 353KT last year. We would have achieved our Performance Commitment to generate 12% of our substantive electricity needs except our new thermal hydrolysis plant at our Esholt works in Bradford was damaged during the widespread flooding at Christmas. To ensure substantial further improvement we have recently committed to invest over £70m in a new renewable energy and waste treatment facility at our Knostrop works in Leeds.

We continue to prioritise customer service and are pleased to see that we have high levels of satisfaction on billing and water services in the water industry's comparative assessment, Service Incentive Mechanism (SIM). Furthermore, we maintained our strong performance in the UK Customer Service Index, scoring well above the utility sector average. We recognise the need for further improvement in our waste water related services, where we see lower levels of satisfaction. We continue to listen and respond to our customers, for example by investing £16m this year at Saltend works with a further £15m in future periods to respond to odour problems.

The overall operating profit of the Company is £248.7m (2015: £395.6m); this reduction is due to the increased operating costs and lower revenues within the year following reduced customer bills from Ofwat's Final Determination revenue controls. Within this operating profit are exceptional costs of £26.5m that relate to the December flooding that impacted a number of our sites.

Despite these challenges and changes, Yorkshire Water continues to make a significant contribution to the social, economic and environmental wellbeing of the region it serves, and remains well placed to deliver the outputs and benefits of its current five-year investment plan for 2015 to 2020.



Richard Flint
Chief Executive
12 July 2016

Customer Outcomes

Yorkshire Water has ongoing responsibilities to provide customers with safe and reliable drinking water and to return waste water safely back into the environment. While doing this, it needs to deliver the level of service customers expect at a price they can afford. We need to ensure our colleagues and partner organisations are safeguarded by complying with legislation and providing the highest levels of health, safety and wellbeing. We are also guided by our company vision of 'Taking responsibility for the water environment for good'. This aligns with our customers' priorities and reflects our aim to invest for a sustainable future while keeping bills affordable.

Shown on the next page is our Performance Commitment Dashboard that is reported every month throughout the business.

Overall business performance in 2015/16 has been strong and we expect to meet the overwhelming majority of our operational, environmental and service commitments. Of our 26 Performance Commitments we have met 24 of the 26 in-year targets and have over achieved performance on two of these which will result in a reward (this reward will be rolled forward year on year and ultimately settled at the next review of customer prices 2019)

The only two commitments we have not achieved are:

- firstly drinking water compliance achieved 99.954% compared to a target of 99.960%. The target was not achieved due to high nickel, lead and iron failures in the distribution system;
- the other commitment not achieved in the year was renewable energy generation; this failure was due to the damage to key energy generation equipment during the floods that hit Yorkshire in December 2015. We are working hard to repair this equipment to get our performance back on track.

These commitments are within the deadband of acceptable performance and don't attract penalty at this moment.

SIM is the water industry regulatory measure of customer service. Ofwat introduced a new methodology for SIM in April 2015, placing more emphasis on customer satisfaction. We achieved our Performance Commitment to improve our score, achieving 82.6 out of 100 points.

We have a SIM improvement plan in place for 2016/17 which is focusing on improving overall customer service performance with a particular focus on the speedy response and resolution of waste water related issues.



Adrian Kennedy
Director of Regulation
12 July 2016

2015 – 2016 Performance Dashboard

Key

- Not expected to achieve year end target
- Not achieving monthly target
- Performance on track
- Forecast to fail year end target
- Financial Incentive/Penalty
- Calander Year Measure
- Financial Year Measure

<p>Safe water: part of our Blueprint for Yorkshire</p>	<p>Water efficient regions: part of our Blueprint for Yorkshire</p>	<p>Safe water: part of our Blueprint for Yorkshire</p>	<p>Excellent catchments, rivers and coasts: part of our Blueprint for Yorkshire</p>	<p>Sustainable resources: part of our Blueprint for Yorkshire</p>	<p>Trusted company: part of our Blueprint for Yorkshire</p>	<p>Strong financial foundations: part of our Blueprint for Yorkshire</p>																								
<p>Drinking Water Compliance</p> <p> 99.954% (99.960)</p> <p>C</p> <p>Future years commitments</p> <table border="1"> <tr><td>99.960%</td><td>100%</td><td>100%</td></tr> </table>	99.960%	100%	100%	<p>Leakage</p> <p> 285.12 (297.1)</p> <p>F</p> <p>Future Years Commitment</p> <table border="1"> <tr><td>297.1</td><td>297.1</td><td>292.1</td></tr> </table>	297.1	297.1	292.1	<p>Internal Flooding</p> <p> 1,842 (1,877)</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>1,898</td><td>1,919</td><td>1,919</td></tr> </table>	1,898	1,919	1,919	<p>Length of river improved</p> <p>N/A</p> <p>End of AMP 440km</p>	<p>Energy Generation</p> <p> 11.3% (12%)</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>>2016-17</td><td>>2017-18</td><td>>2018-19</td></tr> </table>	>2016-17	>2017-18	>2018-19	<p>Quality of Customer Service (SIM)</p> <p> 82.6 (82)</p> <p>Year on Year Improvement</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>>2016-17</td><td>>2017-18</td><td>>2018-19</td></tr> </table>	>2016-17	>2017-18	>2018-19	<p>Assisted Bills</p> <p> To publish data annually (22,735)</p> <p>F</p>									
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<p>Corrective Actions</p> <p> 5 (6)</p> <p>C</p> <p>Future years commitments</p> <table border="1"> <tr><td>6</td><td>6</td><td>6</td></tr> </table>	6	6	6	<p>Water Use</p> <p>141.71 (142.6)</p> <p>F</p> <p>Future Years Commitment</p> <table border="1"> <tr><td>141.5</td><td>140.4</td><td>139.3</td></tr> </table>	141.5	140.4	139.3	<p>External Flooding</p> <p> 9,037 (10,125)</p> <p>F</p> <p>Future Year Commitments</p> <table border="1"> <tr><td>10,363</td><td>10,487</td><td>10,487</td></tr> </table>	10,363	10,487	10,487	<p>Visitor satisfaction</p> <p> Publish annually</p>	<p>Working with others</p> <p>4 (3)</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>3 (6)</td><td>3 (9)</td><td>3 (12)</td></tr> </table>	3 (6)	3 (9)	3 (12)	<p>Service commitment Failures</p> <p> Average 2015-20 performance to be less than average of last 3yrs of 2010-15</p> <p>F</p>	<p>Value for Money</p> <p> Average 2015-20 performance to be better than average of 2010-15</p> <p>F</p>												
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<p>Drinking WQ Contacts</p> <p> 10,007 (10,131)</p> <p>F</p> <p>Future years commitments</p> <table border="1"> <tr><td>8,120</td><td>6,108</td><td>6,108</td></tr> </table>	8,120	6,108	6,108	<p>Water Supply Interruptions</p> <p> 12.89 mins (13.63)</p> <p>F</p> <p>Future Years Commitment</p> <table border="1"> <tr><td>12.81</td><td>12.00</td><td>12.00</td></tr> </table>	12.81	12.00	12.00	<p>Pollution Incidents</p> <p> 5 (8) Cat 1-2 180 Cat 3 (227)</p> <p>C</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>6</td><td>4</td><td>2</td></tr> <tr><td>224</td><td>211</td><td>211</td></tr> </table>	6	4	2	224	211	211	<p>Bathing Water Quality</p> <p>18</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>15+</td><td>15+</td><td>15+</td></tr> </table>	15+	15+	15+	<p>Land conserved & enhanced</p> <p> N/A</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>11,736</td><td>(11,689)</td></tr> </table>	11,736	(11,689)	<p>Waste diverted from Landfill</p> <p> 98.9% (94%)</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>94.0%</td><td>95.0%</td><td>95.0%</td></tr> </table>	94.0%	95.0%	95.0%	<p>Overall Customer Satisfaction</p> <p> Average 2015-20 performance to be better than average of 2010-15</p> <p>F</p>	<p>Bad Debt</p> <p> 3.05%</p> <p>F</p> <p>Future Year Commitments</p> <table border="1"> <tr><td>3.16%</td><td>3.16%</td><td>3.16%</td></tr> </table>	3.16%	3.16%	3.16%
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<p>S&R Water Quality</p> <p> Stable</p> <p>F</p> <p>Future years commitments</p> <table border="1"> <tr><td>Stable</td><td>Stable</td><td>Stable</td></tr> </table>	Stable	Stable	Stable	<p>S&R Water Networks</p> <p> Stable</p> <p>F</p> <p>Future Years Commitment</p> <table border="1"> <tr><td>Stable</td><td>Stable</td><td>Stable</td></tr> </table>	Stable	Stable	Stable	<p>S&R Waste Water Networks</p> <p> Stable</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>Stable</td><td>Stable</td><td>Stable</td></tr> </table>	Stable	Stable	Stable	<p>S&R Waste Water Quality</p> <p> Stable</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>Stable</td><td>Stable</td><td>Stable</td></tr> </table>	Stable	Stable	Stable	<p>Waste diverted from Landfill</p> <p>98.9% (94%)</p> <p>F</p> <p>Future Years Commitments</p> <table border="1"> <tr><td>94.0%</td><td>95.0%</td><td>95.0%</td></tr> </table>	94.0%	95.0%	95.0%	<p>Overall Customer Satisfaction</p> <p> Average 2015-20 performance to be better than average of 2010-15</p> <p>F</p>	<p>Bad Debt</p> <p> 3.05%</p> <p>F</p> <p>Future Year Commitments</p> <table border="1"> <tr><td>3.16%</td><td>3.16%</td><td>3.16%</td></tr> </table>	3.16%	3.16%	3.16%						
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Regulatory Financial Statements

1A - Income statement Yorkshire Water

For the 12 months ended 31 March 2016

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
1 Revenue	£m	3	975.769	0.000	11.262	-11.262	964.507
2 Operating costs	£m	3	-738.641	6.828	-9.218	16.046	-722.595
3 Other operating income	£m	3	11.596	0.000	0.000	0.000	11.596
4 Operating profit	£m	3	248.724	6.828	2.044	4.784	253.508
5 Other income	£m	3	0.000	1.899	0.000	1.899	1.899
6 Interest income	£m	3	85.614	0.000	0.000	0.000	85.614
7 Interest expense	£m	3	-255.213	-13.037	0.000	-13.037	-268.250
8 Other interest expense	£m	3	0.000	0.000	0.000	0.000	0.000
9 Profit before tax and fair value movements	£m	3	79.125	-4.310	2.044	-6.354	72.771
10 Fair value gains/(losses) on financial instruments	£m	3	132.670	0.000	0.000	0.000	132.670
11 Profit before tax	£m	3	211.795	-4.310	2.044	-6.354	205.441
12 UK Corporation tax	£m	3	-0.146	0.000	0.000	0.000	-0.146
13 Deferred tax	£m	3	24.534	0.000	-0.449	0.449	24.983
14 Profit for the year	£m	3	236.183	-4.310	1.595	-5.905	230.278

Table 1 - Income Statement

The above table shows separate figures for the appointed and non-appointed business. The appointed business is defined to be the regulated activities of the appointee i.e. those necessary to fulfil the functions and duties of a water sewerage undertaker. The non-appointed business encompasses those activities for which Yorkshire Water is 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.

Included within other operating income is £10m of insurance income relating to an interim payment regarding the damage suffered during the severe flooding in December 2015. The flooding affected a number of sewerage treatment works and damaged or destroyed some of Yorkshire Water's assets. The remaining balance of £1.6m relates to land and buildings that were sold to Group companies at market value during the year.

Operating costs outturn at £722.6m for the appointed business. Included within this is £35.0m impairment on assets, shown within the depreciation charge for the year, which was as a result of the flooding. The company also incurred £1.5m operational costs including a small value of mutual aid from other water companies; these values are included throughout the regulatory tables within operational expenditure.

Non Appointed income is made up of £4.8m Safemove, £3.8m Kelda Non-Regulated Companies, £1.2m Syngenta and £1.5m tankered waste.

Differences between the statutory accounts and the regulatory income statement are:

- to meet the requirements of FRS102, interest of £13m is capitalised with a resulting increase in amortisation charge of £8.7m. This is removed for regulatory purposes; and
- other income is displayed differently compared to the statutory accounts. This has resulted in £1.9m being removed from other operating costs and shown separately within other income.

The table below illustrates these differences:

Reconciliation between Statutory and Regulatory accounts

For the 12 months ended 31 March 2016

Line description	Units	DPs	Statutory	Adjustments		
				1. Other Income	2. Capitalisation of borrowing costs	Total differences
1 Revenue	£m	3	975.769	0.000	0.000	0.000
2 Operating costs	£m	3	-738.641	-1.899	8.727	6.828
3 Other operating income	£m	3	11.596	0.000	0.000	0.000
4 Operating profit	£m	3	248.724	-1.899	8.727	6.828
5 Other income	£m	3	0.000	1.899	0.000	1.899
6 Interest income	£m	3	85.614	0.000	0.000	0.000
7 Interest expense	£m	3	-255.213	0.000	-13.037	-13.037
8 Other interest expense	£m	3	0.000	0.000	0.000	0.000
9 Profit before tax and fair value movements	£m	3	79.125	0.000	-4.310	-4.310
10 Fair value gains/(losses) on financial instruments	£m	3	132.670	0.000	0.000	0.000
11 Profit before tax	£m	3	211.795	0.000	-4.310	-4.310
12 UK Corporation tax	£m	3	-0.146	0.000	0.000	0.000
13 Deferred tax	£m	3	24.534	0.000	0.000	0.000
14 Profit for the year	£m	3	236.183	0.000	-4.310	-4.310

Table 2 - Income statement reconciliation

1B - Statement of comprehensive income

Yorkshire Water

For the 12 months ended 31 March 2016

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
1 Profit for the year	£m	3	236.183	-4.310	1.595	-5.905	230.278
2 Actuarial gains/(losses) on post employment plans	£m	3	0.000	0.000	0.000	0.000	0.000
3 Other comprehensive income	£m	3	-3.121	0.000	0.000	0.000	-3.121
4 Total Comprehensive income for the year	£m	3	233.062	-4.310	1.595	-5.905	227.157

Table 3 - Statement of comprehensive income

Energy price swaps, which hedge the Company's exposure to energy price risk by exchanging the day ahead index price of energy for a fixed price, are designated as cashflow hedges and hedge accounting has been applied. The change in fair value of energy price swaps during the year of £3.121m has been recognised directly in reserves through the other comprehensive income statement. This will be 'recycled' from reserves to the income statement when the underlying transactions occur.

1C - Statement of financial position**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
A Non-current assets							
1 Fixed assets	£m	3	6871.216	-97.104	3.009	-100.113	6771.103
2 Intangible assets	£m	3	29.037	0.000	0.000	0.000	29.037
3 Investments - loans to group companies	£m	3	1268.820	0.000	0.000	0.000	1268.820
4 Investments - other	£m	3	0.050	0.000	0.000	0.000	0.050
5 Financial instruments	£m	3	90.813	0.000	0.000	0.000	90.813
6 Retirement benefit assets	£m	3	0.000	0.000	0.000	0.000	0.000
7 Total non-current assets	£m	3	8259.936	-97.104	3.009	-100.113	8159.823
B Current assets							
8 Inventories	£m	3	1.993	0.000	0.000	0.000	1.993
9 Trade & other receivables	£m	3	177.744	0.000	3.079	-3.079	174.665
10 Financial instruments	£m	3	0.000	0.000	0.000	0.000	0.000
11 Cash & cash equivalents	£m	3	24.002	0.000	0.000	0.000	24.002
12 Total current assets	£m	3	203.739	0.000	3.079	-3.079	200.660
C Current liabilities							
13 Trade & other payables	£m	3	-228.161	0.000	-0.148	0.148	-228.013
14 Capex creditor	£m	3	-60.964	0.000	0.000	0.000	-60.964
15 Borrowings	£m	3	-82.596	0.000	0.000	0.000	-82.596
16 Financial instruments	£m	3	0.000	0.000	0.000	0.000	0.000
17 Current tax liabilities	£m	3	-0.057	0.000	-0.449	0.449	0.392
18 Provisions	£m	3	-2.909	0.000	0.000	0.000	-2.909
19 Total current liabilities	£m	3	-374.687	0.000	-0.597	0.597	-374.090
20 Net current assets / (liabilities)	£m	3	-170.948	0.000	2.482	-2.482	-173.430
D Non-Current liabilities							
21 Trade & other payables	£m	3	-16.515	0.000	0.000	0.000	-16.515
22 Borrowings	£m	3	-4502.323	0.000	0.000	0.000	-4502.323
23 Financial instruments	£m	3	-1619.841	0.000	0.000	0.000	-1619.841
24 Retirement benefit obligations	£m	3	0.000	0.000	0.000	0.000	0.000
25 Provisions	£m	3	-0.680	0.000	0.000	0.000	-0.680
26 Deferred income - G&C's	£m	3	-402.497	0.000	-2.475	2.475	-400.022
27 Preference share capital	£m	3	0.000	0.000	0.000	0.000	0.000
28 Deferred tax	£m	3	-399.211	18.564	0.000	18.564	-380.647
29 Total non-current liabilities	£m	3	-6941.067	18.564	-2.475	21.039	-6920.028
30 Net assets	£m	3	1147.921	-78.540	3.016	-81.556	1066.365
E Equity							
31 Called up share capital	£m	3	10.000	0.000	0.000	0.000	10.000
32 Retained earnings & other reserves	£m	3	1137.921	-78.540	3.016	-81.556	1056.365
33 Total Equity	£m	3	1147.921	-78.540	3.016	-81.556	1066.365

Table 4 – Statement of financial position

The value of fixed assets has been reduced in the year by £35.0m to allow for the asset impairments following the flooding in December 2015.

All the adjustments within the differences between regulatory and statutory accounts wholly relate to the removal of capitalisation of borrowing costs and any associated impact.

1D - Statement of cash flows**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Units	DPs	Statutory	Adjustments			Total appointed activities
				Differences between statutory and RAG definitions	Non-appointed	Total adjustments	
A Statement of cashflows							
1 Operating profit	£m	3	248.724	6.828	2.044	4.784	253.508
2 Other income	£m	3	0.000	1.899	0.000	1.899	1.899
3 Depreciation	£m	3	313.190	-8.727	0.122	-8.849	304.341
4 Amortisation - G&C's	£m	3	-2.812	0.000	0.143	-0.143	-2.955
5 Changes in working capital	£m	3	23.293	0.000	-1.033	1.033	24.326
6 Pension contributions	£m	3	-27.220	0.000	0.000	0.000	-27.220
7 Movement in provisions	£m	3	0.015	0.000	0.000	0.000	0.015
8 Profit on sale of fixed assets	£m	3	-1.596	0.000	0.000	0.000	-1.596
9 Cash generated from operations	£m	3	553.594	0.000	1.276	-1.276	552.318
10 Net interest paid	£m	3	-162.942	0.000	0.000	0.000	-162.942
11 Tax paid	£m	3	2.710	0.000	-0.549	0.549	3.259
12 Net cash generated from operating activities	£m	3	393.362	0.000	0.727	-0.727	392.635
C Investing activities							
13 Capital expenditure	£m	3	-266.674	0.000	0.000	0.000	-266.674
14 Grants & Contributions	£m	3	16.975	0.000	0.000	0.000	16.975
15 Disposal of fixed assets	£m	3	4.573	0.000	0.000	0.000	4.573
16 Other	£m	3	0.000	0.000	0.000	0.000	0.000
17 Net cash used in investing activities	£m	3	-245.126	0.000	0.000	0.000	-245.126
18 Net cash generated before financing activities	£m	3	148.236	0.000	0.727	-0.727	147.509
D Cashflows from financing activities							
19 Equity dividends paid	£m	3	-90.864	0.000	-0.727	0.727	-90.137
20 Net loans received	£m	3	-63.246	0.000	0.000	0.000	-63.246
21 Cash inflow from equity financing	£m	3	0.000	0.000	0.000	0.000	0.000
22 Net cash generated from financing activities	£m	3	-154.110	0.000	-0.727	0.727	-153.383
23 Increase (decrease) in net cash	£m	3	-5.874	0.000	0.000	0.000	-5.874

Table 5 - Statement of cashflows

The differences between statutory and regulatory are noncash items and net to nil. The other income is reported within operating profit for statutory reporting and has therefore been added back in for regulatory reporting. The £8.7m relates to the amortisation of capitalised borrowing costs, which is excluded from regulatory reporting.

1E - Net debt analysis at 31 March**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Units	DPs	Interest rate risk profile				
			Fixed rate	Floating rate	Index linked	Total	
1	Borrowings (excluding preference shares)	£m	3	2009.639	1115.620	1374.489	4499.748
2	Preference share capital	£m	3				0.000
3	Total borrowings	£m	3				4499.748
4	Cash	£m	3				-8.265
5	Short term deposits	£m	3				-15.736
6	Net Debt	£m	3				4475.747
7	Gearing	%	2				76.73
8	Adjusted gearing	%	2				77.90
9	Full year equivalent nominal interest cost	£m	3	124.257	22.322	104.875	251.454
10	Full year equivalent cash interest payment	£m	3	124.221	22.322	62.459	209.002
Indicative interest rates							
11	Indicative weighted average nominal interest rate	%	2	6.05	-10.22	3.94	5.59
12	Indicative weighted average cash interest rate	%	2	6.05	-10.22	2.35	4.64

Table 6 - Net debt analysis

Price control and additional segmental reporting (Regulatory Financial Statements continued)

2A - Segmental income statement				Yorkshire Water				
For the 12 months ended 31 March 2016								
Line description	Units	DPs	Retail		Wholesale		Total	
			Household	Non-Household	Water	Wastewater		
1	Revenue - price control	£m	3	60.375	10.758	399.557	488.563	959.253
2	Revenue - non price control	£m	3	6.778	0.489	-4.438	2.425	5.254
3	Operating costs	£m	3	-56.061	-6.031	-293.629	-366.874	-722.595
4	Other operating income	£m	3	0.000	0.000	0.790	10.806	11.596
5	Operating profit before recharges	£m	3	11.092	5.216	102.280	134.920	253.508
6	Recharges from other segments	£m	3	-0.378	0.000	0.000	0.000	-0.378
7	Recharges to other segments	£m	3	0.000	0.378	0.000	0.000	0.378
8	Operating profit	£m	3	10.714	5.594	102.280	134.920	253.508
9	Surface water drainage rebates	£m	3					1.003

Table 7 - Segmental income statement

Within wastewater other operating income, is £10m from the flood insurance claim. The remaining value in water and wastewater relates to sale of assets (land) to another Group company (Keyland Developments Limited) at market rates.

Included within operating costs is £1.5m which is associated with the flooding costs and an asset impairment write down of £35m.

2B - Totex analysis - wholesale**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description		Units	DPs	Water	Wastewater	Total
A Operating expenditure						
1	Power	£m	3	26.594	30.551	57.145
2	Income treated as negative expenditure	£m	3	-0.476	-1.735	-2.211
3	Service charges/ discharge consents	£m	3	5.663	4.548	10.211
4	Bulk supply/ Bulk discharge	£m	3	3.851	0.000	3.851
5	Other operating expenditure	£m	3	96.650	119.313	215.963
6	Local authority rates	£m	3	38.653	21.943	60.596
7	Total operating expenditure excluding third party services	£m	3	170.935	174.620	345.555
8	Third party services	£m	3	1.628	0.002	1.630
9	Total operating expenditure	£m	3	172.563	174.622	347.185
B Capital Expenditure						
10	Maintaining the long term capability of the assets - infra	£m	3	36.322	30.576	66.898
11	Maintaining the long term capability of the assets - non- infra	£m	3	43.468	71.287	114.755
12	Other capital expenditure - infra	£m	3	18.573	19.834	38.407
13	Other capital expenditure - non-infra	£m	3	15.702	22.135	37.837
14	Total gross capital expenditure excluding third party services	£m	3	114.065	143.832	257.897
15	Third party services	£m	3	0.000	0.000	0.000
16	Total gross capital expenditure	£m	3	114.065	143.832	257.897
17	Grants and contributions (price control)	£m	3	14.342	7.322	21.664
18	Totex	£m	3	272.286	311.132	583.418
C Cash Expenditure						
19	Pension deficit recovery payments	£m	3	7.509	9.786	17.295
20	Other cash items	£m	3	0.000	0.000	0.000
D Total						
21	Totex including cash items	£m	3	279.795	320.918	600.713

Table 8 - Totex analysis wholesale

Commentary on totex by service is provided in section 4.

2C - Operating cost analysis - retail**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description		Units	DPs	Household	Non-household	Total
Operating expenditure						
1	Customer services	£m	3	16.964	2.012	18.976
2	Debt management	£m	3	3.554	0.365	3.919
3	Doubtful debts	£m	3	17.652	1.062	18.713
4	Meter reading	£m	3	2.356	0.277	2.633
5	Services to developers	£m	3	0.000	0.072	0.072
6	Other operating expenditure	£m	3	10.758	1.368	12.126
7	Total operating expenditure excluding third party services	£m	3	51.284	5.156	56.440
8	Third party services operating expenditure	£m	3	0.000	0.000	0.000
9	Total operating expenditure	£m	3	51.284	5.156	56.440
10	Depreciation	£m	3	4.777	0.875	5.652
11	Total operating costs	£m	3	56.061	6.031	62.092
12	Debt written off	£m	3	16.307	1.062	17.369

Table 9 - Operating cost – retail

The below table shows Household retail costs against the FD for 2015/16.

HH Variance Analysis**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description		Units	DPs	Household	PR14 Submission	Variance
Operating expenditure						
1	Customer services	£m	3	16.964	16.202	0.762
2	Debt management	£m	3	3.554	3.231	0.323
3	Doubtful debts	£m	3	17.652	16.440	1.212
4	Meter reading	£m	3	2.356	2.397	-0.041
5	Services to developers	£m	3	0.000	0.000	0.000
6	Other operating expenditure	£m	3	10.758	9.273	1.485
7	Total operating expenditure excluding third party services	£m	3	51.284	47.543	3.741
8	Third party services operating expenditure	£m	3	0.000	0.000	0.000
9	Total operating expenditure	£m	3	51.284	47.543	3.741
10	Depreciation	£m	3	4.777	4.221	0.556
11	Total operating costs	£m	3	56.061	51.764	4.297
12	Debt written off	£m	3	16.307	not published	n/a

Table 10 - HH Variance Analysis

The below table shows the variance for non-household retail costs against the FD.

NHH Variance Analysis							Yorkshire Water			
For the 12 months ended 31 March 2016							Reason for Variance			
Line description	Units	DPs	Non-household	PR14 Submission	Variance	Economic	Increased costs for market opening	Change from PR14		
Operating expenditure										
1	Customer services	£m	3	2.012	1.937	0.074	0.074	-	-	-
2	Debt management	£m	3	0.365	0.428	-0.063	0.063	-	-	-
3	Doubtful debts	£m	3	1.062	1.418	-0.356	0.356	-	-	-
4	Meter reading	£m	3	0.277	0.253	0.024	0.024	-	-	-
5	Services to developers	£m	3	0.072	0.371	-0.299	0.299	-	-	-
6	Other operating expenditure	£m	3	1.368	0.507	0.862	0.025	0.836	-	-
7	Total operating expenditure excluding third party services	£m	3	5.156	4.914	0.241	0.595	0.836	-	-
8	Third party services operating expenditure	£m	3	0.000	0.000	0.000	-	-	-	-
9	Total operating expenditure	£m	3	5.156	4.914	0.241	0.595	0.836	-	-
10	Depreciation	£m	3	0.875	0.608	0.267	-	-	-	0.267
11	Total operating costs	£m	3	6.031	5.522	0.508	0.595	0.836	0.267	0.267
12	Debt written off	£m	3	1.062	1.418	-0.356	-	-	-	-

Table 11 - NHH Variance Analysis

Overall the Company has seen a cost increase in the year of £508k against the original PR14 submission.

The above table has categorised these cost increases into the following areas

- **Economic**
When there has been no change to methodology but the outturn is different to PR14. This category shows RPI increases along with a lower value of doubtful debts and developer services costs, as a result of the economy at this present time.
- **Preparation of market opening / Company Choice**
This category shows the value that YW has made a decision to spend more than allowed in PR14. These costs are mainly due to a dedicated team planning and implementing the requirements for market opening and understanding the implications as an incumbent retailer, including separating processes and aligning people to the relevant market codes.
- **Change from PR14**
When collating the APR it was recognised that the allocation for depreciation within NHH was incorrect. This has now been corrected but does show a variance of £0.267m.

2D - Historic cost analysis of fixed assets - wholesale & retail**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Units	DPs	Wholesale		Retail		Total
			Water	Wastewater	Household	Non-Household	
A Cost							
1 At 1 April 2015	£m	3	4576.646	5334.443	68.650	5.040	9984.779
2 Disposals	£m	3	-27.629	-16.359	-2.020	-0.833	-46.841
3 Additions	£m	3	121.199	124.752	4.382	0.940	251.273
4 At 31 March 2016	£m	3	4670.216	5442.836	71.012	5.147	10189.211
B Depreciation							
5 At 1 April 2015	£m	3	-1577.009	-1529.971	-51.960	-4.076	-3163.016
6 Disposals	£m	3	24.836	16.193	2.007	0.827	43.863
7 Charge for the year	£m	3	-111.743	-181.559	-4.777	-0.875	-298.954
8 At 31 March 2016	£m	3	-1663.916	-1695.337	-54.730	-4.124	-3418.107
9 Net book amount at 31 March 2016	£m	3	3006.300	3747.499	16.282	1.023	6771.104
10 Net book amount at 1 April 2015	£m	3	2999.637	3804.472	16.690	0.964	6821.763

Table 12 - Fixed assets

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

For the 12 months ended 31 March 2016

Line description	Units	DPs	Current year			Total
			Fully recognised in income statement	Capitalised and amortised against depreciation	Fully netted off capex	
A Grants and contributions - water						
1 Connection charges (s45)	£m	3	0.000	6.997	0.000	6.997
2 Infrastructure charge receipts (s146)	£m	3	0.000	5.046	0.000	5.046
3 Requisitioned mains (s43, s55 & s56)	£m	3	0.000	2.299	0.000	2.299
4 Diversions (s185)	£m	3	0.000	2.855	0.000	2.855
5 Other Contributions	£m	3	0.000	1.645	0.000	1.645
6 Total	£m	3	0.000	18.842	0.000	18.842
B Grants and contributions - wastewater						
7 Infrastructure charge receipts (s146)	£m	3	0.000	5.005	0.000	5.005
8 Requisitioned sewers (s100)	£m	3	0.000	2.317	0.000	2.317
9 Diversions (s185)	£m	3	0.000	1.683	0.000	1.683
10 Other Contributions	£m	3	0.000	0.226	0.000	0.226
11 Total	£m	3	0.000	9.231	0.000	9.231

C Balance sheet	Units	DPs	Current year			
			Water	Wastewater	Total	
12 Brought forward	£m	3	122.565	258.435	381.000	
13 Capitalised in year	£m	3	18.842	9.231	28.073	
14 Amortisation (in income statement)	£m	3	-4.395	-4.656	-9.051	
15 Carried forward	£m	3	137.012	263.010	400.022	
D Land sales						
16 Proceeds from disposals of protected land	£m	3	1.740	0.400	2.140	

Table 13 - Capital Contributions & land sales

In comparison to the FD the value of contributions within water is significantly higher. This is as a result of two reasons; the main reason is the treatment of connection charges (s45) which was not included as a contribution within the FD and the second reason is that, slightly higher contributions were received due to the recovery of the economy.

2F - Household - revenues by customer type**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Wholesale charges revenue £m	Retail revenue £m	Total revenue £m	Number of customers 000s	Average household retail revenue per customer £
1 Unmeasured water only customer	12.251	0.723	12.974	59.318	12.189
2 Unmeasured wastewater only customer	15.820	0.948	16.768	68.514	13.837
3 Unmeasured water and wastewater customer	378.743	25.619	404.362	960.752	26.666
4 Measured water only customer	6.235	0.592	6.827	45.643	12.970
5 Measured wastewater only customer	6.421	1.488	7.909	47.182	31.537
6 Measured water and wastewater customer	255.132	31.005	286.137	952.066	32.566
7 Total	674.602	60.375	734.977	2133.475	28.299

Table 14 - Household revenues

2G - Non-household water - revenues by customer type**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Wholesale charges revenue £m	Retail revenue £m	Total revenue £m	Number of customers (nr)	Average non-household retail revenue per customer £
A Non-Default tariffs					
1 Total non-default tariffs	0.000	0.000	0.000	0.0	0.00
B Default tariffs					
2 Tariff band 1 ≤50 MI/a water metered	72.857	4.667	77.524	111843.0	41.73
3 Tariff band 2 > 50 ≤ 250 MI/a water metered	13.695	0.208	13.903	110.0	1890.91
4 Tariff band 3 > 250 MI/a water metered	13.283	0.139	13.422	28.0	4964.29
5 Tariff band 4 water unmetered	1.070	0.356	1.426	15067.5	23.63
6			0.000		0.00
7			0.000		0.00
8			0.000		0.00
9			0.000		0.00
10			0.000		0.00
11			0.000		0.00
12			0.000		0.00
13			0.000		0.00
14			0.000		0.00
15			0.000		0.00
16			0.000		0.00
17			0.000		0.00
18			0.000		0.00
19			0.000		0.00
20 Total default tariffs	100.905	5.370	106.275	127049	42.27
21 Total	100.905	5.370	106.275	127048.5	42.27

Table 15 - Non-household water revenue

2H - Non-household wastewater - revenues by customer type**Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Wholesale charges revenue £m	Retail revenue £m	Total revenue £m	Number of customers (nr)	Average non-household retail revenue per customer £
A Non-Default tariffs					
1 Total non-default tariffs	0.000	0.000	0.000	0.0	0.00
B Default tariffs					
2 Tariff band 5 ≤50 MI/a sewerage metered	72.097	4.465	76.562	91297.0	48.91
3 Tariff band 6 > 50 ≤ 250 MI/a sewerage metered	6.067	0.105	6.172	30.0	3500.00
4 Tariff band 7 > 250 MI/a sewerage metered	1.866	0.030	1.896	6.0	5000.00
5 Tariff band 8 sewerage unmetered	2.095	0.355	2.450	17032.0	20.84
6 Tariff band 9 ≤50 MI/a trade effluent metered	10.309	0.179	10.488	2350.4	76.16
7 Tariff band 10 > 50 ≤ 250 MI/a trade effluent metered	13.356	0.162	13.518	71.0	2281.69
8 Tariff band 11 > 250 MI/a trade effluent metered	6.822	0.092	6.914	13.0	7076.92
9			0.000		0.00
10			0.000		0.00
11			0.000		0.00
12			0.000		0.00
13			0.000		0.00
14			0.000		0.00
15			0.000		0.00
16			0.000		0.00
17			0.000		0.00
18			0.000		0.00
19			0.000		0.00
20			0.000		0.00
21			0.000		0.00
22 Total default tariffs	112.612	5.388	118.000	110799	48.63
23 Total	112.612	5.388	118.000	110799.4	48.63

Table 16 - Non-household waste water revenue

21 - Revenue analysis & wholesale control reconciliation Yorkshire Water

For the 12 months ended 31 March 2016

Line description	Units	DPs	Household	Non-household	Total																																		
A Wholesale charge - water																																							
1 Unmeasured	£m	3	182.258	1.070	183.328																																		
2 Measured	£m	3	116.394	99.835	216.229																																		
3 Third party revenue	£m	3	0.000	0.000	0.000																																		
4 Total	£m	3	298.652	100.905	399.557																																		
B Wholesale charge - wastewater																																							
5 Unmeasured	£m	3	224.557	2.095	226.652																																		
6 Measured	£m	3	151.394	110.517	261.911																																		
7 Third party revenue	£m	3	0.000	0.000	0.000																																		
8 Total	£m	3	375.951	112.612	488.563																																		
9 Wholesale Total	£m	3	674.603	213.517	888.120																																		
C Retail revenue																																							
10 Unmeasured	£m	3	27.290	0.711	28.001																																		
11 Measured	£m	3	33.085	10.047	43.132																																		
12 Retail third party revenue	£m	3	0.000	0.000	0.000																																		
13 Retail total	£m	3	60.375	10.758	71.133																																		
D Third party revenue - non-price control																																							
14 Bulk Supplies	£m	3			0.095																																		
15 Other third party revenue	£m	3			5.159																																		
16 Other appointed revenue	£m	3			0.000																																		
17 Total appointed revenue	£m	3			964.507																																		
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Water</th> <th>Wastewater</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>18 Wholesale revenue governed by price control</td> <td>£m</td> <td>3</td> <td>399.557</td> <td>488.563</td> <td>888.120</td> </tr> <tr> <td>19 Grants & contributions</td> <td>£m</td> <td>3</td> <td>14.342</td> <td>7.322</td> <td>21.664</td> </tr> <tr> <td>20 Total revenue governed by wholesale price control</td> <td>£m</td> <td>3</td> <td>413.899</td> <td>495.885</td> <td>909.784</td> </tr> <tr> <td>21 Amount assumed in wholesale determination</td> <td>£m</td> <td>3</td> <td>400.694</td> <td>494.719</td> <td>895.413</td> </tr> <tr> <td>22 Difference</td> <td>£m</td> <td>3</td> <td>13.205</td> <td>1.166</td> <td>14.371</td> </tr> </tbody> </table>							Water	Wastewater	Total	18 Wholesale revenue governed by price control	£m	3	399.557	488.563	888.120	19 Grants & contributions	£m	3	14.342	7.322	21.664	20 Total revenue governed by wholesale price control	£m	3	413.899	495.885	909.784	21 Amount assumed in wholesale determination	£m	3	400.694	494.719	895.413	22 Difference	£m	3	13.205	1.166	14.371
	Water	Wastewater	Total																																				
18 Wholesale revenue governed by price control	£m	3	399.557	488.563	888.120																																		
19 Grants & contributions	£m	3	14.342	7.322	21.664																																		
20 Total revenue governed by wholesale price control	£m	3	413.899	495.885	909.784																																		
21 Amount assumed in wholesale determination	£m	3	400.694	494.719	895.413																																		
22 Difference	£m	3	13.205	1.166	14.371																																		

Table 17 – Wholesale revenue analysis

Wholesale water price control

With regards to the variance shown in table 2I against the wholesale water price control, we would ask that an adjustment is made to exclude 'connection charges (s45)' from line 19, which is taken from table 2E.

At the time of the price review we accounted for 'connection charges (s45)' as revenue, which we included within the 'income from other sources' adjustment to the revenue control.

As this was not a capitalised grant or contribution the forecast value for 'connection charges (s45)' was subsequently not included within the 'grants and contribution' value within the wholesale water price control determination.

The move to now include this value within the 'total revenue governed by wholesale price control' is causing a variance to be reported, which is too high given that the 'connection charges (s45)' was not included within the actual price control determination.

To show the variance consistent with the FD the variance to the wholesale water price control would be reported as £6.208m, which is 1.5% higher than the wholesale water price control and will be taken into account through the WRFIM when tariffs are being set in 2017/18.

	Line description	Units	DPs	Water	Wastewater	Total
18	Wholesale revenue governed by price control	£m	3	399.557	488.563	888.120
19	Grants & contributions	£m	3	14.342	7.322	21.664
20	Total revenue governed by wholesale price control	£m	3	413.899	495.885	909.784
21	Amount assumed in wholesale determination	£m	3	400.694	494.719	895.413
22	Difference	£m	3	13.205	1.166	14.371
	Exclude Connection Charges (S45)	£m	3	-6.997	0.000	-6.997
	Adjusted variance to Wholesale determination	£m	3	6.208	1.166	7.373

Performance Summary

Table 18 - Outcome Performance table

3A - Outcome performance table												Yorkshire Water	
For the 12 months ended 31 March 2016													
Row	Unique ID	Performance commitment	Units	2014-15 performance level - actual	2015-16 performance level - actual	2015-16 CPL met?	2015-16 reward or penalty (in-period ODIs)	2015-16 reward or penalty (in-period ODIs) £m absolute value	Notional reward or penalty accrued at 31 March 2016	Notional reward or penalty accrued at 31 March 2016 £m absolute value	Total AMP6 reward or penalty 31 March 2020 forecast	Total AMP6 reward or penalty 31 March 2020 forecast £m absolute value	
1	PR14YKYWSW_WA1	WA1: Drinking water quality	%	99.953	99.954	No	Not applicable		Penalty deadband		blank		
2	PR14YKYWSW_WA2	WA2: Significant drinking water events which require corrective action	nr	3.000	5.000	Yes	Not applicable		blank		Not applicable		
3	PR14YKYWSW_WA3	WA3: Drinking water contacts	nr	10570.000	10007.000	Yes	Not applicable		Reward deadband		blank		
4	PR14YKYWSW_WA4	WA4: Water quality stability and reliability factor	category	Stable	Stable	blank	Not applicable		blank		blank		
5	PR14YKYWSW_WB1	WB1: Leakage	nr	288.420	285.120	Yes	Not applicable		Reward deadband		blank		
6	PR14YKYWSW_WB2	WB2: Water supply interruptions	time	9.480	12.890	Yes	Not applicable		Reward deadband		blank		
7	PR14YKYWSW_WB3	WB3: Water use	nr	n/a	141.710	Yes	Not applicable		blank		Not applicable		
8	PR14YKYWSW_WB4	WB4: Water network stability and reliability factor	category	Stable	Stable	blank	Not applicable		blank		Not applicable		
9	PR14YKYWSW_WC1	WC1: Length of river improved (note: PC is part of a total commitment at Appointee level - see also SB4)	nr	n/a	0.000	blank	Not applicable		blank		blank		
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	n/a	4.000	Yes	Not applicable		Reward	0.000240	blank		
11	PR14YKYWSW_WC3	WC3: Amount of land conserved and enhanced (note: PC is part of a total commitment at Appointee level - see also SB5)	nr	11466.000	11466.000	blank	Not applicable		blank		blank		
12	PR14YKYWSW_WC4	WC4: Recreational visitor satisfaction	text	n/a	Published	Yes	Not applicable		blank		Not applicable		
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)	%	12.260	11.258	No	Not applicable		blank		Not applicable		
14	PR14YKYWSW_WD2	WD2: Proportion of waste diverted from landfill (note: PC is part of a total commitment at Appointee level - see also SC2 and RC2)	%	93.500	98.910	Yes	Not applicable		blank		Not applicable		
15	PR14YKYWSWW_SA1	SA1: Internal sewer flooding incidents	nr	1947.000	1842.000	Yes	Not applicable		Reward deadband		blank		
16	PR14YKYWSWW_SA2	SA2: External sewer flooding incidents	nr	8686.000	9037.000	Yes	Not applicable		blank		Not applicable		
17	PR14YKYWSWW_SA3a	SA3a: Pollution incidents - category 1 and 2	nr	4.000	5.000	Yes	Not applicable		blank		blank		



Table 19 - Outcome Performance table

3A - Outcome performance table												Yorkshire Water	
For the 12 months ended 31 March 2016													
Row	Unique ID	Performance commitment	Units	2014-15 performance level - actual	2015-16 performance level - actual	2015-16 CPL met?	2015-16 reward or penalty (in-period ODIs)	2015-16 reward or penalty (in-period ODIs) £m absolute value	Notional reward or penalty accrued at 31 March 2016	Notional reward or penalty accrued at 31 March 2016 £m absolute value	Total AMP6 reward or penalty 31 March 2020 forecast	Total AMP6 reward or penalty 31 March 2020 forecast £m absolute value	
18	PR14YKYWSWW_SA3b	SA3b: Pollution incidents - category 3	nr	170.000	180.000	Yes	Not applicable		Reward	5.739123	blank		
19	PR14YKYWSWW_SA4	SA4: Sewer network stability and reliability factor	category	Stable	Stable	blank	Not applicable		blank		Not applicable		
20	PR14YKYWSWW_SB1	SB1: Number of Yorkshire's designated bathing waters that exceed the required quality standard	nr	18.000	18.000	Yes	Not applicable		blank		Not applicable		
21	PR14YKYWSWW_SB2	SB2: Wastewater quality stability and reliability factor	category	Stable	Stable	blank	Not applicable		blank		Not applicable		
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	n/a	4.000	Yes	Not applicable		Reward	0.000240	blank		
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	n/a	0.000	blank	Not applicable		blank		blank		
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	11466.000	11466.000	blank	Not applicable		blank		blank		
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)	%	12.260	11.258	No	Not applicable		blank		Not applicable		
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)	%	93.500	98.910	Yes	Not applicable		blank		Not applicable		
27	PR14YKYHHR_RA1	RA1: Customer service - service incentive mechanism (SIM)	score	82.000	82.600	Yes	Not applicable		blank		blank		
28	PR14YKYHHR_RA2	RA2: Service commitment failures	nr	10610.000	10567.000	blank	Not applicable		blank		Not applicable		
29	PR14YKYHHR_RA3	RA3: Overall customer satisfaction (CCWater annual tracking survey)	%	94% (water)89% (waste)	95% (Water)92% (Waste)	blank	Not applicable		blank		Not applicable		
30	PR14YKYHHR_RB1	RB1: Cost of bad debt to customers (expressed as proportion of bill)	%	3.180	3.050	Yes	Not applicable		blank		Not applicable		
31	PR14YKYHHR_RB2	RB2: Number of people who we help to pay their bill	nr	n/a	22735.000	blank	Not applicable		blank		Not applicable		
32	PR14YKYHHR_RB3	RB3: Value for money (CCWater annual tracking survey)	%	76% (water)77 (waste)	82% (Water)83% (Waste)	blank	Not applicable		blank		Not applicable		
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)	%	12.260	11.258	No	Not applicable		blank		Not applicable		
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)	%	93.500	98.910	Yes	Not applicable		blank		Not applicable		



Outcome Performance Summary Commentary

In line with the guidance provided by Ofwat we have provided commentary by exception where we have either achieved or under achieved our agreed performance for 2015/16. Where there is no commentary provided the data reported in this table is in line with expectations and satisfies our regulatory commitments.

Line 1: WA1: Drinking Water Quality

This commitment is based on mean zonal compliance (MZC) from the regulatory sampling programme using the Drinking Water Inspectorate's definition and calculation. MZC measures compliance for 39 defined parameters sampled at customers' taps or supply points. This is a calendar year measure covering the period from 1 January 2015 to 31 December 2015.

The agreed performance commitment level for 2015 was 99.960%. Our final outturn position has been confirmed at 99.954%. This is slightly below the required performance level but within the set deadband therefore no penalty has been incurred. The main contributors were higher than anticipated nickel and lead relating to customer fittings/pipework as well as a marginal increase in iron failures. We have seen less metaldehyde failures impacting performance in 2015; however this remains a key area of risk for future years.

A programme of targeted flushing in our mains network is on-going to remove sediments that can result in discolouration of supply and the presence of iron in water samples. In addition, a number of initiatives are planned including awareness and education campaigns working with farmers to reduce metaldehyde risks and with DIY companies to provide information to customers and reduce the impacts of failures at customer taps.

We have engaged with the Drinking Water Inspectorate and the Customer Forum regarding the underperformance on this measure and will continue to discuss the best ways to ensure we meet our performance level in 2016.

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 multiple agencies, organisations or individuals. These can be delivered through various measures including joint funding, shared resources, investigations and feasibility studies but should be separate to our business as usual work and existing capital investment framework partnerships.

The commitment for 2015/16 was to deliver a minimum of 3 solutions which we have slightly overachieved in delivering 4 solutions. The reward is calculated based on 5% of the average value of all eligible interventions delivered to beneficial completion. For 2015/16 this resulted in a reward of £508, which equates to £479.10 when converted to 2012/13 prices.

The solutions delivered during 2015/16 were:

- upgrading the path around Grimwith reservoir in partnership with Yorkshire Dales National Park and Experience Community;
- tackling invasive species with the Yorkshire Wildlife Trust and volunteers from the Canals and Rivers Trust;
- improving wildlife habitats and historical artefacts in the Upper Nidderdale area working with multiple organisations including English Heritage, Natural England, local authorities;
- working with East Riding Council to jointly develop an integrated catchment flood risk model for the Goole area.

We have engaged with the Customer Forum to discuss the over performance of this commitment and have also specifically presented back to both the Environment Agency and the local flood authorities. Direct Customer engagement through volunteering opportunities and media publicity has also been undertaken on some of the individual schemes.

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

This performance commitment is based on the amount of energy (electricity) we generate through renewable technology expressed as a percentage of total energy consumption. The performance level we committed to achieve in 2015/16 was 12%. Our confirmed outturn position was 11.3%, which is below our commitment however there is no outcome delivery incentive applied to this measure so there is no financial penalty to apply. This is a financial year measure covering the period April 2015 to March 2016.

Until January 2016 generation performance was on target to meet or potentially over achieve the performance commitment level. Performance was impacted by the extensive flooding experienced in Yorkshire on Boxing Day, which caused our largest generating asset at Esholt waste water treatment works to be inundated and taken out of service. An investigation following the flooding also highlighted some additional defects to be resolved.

The Esholt site is expected to be put back into full service during summer 2016 following the resolution of the defects and the completion of the flood recovery work. Work is also underway to understand how to make the site more resilient to flooding in the future. The forecast is to recover performance to meet the 12% target in 2016/17.

We have engaged directly with the Customer Forum to discuss the underperformance of this performance commitment and have also presented to a wide range of stakeholders and communicated with customers on the impact of the Christmas floods and how we are working to resolve the issues caused by the flooding.

Lines 14, 26, 34: WD2, SC2, RC2 % of waste diverted from landfill (reused/recycled)

This performance commitment measures the waste from all YW activities (office, operational or construction) that is recycled or re-used as a percentage of total waste produced.

This is a reputational measure with a commitment to meet a target of 94% for 2015/16 which we overachieved out turning at 98.9%. Discussions with our technical auditors, Halcrow have identified a challenge to the reported performance in relation to the inclusion of clean water sludges to this measure which has had a significant contribution to the overall percentage improvement. However further clarification needs to be provided to confirm whether this was included when the metric and AMP6 targets were established in 2012/13.

Whilst there may have been other activities which have helped us to 'manage and reduce material waste' and 'to use resources more sustainably', these could be overshadowed by the potential impact of this change. Therefore consistency between the measurement of the target and the performance needs to be confirmed, however Halcrow are in agreement that we have included appropriate caveats and agreed actions to review this in 2016/17.

Line 18: SA3b Pollution Incidents - Category 3

This performance commitment is based on the total number of Category 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 is a calendar year measure covering the period 1 January 2015 to 31 December 2015. The committed performance level agreed for 2015 was 237 incidents against which we out turned at 180 incidents resulting in a reward of £5.74m, which will be claimable through AMP 7 year 1 revenues. This reward is calculated by multiplying the

number of incidents below the reward deadband. A deadband is the level of service against which an incentive is calculated. For 2015/16 the reward deadband was set at 211 Category 3 incidents, we out turned at 180 incidents therefore the reward was calculated on the 31 incidents below the deadband multiplied by the agreed incentive rate from the Final Determination which was £0.19m per incident, which resulted in the £5.74m reportable reward.

The over achievement of this measure has been due to the continued drive and benefits following the work undertaken to reduce pollution incidents during 2010-2015. This has included a focus on sewer CCTV data collection and analysis, sewer rehabilitation work and proactive cyclical jetting, which will continue through 2016/17 to drive performance in this area.

Although the performance level for this commitment has been successfully achieved we recognise that our overall pollution performance based on the Environment Agency's Environment Performance Assessment has deteriorated in comparison to 2015. This has been discussed with the Environment Agency and Customer Forum to ensure clarity and transparency in relation to how we performed and will report our performance for 2015. Our continuing pollution improvement plan and discussions with the Environment Agency will focus on identifying the best solutions to improving overall performance alongside meeting our annual performance commitments.

Stability and Reliability Factors

Overall performance is stable for 2015/16, however there are some specific areas where the trends indicate a material change for this reporting year against the expected reference level agreed in the Final Determination, for which we have provided commentary below:

Company	Element acronym	PC ref. (company)	Performance commitment	PC / sub-measure	Unit	Decimal places	2014/15 Actual	2015-16 Ref level	2015-16 Actual CPL
YKY	WSW	WA4	WA4: Water quality stability and reliability factor	WTW coliform non-compliance	%	2	0.057	0.04	0.014
YKY	WSW	WA4	WA4: Water quality stability and reliability factor	SR coliform non-compliance	%	2	0.00	0.00	0
YKY	WSW	WA4	WA4: Water quality stability and reliability factor	Turbidity	nr	0	0.00	0	0
YKY	WSW	WA4	WA4: Water quality stability and reliability factor	Enforcements	nr	0	0.00	0	0
YKY	WSW	WA4	WA4: Water quality stability and reliability factor	Reactive equipment failures	nr	0	4,381	6,771	3955
YKY	WSW	WB4	WB4: Water network stability and reliability factor	Total bursts	nr	0	5,917	5,173	5027
YKY	WSW	WB4	WB4: Water network stability and reliability factor	Interruptions >12 hours	nr	0	271	220	3414
YKY	WSW	WB4	WB4: Water network stability and reliability factor	DG2 low pressure	nr	0	9	15	11
YKY	WSW	WB4	WB4: Water network stability and reliability factor	Customer contacts for discolouration (nr per 1,000 population)	nr	2	1.199	1.18	1.033
YKY	WSW	WB4	WB4: Water network stability and reliability factor	Distribution index TIM (100 - mean zonal compliance)	%	2	0.186	0.20	0.142
YKY	WSW	WB4	WB4: Water network stability and reliability factor	Reactive equipment failures	nr	0	1,387	1,825	1339
YKY	WSWW	SA4	SA4: Sewer network stability and reliability factor	Sewer collapses	nr	0	294	255	261
YKY	WSWW	SA4	SA4: Sewer network stability and reliability factor	Pollution incidents (CSO, RM, FS and SPS)	nr	0	133	203	140
YKY	WSWW	SA4	SA4: Sewer network stability and reliability factor	Properties flooded due to other causes	nr	0	292	302	346
YKY	WSWW	SA4	SA4: Sewer network stability and reliability factor	Properties flooded due to overloaded sewers, excluding severe weather	nr	0	113	72	50
YKY	WSWW	SA4	SA4: Sewer network stability and reliability factor	Sewer blockages	nr	0	18,337	20,695	19,423
YKY	WSWW	SA4	SA4: Sewer network stability and reliability factor	Reactive equipment failures	nr	0	3,591	5,869	3,364
YKY	WSWW	SB2	SB2: Wastewater quality stability and reliability factor	Sewage treatment works non-compliance	nr	0	2	0	2
YKY	WSWW	SB2	SB2: Wastewater quality stability and reliability factor	Population equivalent non-compliance	%	1	0.0	0.0	0.0
YKY	WSWW	SB2	SB2: Wastewater quality stability and reliability factor	Reactive equipment failures	nr	0	11,183	15,651	12,115

Reactive Equipment Failures

This measures the number of works orders created reactively for the assets covered by each of the sub measures. This is the first year of reporting against the new definitions. Comparative data has been back cast which enables trend analysis to be undertaken and commented upon. All 4 of the equipment failures sub-measures were below reference level and the majority have seen a continuing reducing trend in performance, with one measure showing a slight increase.

The continued improvement in performance is attributable to a combination of improving planned maintenance and an increase in expenditure in recent years, which ensures an appropriate replace / repair decision is made reducing the likelihood of further failure.

Interruptions over 12h

This measures the number of properties affected by unplanned supply interruptions, of more than twelve hours' duration.

We were above upper limit for this measure. However, we had a single event that accounted for 3,263 properties (95.5% of the total) which demonstrates the influence that single events can exert over this measure. If this event had not occurred we would have had 151 properties over 12 hours which would have been well below the reference level of 220. Learnings and customer/stakeholder feedback have been taken from this event and incorporated into the investigation findings which are being fed into planning for ensuring performance in future years.

Sewer Flooding – other causes

This measures the number of incidents of sewer flooding due to other causes. This measure has out turned at 346 p which is above the reference level of 302 but within the upper reference level of 379.

Compared to 2014-15 there has been an increase of 19% from 292 to 346 incidents. We believe that this increase is mainly due to the heavy rainfall experienced in Yorkshire during November and December 2015. Statistical analysis has been undertaken to understand the impact of the rain. This has indicated that the rainfall experienced would result in an increase of between 28 and 46 incidents compared to average rainfall values in these months.

Additional Regulatory Information (Regulatory Finance Statements Continued)

4A - Non-financial information Yorkshire Water

For the 12 months ended 31 March 2016

Line description	Units	DPs	Current year		Prior year	
			Unmeasured	Measured	Unmeasured	Measured
Retail - household						
A	Number of households billed ('000s)					
1	Water only connections	'000s	3	59.318	45.643	
2	Wastewater only connections	'000s	3	68.514	47.182	
3	Water and wastewater connections	'000s	3	960.752	952.066	
4	Total	'000s	3	1088.584	1044.891	0.000
5	Number of void households	'000s	3	66.562	41.069	
6	Per capita consumption (excluding supply pipe leakage) l/h/d	l/h/d	2	153.46	107.55	

B	Wholesale volume (Ml/d)	Units	DPs	Current year		Prior year	
				Water	Wastewater	Water	Wastewater
7	Bulk supply export	M/d	3	0.880	0.000		
8	Bulk supply import	M/d	3	53.680	0.000		
9	Distribution input	M/d	3	1,239.580			

Table 20 - Non-financial information

4B - Wholesale totex analysis Yorkshire Water

For the 12 months ended 31 March 2016

Line description	Units	DPs	Current year		Cumulative 2015-20	
			Water	Wastewater	Water	Wastewater
A	Actual totex					
1	Menu totex	£m	3	270.658	311.130	0.000
B	Items excluded from the menu					
2	Pension deficit recovery payments	£m	3	7.509	9.786	
3	Third party costs	£m	3	1.628	0.002	
4	Other adjustments	£m	3	0.000	0.000	
5	Total costs excluded from the menu	£m	3	9.137	9.788	0.000
6	Actual totex	£m	3	279.795	320.918	
7	Actual totex base year prices	£m	3	263.878	302.662	
8	Allowed totex base year prices	£m	3	350.717	393.822	

Table 21 - Wholesale totex analysis

The actual totex (base year prices) compared to the FD allowed (base year prices) is under for the year 2015/16. Operating costs of the business are in line with those assumed in the FD for both water and waste water, with further provided in tables 4D and 4E. Capital expenditure has been re-profiled creating a timing difference within the first year of the period; reasons for this are detailed below. As reported in section 3, we have managed the re-profiling of the programme to balance the challenge of meeting our performance commitments in the year, deliver acceptable performance commitment improvements in future years and driving continued sustainable efficiency.

Water

As part of our drive to meet stretching performance commitments whilst continuing to deliver efficient services we have been identifying different procurement methods whilst still using our proven framework partners. By identifying less complex solutions on the aqueducts programme and delivering these

through a direct procurement framework we have been able to target delivery efficiencies. We are expanding this approach to other parts elements of our programme and plan to deliver further significant efficiency over the remainder of the water programme.

Within the year there has been a re-profiling of the reservoir safety statutory programme to ensure that we promote efficient improvements identified within the inspecting engineer's Section 10 reports subject to safety assurance being in place.

To complete our automated meter reading programme that commenced in 2010, we are now left with meters where we need to gain entry to properties that have not been accessible to date. This ongoing difficulties in gaining access has led to delays to completing the programme whilst balancing customer satisfaction.

The quality enhancements supported by the DWI at key water treatment assets have experienced delays to the original planned programme due to issues with agreeing efficient solutions whilst ensuring long term compliance is delivered to support the drive towards the stretching 100% water quality compliance performance commitment during the final three years of the period.

The programme to maintain the long term capability of our water assets has been reviewed and re-prioritised to ensure that the investment promoted into delivery is addressing the highest asset risks impacting on our performance commitments to support and maximise any out-performance opportunities.

Wastewater

The most significant variance against the waste water plan are the changes agreed with the Environment Agency with regards to the National Environment Programme (NEP). The majority of sites identified and planned for early delivery in the final determination have been removed or had changes to the environmental drivers or standards. This has resulted in a significant change to the regulatory compliance profile of the sites now agreed with the majority being delayed until the end of the period. It has taken the majority of the first year before the revised programme to be issued to us. This uncertainty on programme changes had a significant impact on the early start programme and has continued to delay the programme into the current year

At PR14 it was clear from Ofwat's modelling that our sludge treatment and disposal costs were relatively inefficient. Consequently, we have reviewed our strategy to ensure we deliver competitive and efficient services to our customers. This has resulted in a change to the programme of work and whilst this has meant there have been delays to the delivery programme it will allow us to maximise sustainable capital and operating expenditure outperformance.

Over the last year changes to the sentencing guidelines, resulting in significant company fines for significant (Category 1 and 2) pollution incidents has led to us accelerate our sewer network rehabilitation programme, targeting earlier replacement of our high risk rising mains and sewers.

Finding affordable solutions to customer flooding problems due to hydraulic capacity continues to be a challenge. The removal of a register reduction target is welcomed but has resulted in the solutions promoted in the original plan being reviewed to ensure we are now targeting solutions that balance cost and a reduction in actual flooding frequency, as well as reviewing all previously known risks that were unaffordable with this new criteria. This new process in solution development has resulted in delays to the original programme and whilst we have offset some of this delay with an increase in the activity to resolve internal flooding due to other causes there is still an overall programme delay. We have implemented this change without adversely impacting on the performance commitments.

The programme to maintain the long term capability of our waste water assets has been reviewed and re-prioritised to ensure that the investment promoted for capital intervention is addressing the highest asset risks impacting on our performance commitments to support and maximise any out-performance opportunities.

4C - Forecast impact of performance on RCV Yorkshire Water

For the 12 months ended 31 March 2016

Line description		Units	DPs	Current year
1	RCV determined at FD	£m	3	5832.962
2	RCV element of Totex over/underspend	£m	3	-92.182
3	Allowance (Rewards/penalties - ODI)	£m	3	0.000
4	Projected 'shadow' RCV	£m	3	5740.780

Table 22 - Forecast impact on RCV

4D - Wholesale totex analysis - water **Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Units	DPs	Water resources		Raw water distribution		Water treatment	Treated water distribution	Total	
			Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage				
A Operating expenditure										
1 Power	£m	3	0.000	2.224	5.216	0.709	6.683	11.762	26.594	
2 Income treated as negative expenditure	£m	3	0.000	0.000	-0.137	0.000	-0.339	0.000	-0.476	
3 Service charges/ discharge consents	£m	3	5.486	0.000	0.000	0.000	0.177	0.000	5.663	
4 Bulk supply/ Bulk discharge	£m	3	0.000	3.851	0.000	0.000	0.000	0.000	3.851	
5 Other operating expenditure	£m	3	0.019	7.189	1.911	1.456	30.246	55.829	96.650	
6 Local authority rates	£m	3	0.000	1.823	1.811	5.850	1.447	27.722	38.653	
7 Total operating expenditure excluding third party services	£m	3	5.505	15.087	8.801	8.015	38.214	95.313	170.935	
8 Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	1.628	1.628	
9 Total operating expenditure	£m	3	5.505	15.087	8.801	8.015	38.214	96.941	172.563	
B Capital Expenditure										
10 Maintaining the long term capability of the assets - infra	£m	3	0.000	1.258	1.049	5.901	-2.326	30.440	36.322	
11 Maintaining the long term capability of the assets - non-infra	£m	3	0.000	3.101	0.760	0.000	16.875	22.732	43.468	
12 Other capital expenditure - infra	£m	3	0.000	0.694	0.000	0.000	0.000	17.879	18.573	
13 Other capital expenditure - non-infra	£m	3	0.000	0.681	0.121	0.000	8.060	6.840	15.702	
14 Total gross capital expenditure excluding third party services	£m	3	0.000	5.734	1.930	5.901	22.609	77.891	114.065	
15 Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
16 Total gross capital expenditure	£m	3	0.000	5.734	1.930	5.901	22.609	77.891	114.065	
17 Grants and contributions (price control)	£m	3	0.000	0.000	0.000	0.000	0.000	14.342	14.342	
18 Totex	£m	3	5.505	20.821	10.731	13.916	60.823	160.490	272.286	
C Cash Expenditure										
19 Pension deficit recovery payments	£m	3	0.000	0.437	0.180	0.068	1.824	5.000	7.509	
20 Other cash items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
21 Totex including cash items	£m	3	5.505	21.258	10.911	13.984	62.647	165.490	279.795	
D Unit cost information (operating expenditure)										
22 Licenced volume available	M	3	848969.000							
23 Volume abstracted	M	3		456130.478						
24 Volume transported	M	3			282688.000					
25 Average volume stored	M	3				90053.000				
26 Distribution input from water treatment	M	3					453686.280			
27 Distribution input treated water	M	3						453686.280		
28 Unit cost	£/M	3	6.484	33.076	31.133	89.003	84.230	213.674		

Table 23 - Wholesale total analysis water

Within 2015/16 operating costs are in broadly line with the intended FD. For water services there has been increased spend activity on leakage to ensure the performance commitment was achieved and increased costs on mitigating assets as an impact of the delayed capital programme.



4E - Wholesale totex analysis - wastewater Yorkshire Water

For the 12 months ended 31 March 2016

Line description	Units	DPs	Sewage collection			Sewage treatment		Sludge			Total
			Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal	
A Operating expenditure											
1 Power	£m	3	1,527	1,768	0.723	23,779	0.130	0.000	2,624	0.000	30,551
2 Income treated as negative expenditure	£m	3	0.000	0.000	0.000	-0.192	0.000	0.000	-1,543	0.000	-1,735
3 Service charges/ discharge consents	£m	3	0.520	0.602	0.246	2,963	0.000	0.000	0.001	0.216	4,548
4 Bulk supply/ Bulk discharge	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Other operating expenditure	£m	3	15,797	18,255	9,122	34,414	0.347	8,969	24,019	8,390	119,313
6 Local authority rates	£m	3	0.057	0.068	0.048	18,033	0.000	0.040	3,686	0.011	21,943
7 Total operating expenditure excluding third party services	£m	3	17,901	20,693	10,139	78,997	0.477	9,009	28,787	8,617	174,620
8 Third party services	£m	3	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
9 Total operating expenditure	£m	3	17,903	20,693	10,139	78,997	0.477	9,009	28,787	8,617	174,622
B Capital Expenditure											
10 Maintaining the long term capability of the assets - infra	£m	3	12,028	13,927	5,697	-0.061	0.000	0.000	-1,015	0.000	30,576
11 Maintaining the long term capability of the assets - non-infra	£m	3	6,495	7,522	3,077	36,182	0.002	0.000	18,009	0.000	71,287
12 Other capital expenditure - infra	£m	3	7,435	8,609	3,522	0.268	0.000	0.000	0.000	0.000	19,834
13 Other capital expenditure - non-infra	£m	3	2,068	2,395	0.980	16,475	0.000	0.000	0.217	0.000	22,135
14 Total gross capital expenditure excluding third party services	£m	3	28,026	32,453	13,276	52,864	0.002	0.000	17,211	0.000	143,832
15 Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16 Total gross capital expenditure	£m	3	28,026	32,453	13,276	52,864	0.002	0.000	17,211	0.000	143,832
17 Grants and contributions (price control)	£m	3	2,782	3,222	1,318	0.000	0.000	0.000	0.000	0.000	7,322
18 Totex	£m	3	43,147	49,924	22,097	131,861	0.479	9,009	45,998	8,617	311,132
C Cash Expenditure											
19 Pension deficit recovery payments	£m	3	0.893	1,116	0.737	3,815	0.005	0.858	2,203	0.159	9,786
20 Other cash items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21 Totex including cash items	£m	3	44,040	51,040	22,834	135,676	0.484	9,867	48,201	8,776	320,918
D Unit cost information (operating expenditure)											
22 Volume collected foul	M	3	295975.055								
23 Volume collected surface water drainage	M	3		322286.700							
24 Volume collected highway drainage	M	3			96267.455						
25 Biochemical Oxygen Demand (BOD) sewage	Tonnes	3				128261.980					
26 Biochemical Oxygen Demand (BOD) imported sludge liquor	Tonnes	3					5839.000				
27 Sludge volume transported	m3	3						752897.000			
28 Sludge treatment dried solid mass treated	tds	3							124548.000		
29 Sludge disposal dried solid mass disposed	tds	3								131700.000	
30 Unit cost	£/unit	3	60.488	64.205	105.321	615.903	81.692	11.966	231.132	65.429	

Table 24 - Wholesale totex - wastewater

Wastewater operating costs are also broadly in line against the FD for 2015/16. Wastewater assets were affected by the December 2015 flooding creating not only operating costs to recover the assets but also loss of energy generation at these sites. The Company also made a choice to invest more in Service Incentive Mechanism (SIM) and at Hull where a statutory abatement notice is in place for odours.

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 our sewers/drains, the number of properties physically connected for drainage services, and the average rainfall (mm) across our 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.

Sludge liquor units in line 26 please see Appendix 7 Upstream methodology for further details on the assumptions used to calculate this unit cost.



4F - Operating cost analysis - household retail											Yorkshire Water	
For the 12 months ended 31 March 2016												
Line description	Units	DPs	Household unmeasured				Household measured				Total	
			Water only	Wastewater only	Water and wastewater	Total	Water only	Wastewater only	Water and wastewater	Total		
A Operating expenditure												
1 Customer services	£m	3	0.372	0.429	7.826	8.627	0.286	0.296	7.755	8.337	16.964	
2 Debt management	£m	3	0.077	0.090	1.640	1.807	0.060	0.062	1.625	1.747	3.554	
3 Doubtful debts	£m	3	0.431	0.105	10.657	11.193	0.214	0.003	6.242	6.459	17.652	
4 Meter reading	£m	3				0.000	0.081	0.084	2.191	2.356	2.356	
5 Other operating expenditure	£m	3	0.236	0.272	4.963	5.471	0.182	0.187	4.918	5.287	10.758	
6 Total operating expenditure excluding third party services	£m	3	1.116	0.896	25.086	27.098	0.823	0.632	22.731	24.186	51.284	
7 Depreciation	£m	3	0.105	0.121	2.203	2.429	0.081	0.083	2.184	2.348	4.777	
8 Total operating costs excluding third party services	£m	3	1.221	1.017	27.289	29.527	0.904	0.715	24.915	26.534	56.061	
B Other operating expenditure - breakdown												
9 Demand-side water efficiency - gross expenditure	£m	3									0.420	
10 Demand-side water efficiency - expenditure funded by wholesale	£m	3									0.000	
11 Demand-side water efficiency - net retail expenditure	£m	3									0.420	
12 Customer-side leak repairs - gross expenditure	£m	3									1.861	
13 Customer-side leak repairs - expenditure funded by wholesale	£m	3									0.000	
14 Customer-side leak repairs - net retail expenditure	£m	3									1.861	

Table 25 - Operating cost analysis - Household retail

4G - Wholesale current cost financial performance						Yorkshire Water	
For the 12 months ended 31 March 2016							
Line description	Units	DPs	Water	Wastewater	Total		
1 Revenue	£m	3	395.119	490.988	886.107		
2 Operating expenditure	£m	3	-172.563	-174.622	-347.185		
3 Capital maintenance charges	£m	3	129.868	202.030	331.898		
4 Other operating income	£m	3	0.790	10.806	11.596		
5 Current cost operating profit	£m	3	353.214	529.202	882.416		
6 Other income	£m	3	1.671	0.228	1.899		
7 Interest income	£m	3	36.326	49.288	85.614		
8 Interest expense	£m	3	-113.820	-154.430	-268.250		
9 Interest expense related to the unwinding of discounted liabilities	£m	3	0.000	0.000	0.000		
10 Profit before tax and fair value movements	£m	3	277.391	424.288	701.679		
11 Fair value gains/(losses) on financial instruments	£m	3	56.293	76.377	132.670		
12 Profit before tax	£m	3	333.684	500.665	834.349		

Table 26 - Wholesale current cost financial performance

To split the interest income, interest expense and fair value gains / (losses) on financial instruments into Water and Wastewater categories, 2016 Regulatory Capital Values (RCV) were used.

RCV	Water	Wastewater	Total
£m	2475.382	3358.580	5833.962
%	42%	58%	100%

4H - Financial metrics

Yorkshire Water

For the 12 months ended 31 March 2016

Line description		Units	DPs	Metric
1	Net debt	£m	3	4475.747
2	Regulated equity	£m	3	1357.215
3	Regulated gearing	%	2	76.73
4	Post tax return on regulated equity	%	2	5.72
5	RORE (return on regulated equity)	%	2	3.51
6	Dividend yield	%	2	0.00
7	Retail profit margin - Household	%	2	1.24
8	Retail profit margin - Non household	%	2	2.50
9	Credit rating	n/a	n/a	Baa2
10	Return on RCV	%	2	4.46
11	Dividend cover	dec	2	0.00
12	Funds from operations (FFO)	£m	3	368.309
13	Interest cover (cash)	dec	2	2.59
14	Adjusted interest cover (cash)	dec	2	1.68
15	FFO/Debt	dec	2	0.08
16	Effective tax rate	%	2	0.20
17	Free cash flow (RCF)	£m	3	278.172
18	RCF/capex	dec	2	1.04
19	Revenue (actual)	£m	3	959.253
20	EBITDA (actual)	£m	3	543.95
21	Proportion of borrowings which are fixed rate	%	2	44.66
22	Proportion of borrowings which are floating rate	%	2	24.79
23	Proportion of borrowings which are index linked	%	2	30.55
24	Proportion of borrowings due within 1 year or less	%	2	1.56
25	Proportion of borrowings due in more than 1 year but no more than 2 years	%	2	7.69
26	Proportion of borrowings due in more than 2 years but but no more than 5 years	%	2	9.04
27	Proportion of borrowings due in more than 5 years but no more than 20 years	%	2	44.81
28	Proportion of borrowings due in more than 20 years	%	2	36.90

Table 27 - Financial Metrics

2015-16

Base return	5.65%
Totex outperformance*	0.12%
Financing impact	-2.30%
ODI	0.27%
Other	-0.22%
RoRE	3.51%

Table 28 - Reconciliation of line 5 RORE

The significant movement that we are reporting on the RoRE in 2015-16 is due to the reported Totex reprofiling, this is explained in Section 4B (Wholesale Totex analysis). This will reduce throughout the AMP and the RoRE adjustment will reduce to reflect true outperformance as we move through the price control period.

4I - Financial derivatives **Yorkshire Water**

For the 12 months ended 31 March 2016

Line description	Units	DPs	Nominal value by maturity (net)			Total value		Total accretion £m	Units	DPs	Interest rate (weighted average)	
			1 to 2 years	2 to 5 years	Over 5 years	Nominal value (net)	Mark to Market				Payable	Receivable
Derivative type												
A Interest rate swap (sterling)												
1 Floating to/from fixed rate	£m	3	0.000	0.000	475.000	475.000	23.055	0.000	%	2	2.05	0.00
2 Floating to/from index linked	£m	3	0.000	0.000	1289.000	1289.000	-2390.700	150.220	%	2	2.53	0.00
3 Fixed to/from index-linked	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
4 Total	£m	3	0.000	0.000	1764.000	1764.000	-2367.645	150.220				
B Foreign Exchange												
5 Cross currency swap USD	£m	3	0.000	219.939	66.008	285.948	43.086	0.000	%	2	1.66	0.00
6 Cross currency swap EUR	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
7 Cross currency swap YEN	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
8 Cross currency swap Other	£m	3	0.000	0.000	33.800	33.800	-5.491	0.000	%	2	1.45	0.00
9 Total	£m	3	0.000	219.939	99.808	319.748	37.595	0.000				
C Currency interest rate												
10 Currency interest rate swaps USD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
11 Currency interest rate swaps EUR	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
12 Currency interest rate swaps YEN	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
13 Currency interest rate swaps Other	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	%	2	0.00	0.00
14 Total	£m	3	0.000	0.000	0.000	0.000	0.000	0.000				
D Forward currency contracts												
15 Forward currency contracts USD	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	£m	3	0.000	0.000
16 Forward currency contracts EUR	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	£m	3	0.000	0.000
17 Forward currency contracts YEN	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	£m	3	0.000	0.000
18 Forward currency contracts Other	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	£m	3	0.000	0.000
19 Total	£m	3	0.000	0.000	0.000	0.000	0.000	0.000				
E Total												
20 Total	£m	3	0.000	219.939	1863.808	2083.748	-2330.050	150.220				

Please provide explanation w/ty 'Not

Table 29 - Financial derivatives

See below explanation notes for the variance between nominal and notional values.

Hedging - Swaps detail

Description	Notional Value	Nominal Value	Comment	Ofwat Definition
Fixed rate bonds swapped into Floating	£m	£m	430.0 Pay margin on floating	Financial instruments through which floating interest rate liabilities are converted into fixed rate interest rate liabilities or vice versa
Finance Lease Vanilla Swaps (Floating to Fixed)	45.0		Pay Fixed Rate on Notional	Financial instruments through which floating interest rate liabilities are converted into fixed rate interest rate liabilities or vice versa
Finance Lease Vanilla Swaps (Floating to Fixed)			Receive Floating Rate on Notional	
Index Linked Swaps:	1289.0		Payable Coupon on RPI Notional	Financial instruments through which floating interest rate liabilities are converted into inflation linked interest rate liabilities or vice versa
Index Linked Swaps:			Receive Floating Rate on notional	
Cross Currency Swaps (USD)		285.9	Pay margin on floating	Financial instruments which convert debt liabilities from US Dollars into Pounds Sterling
Cross Currency Swaps (AUD)		33.8	Pay margin on floating	Financial instruments which convert debt liabilities from currencies other than US Dollars, Euro or Yen into Pounds Sterling
Total	1334.0	749.7		



Risk and Compliance Statement 2016

The Compliance Statement 2016 covers the reporting year 1 April 2015 to 31 March 2016 for all obligations, with the exception of environmental compliance and water quality parameters, which rely on a calendar year report, for which the statement covers obligations during the period 1 January 2015 to 31 December 2015.

Compliance with obligations

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, and that it is taking appropriate steps to manage and/or mitigate the risks it faces.

In particular, the Board confirms that it:

- considers it has a comprehensive understanding of, and is meeting, its obligations and has taken steps to understand and meet customer expectations;
- has satisfied itself that it has sufficient processes and internal systems of control to meet its obligations;
- has appropriate systems and processes in place to allow it to identify, manage and review its risks.

In addition, the Board has confirmed, in accordance with Ofwat's information provision requirements, that it:

- provides information to customers in line with Ofwat's information principles;
- involves customers and representatives in preparing, changing and implementing its information provision approach.

Yorkshire Water continues to comply with the requirements of the Guaranteed Standards of Service (GSS) scheme and offers enhanced guarantees and /or payments in a number of areas.

Licence condition F6A: sufficient financial and management resources

The Board declares that, in their opinion:

- i. 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 its 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.

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 2016 and the Company's business plan for 2016/17;

- 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; and
- e) the Company's employment policies and strategy as described in detail in the Directors' Report within the statutory financial statements of Yorkshire Water.

The Board 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.

Performance Outcomes, Measures and Commitments

Yorkshire Water's compliance with its regulatory and customer obligations is demonstrated by the delivery of its Performance Commitments and measures, as set out in Table 3A of this Annual Performance Report.

Yorkshire Water uses the 2014 Final Determination as well as continuing to apply the Levels of Service Methodologies, last published in June Return 2010, enhanced through continual improvement, for compilation of annual performance information.

Performance reporting is undertaken following a well embedded ISO9001 certified process with external assurance provided by Halcrow and PricewaterhouseCoopers LLP to test that the processes and controls in place are sufficient and robust and confirm the output of our performance reporting.

Material or potentially material risks

Using the Performance Measures as indicators of compliance with regulatory obligations, the Board has identified the following material or potentially material risks:

- drinking Water Quality Compliance: This did not meet the 2015/16 performance commitment of 99.960%. There is also a future risk identified in ensuring performance can meet the 100% compliance required from 2017;
- energy Generation: This did not meet the 2015/16 performance commitment of 12%. There is also a future risk identified in ensuring performance can meet the 100% compliance required from 2017;
- Our Drinking Water Contacts performance commitment is identified as a potentially material risk due to the challenging targets confirmed for this which will see us aim to achieve an almost 50% reduction in contacts over the next 4 years with.

For further information on our performance against our commitment please refer to **Table 3A**.

Managing Risk

Our company wide risk management framework provides a standard approach to the identification, assessment, monitoring and reporting of risk. Risks are monitored through a series of aligned registers at strategic, functional and operational levels. These registers are used to assess the risks, document their controls, establish mitigation plans and define ownership and accountability.

Risks and their controls are reviewed regularly by the Kelda Management Team, KMT, each functional leadership team level, and through an annual 'Control of Risk Self-Assessment' with all senior leaders. Our corporate risk register is reported regularly to the Board Audit Committee and the Board.

Our Internal Audit function provides independent assurance on the adequacy and effectiveness of our system of internal control. An annual review of internal controls is also conducted and reported to the Board. We have established a Risk Committee during the year to further drive our focus on effective risk management. A review of our key strategic risks is provided in our Annual Report and Financial Statement document.

In November we published our [Risks, Strengths and Weaknesses Statement](#). This provided information on what our stakeholders think about the performance information that we publish. It also identifies additional reporting risks we have identified ourselves. We committed to a number of steps to continue to maintain the trust and confidence of our customers and stakeholders in the information we report.

Further information is available within the published [Risks, Strengths and Weaknesses Statement](#) and [Assurance Plan](#) documents. The Assurance Plan also provides information on our approach to delivering a robust assurance process.

Taking Responsibility for Resilience

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. In order to maintain customer trust and meet the duties we have as a water company we need 'the ability to cope with, and recover from, disruption and anticipate trends and variability to maintain services for people and the environment, now and in the future'.

As part of our future long term planning for PR19 we have been responding to how we will build on our existing plans, processes and systems to ensure we meet our resilience duty as part of the new Water 2020 regulatory framework and in response to the recent Defra publication 'Enabling resilience in the water sector'. We are currently developing our resilience policy to clearly understand what we need to do to keep things running things well; our current and future risks (in context of our strategic risks) and if we are responding in the most sustainable way through:

- meeting customer expectations;
- embedding effective systems and governance to understand and manage risks;
- enabling the ability to take action to deal with the consequences of unplanned failures;
- enduring appropriate systems, processes and controls are in place.

We also recognise that our duty is not only in relation to service but also in recognising how financial and economic changes could impact us a company and this is reflected in the financial resilience assessments, as presented in our Annual Report and Financial Statements.

Accounting Separation Methodology Statement

Introduction

The economic regulator of England and Wales (Ofwat) requires water companies to publish an Annual Performance Report (APR) which provides information which is transparent and covers progress for the following areas:

- delivery of customer outcomes;
- service levels; and
- financial performance.

Regulatory Requirements

The data collated and represented in the tables follow Ofwat's Regulatory Accounting Guidelines (RAG's), which show the reported costs, revenues, assets and liabilities separately, for different activities to deliver that service. 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) 15/18 'Expectations for company annual performance reporting 2015/16';
- RAG1.06 – Principles and guidelines for regulatory reporting under new UK GAAP;
- RAG 2.05 – Guideline for the classification of costs across the price controls;
- RAG 3.08 – Guidelines for the format and disclosures for the annual performance report;
- RAG 4.05 - Guidelines for the table definitions for the annual performance report;
- RAG 5.05 – Guidelines for transfer pricing;
- 2016 Annual Report Performance tables.

Application of Regulatory Accounting Guidelines

RAG 1.06 – Principles and guidelines for regulatory reporting under new UK GAAP

For the year ended 31 March 2016, YW prepared its financial statements under new United Kingdom Generally Accepted Accounting Practice (new UK GAAP) in compliance with Financial Reporting Standard 102 (FRS 102) and therefore these results are presented in line with the new reporting framework required within the UK. The differences between the RAG's and FRS 102 are detailed in the disclosure section of this document.

In summary the principal differences that affect YW are as follows:

- the regulatory accounts segment reporting into the price controls;
- the regulatory accounts require some information to be prepared under current cost accounting (CCA);
- IAS23.8 and FRS102 (25.2) requires borrowing costs to be capitalised where they directly relate to the construction of an asset. The regulatory accounts require this rule to be dis-applied;
- fair value adjustment on financial instruments presented separately within the regulatory accounts.

RAG 2.05 – Guideline for classification of costs across the price controls

Cost attribution and allocation are the means by which costs are divided between specific products and services. Costs can be considered as:

- direct cost of activities (for example material and wages); and
- indirect costs which are directly consumed or allocated to activities.

Information used to populate the tables originates from our financial core system (SAP). We believe that the allocations made within the accounting separation models are reasonable on the basis that:

- direct costs are posted to specifically identified cost centres for that expenditure. The hierarchy of costs is reviewed as part of the month end process by the Financial Business Partners and any queries relating to costs are directed to operational managers. Any incorrectly allocated costs are corrected;
- to allocate any indirect costs YW use a function within SAP called 'assessments'. This is a method of allocating indirect costs in cost centre accounting; it in effect creates a rule for how those costs should be allocated over the relevant activities. To create this rule the Finance Business Partners discuss and agree with operational Managers the relevant apportionment.

The cost drivers and allocation method are provided within the appendix of this report.

In RAG 2.05 Ofwat laid out cost allocation principles. Detailed below are the principles applied, together with Yorkshire Water's response on how the approach has been taken.

Transparency: *the cost attribution and allocation methods applied to allocate costs within the Annual Performance Report need to be transparent. This requires 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.*

- costs are allocated in a clearly transparent way via cost centres within the company's accounting system (SAP);
- where adjustments are made to the costs in SAP this is to improve the accuracy of reporting and have been agreed with the Finance Business Partner or Operational Manager;
- cost drivers used are consistent with Ofwat guidance and are set out in the appendices.

Causality: *cost causality requires that costs (and revenues) are allocated to those activities and services that cause the cost (or revenue) to be incurred. This requires that the attribution of costs and revenues to activities and services should be performed at as granular level as possible. All costs must ultimately be attributed or allocated, including, where appropriate, depreciation charges on assets.*

- a cost centre hierarchy is maintained within the SAP system. This assigns every cost centre to a 'service level' node 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 codes 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 the allocation methods used were chosen from the suggested methods in the guidelines;
- a monthly report is produced showing all costs within the categories so high level checks and variance understanding can be carried out;
- the costs within the hierarchy are reviewed and maintained by the Finance Business Partners. As part of our internal governance all these costs are signed off by the senior manager in that area

along with the procedure note detailing the checks the Finance Business Partners have carried out in the year.

Non-discrimination: the attribution of costs and revenues should not favour any business unit within the regulated company and it should be possible to demonstrate that internal transfer charges are consistent with the prices charged to external third parties.

- the attribution of costs and revenues do not favour any business unit and all internal transfers are at cost.

No cross subsidy between price controls: companies cannot transfer costs between the price control units in setting prices and preparing regulatory statements.

- costs are allocated based on the activity and services that cause that cost (or revenue) to be incurred;
- within the internal governance of preparing these statements there is a high degree of segregation of duties. This is detailed further in the internal governance section.

Objectivity: the cost and revenue attribution criteria need to be objective and should not intend to benefit any business unit or service. Cost allocation must be fair and reasonable and there must be consistent treatment of costs for appointed and non-appointed activities.

- 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 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.

Consistency: the cost and revenue attribution criteria should be consistent from year to year to enable meaningful comparison of information over time. Changes to the attribution methodology from year to year should be clearly justified and documented.

- the tables are prepared in a consistent manner each year in order to enable meaningful comparison of information over time. However if a change is necessary to improve accuracy this is detailed within this report in the changes to methodology section;
- any changes as detailed in Information Notices or company specific letters issued by Ofwat are implemented.

Principal Use: where possible, capital expenditures and associated depreciation should be directly attributed to one of the four services. Where that is not possible as the asset is used by more than one service it should be reported in the service of principal use with recharges made to the other services that use the asset reflecting the proportion of the asset used by the other services.

- 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 are allocated to a single business unit of principal use and recharged to the relevant business unit, a breakdown of these assets are shown in table;
- there are a number of general support assets that do not have a single principal use service, for example the financial system. On these occasions an appropriate cost driver is applied that allocates the costs across the relevant service activities.

Asset category	Price control of principal use	Recharge basis	Total depreciation (£m)	Recharged to Retail Non-household (£m)
Billing system (household)	Retail household	No. of customers	1.568	0.204
Customer contacts system	Retail household	No. of customers	0.958	0.125
Other information technology	Retail household	No. of customers	0.336	0.044
Accommodation	Retail household	No. of customers	0.047	0.005
TOTAL			2.909	0.378

Table 30 – Assets recharged by principal use

Asset category	Recharge basis	Total depreciation (£m)	Allocation to Water (£m)	Allocation to Wastewater (£m)	Allocation to Retail Household (£m)	Allocation to Retail Non-household (£m)
Information Technology	Headcount	13.735	5.651	6.365	1.106	0.613
General offices	Full-time equivalent	1.598	0.691	0.787	0.094	0.026
Operational assets not directly allocated	Full-time equivalent	0.092	0.042	0.050		
Research & development	Full-time equivalent	1.191	0.438	0.488	0.176	0.089
Regulation	Full-time equivalent	3.107	1.321	1.510	0.240	0.036
Scientific services	Full-time equivalent	0.007	0.003	0.004		
Stores/depots	Full-time equivalent	0.112	0.052	0.060		
Telemetry	Full-time equivalent	3.669	1.712	1.957		
Vehicles	Full-time equivalent	2.386	0.982	1.114	0.216	0.074
TOTAL		25.897	10.892	12.335	1.832	0.838

Table 31 – Cost drivers & assets that are allocated over all services

Changes in methodology

During 2015/16 the following changes have been made to categorisation of costs:

- following a review of the methodology on allocation of rates it was noted that some assets had been excluded that were rateable. This correction has now been amended in the cost allocation for 2015/16 and has resulted in GMEA values for Impounding Reservoirs, Catchwaters and water network pipes being included in local authority rates allocation;
- a review was carried out in 2015/16 on sewer lengths within YW system (Odyssey). The outcome of this review changed the percentage allocation between the three Ofwat categories (foul, surface water & highway) the outcome of this allocation split is shown in appendix 7;

- this year the process of allocating the Income treated as negative expenditure has been refined. The income is directly allocated to the Ofwat business unit, where the generation of the electricity has taken place. This gives more accurate allocation of the income.

Following the targeted review by Ofwat and CEPA during this financial year YW has made the following amendments:

- we have reviewed our water resource assets and costs and can confirm that 100% compensating reservoirs are within water resources;
- costs associated with networks between boreholes and water treatment works are classified as raw water distribution;
- we have moved domestic waste transported to sewerage treatment works by tanker from appointed to non-appointed;
- the charging of use of appointed assets is not a fully loaded opex charge with depreciation.

Governance

To ensure the data is checked and reviewed there are various individuals and teams that hold different responsibilities set out in documented processes. Having this segregation of duties means that not one area is treated preferentially to another and different checks are carried out by different teams

Roles and responsibilities:

Consolidation & Reporting Team

- ensure compliance with current Ofwat guidance;
- overall responsibility of cost centres accounting separation hierarchies;
- ensure all values reconcile and all costs are included within the regulatory accounts;
- produce monthly cost allocation information by categories;
- consolidate and report annual performance tables in accordance with Ofwat's timescales;
- produce and publish the Annual Performance Report including methodology statement.

Account to Report Support

- journal requests posted at the request of Finance Business Partners;
- create maintain and run assessments;
- provide and review assessments on:
 - Fleet
 - Software
 - Rates
 - Payroll provisions
 - Insurance premiums
- provide Gross Modern Equivalent Asset Values (GMEAV) for insurance & rates.

Finance Business Partners

- review and sign off allocations with Operational Managers as part of the annual Business Planning process but also as required if there are relevant changes;
- review SAP for miss-postings and request a journal to amend;
- review the monthly cost allocation with Operational Managers;
- inform Account to Report of any amendments to allocations;
- provide reconciled year end information on the retail Household / Non-Household;
- ensure all procedures of allocations are maintained and authorised.

Senior Managers

- review and authorise 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 sign off

Yorkshire Water Board sign off the audited report before publication.

The below figure shows the summary of the regulatory reporting process and products required.

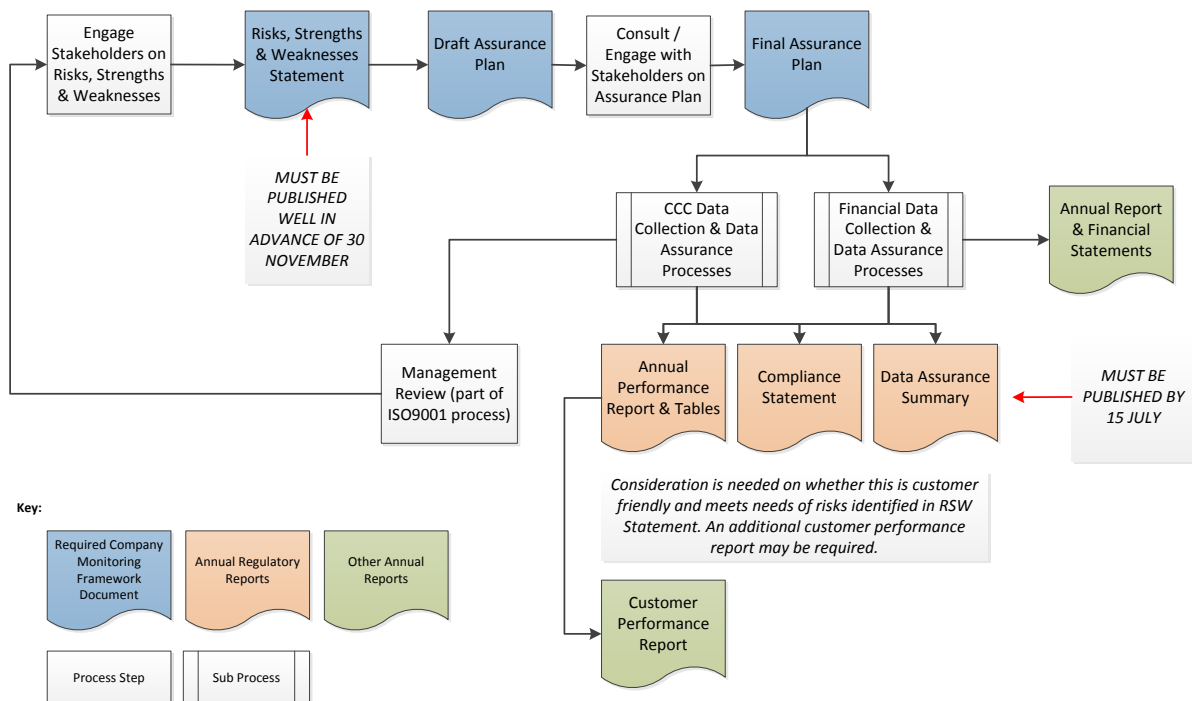


Figure 1 - Summary regulatory reporting

Directors Responsibility

The directors are responsible for preparing the Annual Report and Financial Statements (ARFS) of Yorkshire Water which includes the Strategic Report and Directors’ Report, in accordance with applicable law and regulations. The ARFS is a separate document to the APR however both are prepared on the same basis and published on the same day.

Company law requires the directors to prepare financial statements 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; and
- 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 on page 108 of the ARFS.

Business Structure

Figure 2 shows how the Company is currently organised into business units. Asset Management includes building and maintenance of wholesale assets. Service Delivery includes the operation of the wholesale assets and associated customer services. Support Services includes Business Support Group, Communications, Company Secretariat & Legal Services, Finance & Regulation, and Human Resources.

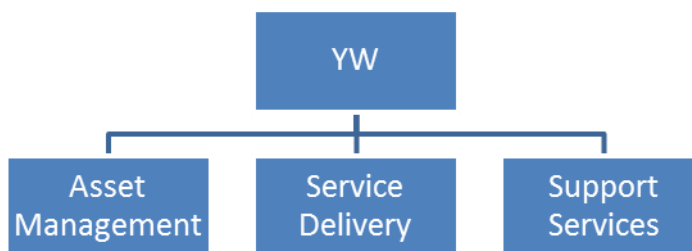


Figure 2 - YW Structure

Outsource functions

Ofwat requires companies to disclose outsourcing agreements as this could affect benchmarking comparisons.

A significant proportion of the activities identified within retail are performed by a separate company, Loop Customer Management Limited (LCML), which is a UK based company, and are charged to YW via an annual contract fee. Both YW and LCML companies are wholly owned subsidiaries of Kelda Group Limited.

For some customers LCML outsources billing and collection to other water companies and local authorities. Where possible the costs are charged directly to the retail service activity that consumed the goods or service. The remainder of costs identified as retail are incurred by YW and, where possible, are allocated directly to an activity. Costs not allocated directly are allocated via management assessment.

The table below shows the activities that were outsourced by YW and LCML for the year ended 31 March 2016.

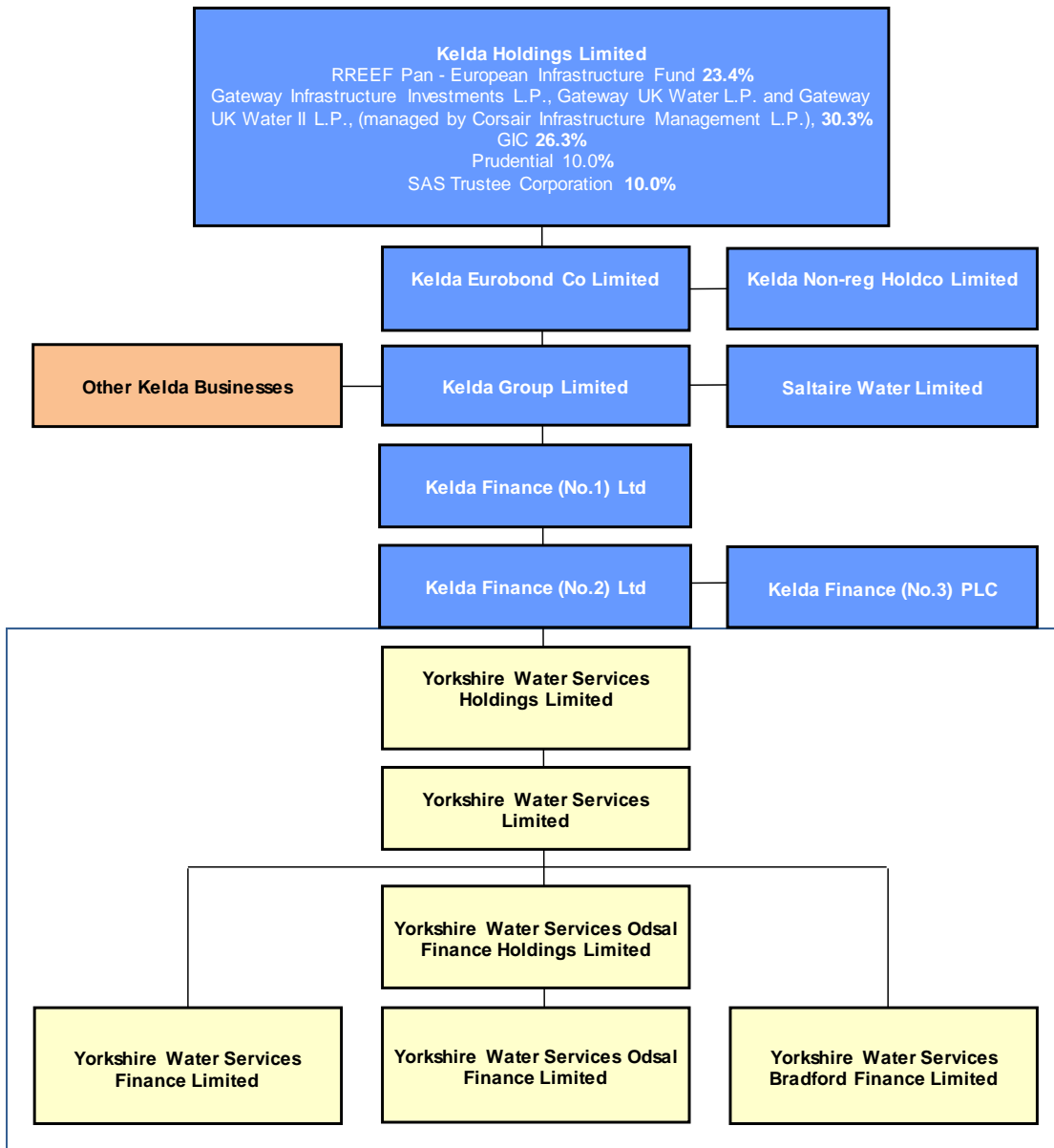
Which company outsources	Function outsourced	Outsourced to
LCML	Cross water company boundary billing, payment handling and debt management	Other water companies
LCML	Some billing, payment handling and debt management	UK based local authorities and housing associations
YWSL	Capital delivery	UK based contract partners
YWSL	Below ground network repair and maintenance	UK based contract partners

Table 32 - Outsourcing agreements

Disclosures

Corporate structure

Yorkshire Water is part of the Kelda Holdings group. The chart below shows where Yorkshire Water Services Limited sits within the condensed group structure.



Yorkshire Water established a financing structure known as a "whole business securitisation" (WBS) on 24 July 2009. The WBS enhances the creditworthiness of Yorkshire Water by setting appropriate restrictions upon the securitised group. This enables more cost effective borrowing and customers share

the benefit of the lower interest rates because this is factored into prices, as part of the process to simplify the legal structure of the group.

This WBS works by ring-fencing around Yorkshire Water's business with controls over how it operates; how it trades with other Group companies; and, how it is financed. 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.

Borrowings or sums lent

A long term loan was advanced by Yorkshire Water to Kelda Holdco Limited during 2008/09 to reflect the market value of certain index linked swaps novated from Kelda Holdco Limited to Yorkshire Water at that point in time. Balances at 1 April 2015 and 31 March 2016 were £256.1m and £247.9m respectively. Interest payable is at current market rates.

In addition Yorkshire Water has made further loan advances to Kelda Holdco Limited to enable the refinancing of debt in Kelda Holdco Limited. The balance of these loans at 31 March 2016 was £1,009.0m (2015: £1,009.0m) interest is payable on these at current market rates.

On 31 March 2015, the above loan balances were novated to Kelda Eurobond Co Limited. As a result of the implementation of the WBS, Yorkshire Water Services Finance Limited (YWSFL), a subsidiary of the company remains the issuer in respect of existing bonds previously on-lent to Yorkshire Water. Under the terms of the WBS YWSFL will not issue any further bonds.

Part of the WBS process involved certain bonds initially issued by YWSFL being exchanged for new bonds issued by a fellow subsidiary of the company Yorkshire Water Services Odsal Finance Limited (YWSOFL). These exchange bonds were issued on different terms to the existing bonds.

In order to fund the change in coupon payable and differences in par values post the bond exchange, Yorkshire Water entered into a series of loans with YWSOFL:

- deep discounting loans structured such that their redemption value will be discharged by the difference between par value paid by YWSFL in respect of the old bonds and the par value paid by the YWSOFL in respect of the new bonds; and
- amortising loans structured such that the regular payments of principal and interest equate to the difference between the interest received from YWSFL on the old bonds and the amount payable by the YWSOFL on the new bonds.

Post the implementation of the WBS new bonds have been issued from Yorkshire Water Services Bradford Finance Limited (YWSBFL), a subsidiary of the company and on lent to YWSL.

The banking arrangements of Yorkshire Water operate on a pooled basis with the above stated Group companies and the bank balances of each subsidiary can be offset with each other. Yorkshire Water has guaranteed the following bonds at 31 March 2016:

	Nominal £m	Coupon %	Maturity date Year	Liability at 31 March 2016 £m
Fixed rate				
Yorkshire Water Services Finance Limited	6.7	5.375	2023	4.7
Yorkshire Water Services Finance Limited	7.4	5.500	2027	6.5
Yorkshire Water Services Finance Limited	0.1	6.625	2031	0.7
Yorkshire Water Services Finance Limited	200.0	5.500	2037	195.3
Yorkshire Water Services Odsal Finance Limited	210.7	6.588	2023	210.7
Yorkshire Water Services Odsal Finance Limited	135.5	6.454	2027	135.5
Yorkshire Water Services Odsal Finance Limited	255.0	6.601	2031	255.0
Yorkshire Water Services Bradford Finance Limited	275.0	6.000	2019	274.2
Yorkshire Water Services Bradford Finance Limited	200.0	6.375	2039	198.6
Yorkshire Water Services Bradford Finance Limited	100.0	6.375	2039	105.9
Yorkshire Water Services Bradford Finance Limited	260.0	6.000	2017	259.4
Yorkshire Water Services Bradford Finance Limited	18.9	3.180	2018	21.3
Yorkshire Water Services Bradford Finance Limited	9.4	3.180	2019	10.6
Yorkshire Water Services Bradford Finance Limited	72.3	3.770	2021	83.5
Yorkshire Water Services Bradford Finance Limited	25.1	3.770	2022	29.0
Yorkshire Water Services Bradford Finance Limited	94.3	3.870	2023	110.6
Yorkshire Water Services Bradford Finance Limited	18.8	3.870	2024	22.1
Yorkshire Water Services Bradford Finance Limited	47.2	5.070	2022	54.3
Yorkshire Water Services Bradford Finance Limited	250.0	3.625	2029	262.9
Yorkshire Water Services Bradford Finance Limited	90.0	4.965	2033	104.1
Yorkshire Water Services Bradford Finance Limited	33.8	5.875	2033	29.5
Yorkshire Water Services Bradford Finance Limited	90.0	3.540	2029	102.1
Yorkshire Water Services Bradford Finance Limited	200.0	3.750	2023	189.1
Total fixed				2,665.6
Index linked				
Yorkshire Water Services Finance Limited	0.1	3.048	2033	(1.0)
Yorkshire Water Services Finance Limited	65.0	1.823	2050	81.8
Yorkshire Water Services Finance Limited	125.0	1.462	2051	162.0
Yorkshire Water Services Finance Limited	85.0	1.758	2054	107.2
Yorkshire Water Services Finance Limited	125.0	1.460	2056	161.9
Yorkshire Water Services Finance Limited	100.0	1.709	2058	125.9
Yorkshire Water Services Odsal Finance Limited	127.8	3.306	2033	153.0
Yorkshire Water Services Bradford Finance Limited	175.0	2.718	2039	214.1
Yorkshire Water Services Bradford Finance Limited	85.0	2.718	2039	114.3
Yorkshire Water Services Bradford Finance Limited	50.0	2.160	2041	54.2
Yorkshire Water Services Bradford Finance Limited	50.0	1.803	2042	53.9
Total index linked				1,227.3

Table 33 - Outstanding loan balances with Group Companies

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

Until August 2008, the bankers for Kelda Group Limited and subsidiaries current accounts provided pooling arrangements for all accounts whereby debit and credit balances were pooled with interest charged on the net Group balance. Arrangements changed on 11 August 2008 and now Yorkshire

Water has pooling arrangements with YWSFL. Debit and credit balances are pooled with interest charged on the net Group balance.

This facility is subject to provision of cross guarantees by each company within each pooling arrangement, guaranteeing each of the other companies' current account liabilities with the bank.

This is provided that the aggregate of the cleared debit balances, less the aggregate of the cleared credit balances, i.e. the net amount must not exceed £10.0m. In addition, the aggregate of the cleared debit balances on the Group financial statements must not exceed £15.0m.

Supply of service

Details of all transactions between the appointee and its associated companies during the year must be disclosed and if any single transaction exceeds 0.5% of turnover of the appointed business it should not be aggregated.

Services received by regulated business	Associate Company	Turnover of Associate £m	Terms of Supply	Value £m
Corporate charges	Kelda Group Limited	7.133	Cost allocation	6.046
Customer services	Loop Customer Management Limited	30.335	Cost allocation	28.435

Table 34 - Services received by associated companies

Yorkshire Water provides IT, facility charges, legal and a variety of common services to companies within the Group. These services total £3.721m and are provided at cost.

The directors declare that, to the best of their knowledge, all appropriate transactions with associated companies have been disclosed.

Managing key risks

Our corporate risk register is reviewed regularly by the Audit Committee and the Board, which also considers risk on an annual basis. The risk management framework is designed to manage the risk of failure to achieve our business objectives and provides reasonable (rather than absolute) assurance against material misstatement or loss.

Our Internal Audit function provides independent assurance on the adequacy and effectiveness of our system of internal control. Our audit programme is agreed with the Audit Committee and all audit reports, and progress against action plans, are summarised at each meeting for discussion and review.

The Audit Committee, on behalf of the Board, keeps the effectiveness of the system of internal control under review and has met four times to do this during 2015/16, including a workshop focused on a full review of strategic risks. An annual review of internal controls is also conducted and reported to the Board, which conducts its own risk review.

During 2015/16 the Audit Committees have overseen significant improvements in the effectiveness of our risk management and assurance processes. The development of a corporate risk appetite statement forms a key element of this. The aim is to embed integrated, proactive risk management with risks escalated in a timely way, visible and managed at the right level of the business. This development is ongoing as part of our annual risk management improvement plans.

Regular updates on risk management process and assurance are provided from the Chair of the Audit Committees to the Boards. During 2015/16 the Audit Committee has not identified nor has been advised of any failings or weaknesses which it has determined to be significant. Management has also established a Risk Committee during the year in order to further drive our focus on effective risk management.

Our principal risks capture everything we have identified that could compromise our delivery of customer services, the expected outcomes for our key stakeholders, our regulatory contract and our reputation. These principal risks, and the controls in place to mitigate them, are summarised in the table below:

Risk Analysis - Principal risks

	Principal risk	Change in year	Risk to SBOs	Treatment plans	
				Cross Business	Bespoke
1	<p>Failure to protect colleagues and the public from harm</p> <p>We play a critical role in protecting the safety, health and wellbeing of our customers, colleagues and contract partners.</p>	→		<ul style="list-style-type: none"> Forecasting and long term planning Business planning Emergency response and escalation 	<ul style="list-style-type: none"> Occupational Health and Safety Management System Health and safety improvement programme Board Safety, Health and Environment Committee (SHE)
2	<p>Failure to deliver enough clean, safe drinking water</p> <p>We supply an average of 1.3 billion litres of water to Yorkshire consumers each day. It is imperative that this remains a safe, high quality and reliable service.</p>	→		<ul style="list-style-type: none"> Regulatory monitoring and reporting Day-to-day management controls, including 24/7 Service Delivery Centre 	<ul style="list-style-type: none"> Flexible grid network Water Resources Allocation Planning (WRAP) Drinking Water Safety Planning Investment in water efficiency and leakage
3	<p>Failure to respond to external threats and opportunities</p> <p>We need to ensure we are fit for the future and able to deal with the impacts of population growth, climate change and extreme weather conditions. We also need to manage various threats (malicious or accidental) our resources, assets and infrastructure are exposed to and which could impact the provision of our essential services.</p>	↑		<ul style="list-style-type: none"> ISO certified integrated management systems Dynamic risk management culture and systems Internal audit and external assurance 	<ul style="list-style-type: none"> Long term planning, eg climate change strategy and Water Resources Management Plan Investment programmes in water efficiency, flood risk management, and energy efficiency and renewables Innovation programme preparing for future challenges Insurance Collaboration, for example with Local Resilience Forum and national security bodies
4	<p>Failure to manage waste water</p> <p>We must effectively maintain and operate our sewer network and waste water treatment works to ensure a healthy environment, avoid pollution and play our part in managing flood risk.</p>	→		<ul style="list-style-type: none"> Internal monitoring and measurement Stakeholder engagement and influencing 	<ul style="list-style-type: none"> ISO certified Water and Environmental Management Systems Investment programmes in waste water treatment, networks and bathing waters Pollution incident reduction plan
5	<p>Failure to deliver our customer promise and outcomes for stakeholders</p> <p>We know, through consultation, what our customers and key stakeholders expect of us. We must deliver our commitments to ensure our regulatory compliance, reputation and our licence to operate.</p>	→		<ul style="list-style-type: none"> Customer insight and feedback Training and development 	<ul style="list-style-type: none"> Customer and stakeholder consultation and engagement, informing our Price Review plan and local activities Transparent reporting Customer support services and investment programme
6	<p>Failure to comply with legal and regulatory requirements</p> <p>We are highly regulated and non-compliance presents the risk of fines, enforcement action, increased scrutiny and ultimately licence revocation. Currently operating within a competitive market.</p>	→		<ul style="list-style-type: none"> In-house and partner expertise and experience Maintenance and enhancement investment programmes Governance and assurance processes 	<ul style="list-style-type: none"> ISO certified integrated management systems Controls and Risk Self-Assessment process Preparing for increasing competition in the water industry
7	<p>Failure to achieve financial sustainability</p> <p>We manage a variety of financial risks that include the effects of changes to debt market prices, interest rates, revenue and competition. Predictable and transparent regulation is key to maintaining credit ratings, and attract investment. The Western economy is still recovering from economic downturn.</p>	→		<ul style="list-style-type: none"> Maintenance and enhancement investment programmes Governance and assurance processes 	<ul style="list-style-type: none"> Blueprint business plan Financial governance of all expenditure and costs, including Board Investment Committee Supporting customer affordability and managing customer debt Innovation programme preparing for future challenges
8	<p>Failure to execute and deliver strategy, systems, data and process</p> <p>We must effectively execute essential strategies, systems and processes to avoid compromising our ability to operate efficiently and effectively, including our ability to make appropriate decisions and meet targets.</p>	↑		<ul style="list-style-type: none"> Governance and assurance processes 	<ul style="list-style-type: none"> Blueprint business plan IT and data control frameworks and investment Short, medium and long term strategy and planning processes Partnership working
9	<p>Failure to protect and manage our impact on the environment</p> <p>We safely abstract and discharge to the water environment and manage substantial land holdings and emissions to the atmosphere, all aspects of our continual interaction with the natural environment.</p>	→		<ul style="list-style-type: none"> Governance and assurance processes 	<ul style="list-style-type: none"> ISO certified Environmental and Quality Management Systems Land, coast and river management programmes Investment programmes in water efficiency, waste water collection and treatment, and energy efficiency and renewables



Viability Statement

Assessment of prospects

Our business model, strategy and ongoing performance, details of which are set out on pages 6 to 58 of the ARFS, are central to an understanding of our prospects. Our core function is the provision of essential water and waste water services. As a result, it is a business that focuses on the long term which sets the strategic direction for regulated five year Asset Management Periods (AMPs) detailed within five year business plans. Our long term planning is encapsulated in “Our Blueprint for Yorkshire” which considers such factors as the predicted population growth in the region and the effects of climate change over the coming decades.

Our strategy has been in place since 2011 and is summarised through our vision, ‘Taking responsibility for the water environment for good’ and six SBOs, encompassing the economic, environmental and social ambition for the Group. The SBOs were last refreshed in 2014/15 when the Blueprint business plan for 2015 to 2020 was developed and annual targets set for each SBO through to 2020. As part of the plan agreed with Ofwat, we have 26 Performance Commitments covering specific operational measures, performance against which may result in earning a regulatory financial reward or incurring a regulatory financial penalty. Progress against these targets is monitored internally on a quarterly basis and reviewed on an annual basis with Ofwat.

The essence of the strategy is to go beyond regulatory requirements and achieve long term sustainability through a holistic and integrated approach. The strategy aims to balance the needs of various stakeholders and ultimately seeks to do what is right for customers, colleagues, partners, the environment and investors, both in the short and long term.

The Board continues to take a conservative approach to our strategy. Decisions relating to major new projects and investments are made with a low appetite to risk and with a need to address both current and future service obligation and affordability challenges.

Our prospects are assessed primarily through our strategic planning process which includes an annual review and update of the ongoing Blueprint plan, led by the Chief Executive and involving the senior management team and key functions within the business. The latest updates to the strategic plan were discussed and finalised at the March 2016 Yorkshire Water and Kelda Holdings Boards. The annual review process considers the progress against the Blueprint 2020 objectives, a review of risk and controls and financial forecasts. It is this updated plan which is used in the process of assessing both the prospects and the viability of the Group. The key assumptions in the financial forecasts include income from customers increasing at rates agreed with Ofwat at the last Price Review plus specific inflation, operating costs based on known cost movements or estimated where appropriate, whilst ensuring appropriate resources to drive delivery of the Performance Commitments, capital investment plans to deliver statutory and regulatory commitments and the review of emerging risks and uncertainties for which financial contingency may be required.

Assessment of viability

The strategic plan reflects the Directors’ best estimate of the future prospects. Whilst we have operational and investment plans that go beyond 2020, the viability statement covers the period to the end of the current AMP (31 March 2020). A thorough risk review process takes place which quantifies the impacts (e.g. financial, reputational, and service) and likelihood of strategic risks materialising and makes appropriate provision with the financial forecasts within the Blueprint plan. These principal risks are detailed further on page 56 of the ARFS and their impact and likelihood are considered within the detailed financial forecasts in the Blueprint plan.

By this means, the Directors have assessed the viability of Yorkshire Water over the remaining period of AMP6, taking account of the current position and the potential impact of each of the principal risks and

uncertainties documented in the risk section of this report. In particular, but without limitation, the Directors have focused their attention upon the key risks which included drought, severe winter, flooding, death, or serious injury, significant IT interruption and failure to deliver targets. Based on this assessment, 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 remaining period of AMP6.

The Directors have taken account of the detailed financial projections available for the period, the investment obligations, Yorkshire Water's robust solvency position, its likely ability to raise new finance in most market conditions, its key potential mitigating action of restricting dividend payments and the protections which exist under the regulatory model.

The Directors have considered the resilience of Yorkshire Water, taking account of its current position, the principal risks and uncertainties facing the business in severe but plausible scenarios, and the effectiveness of any mitigating actions. This consideration has included the impact on Yorkshire Water of the risks faced in Kelda's non-regulated businesses which are relatively small in comparison to Yorkshire Water. The assessment has considered the potential impacts of these risks and uncertainties on the solvency, liquidity, risk management and financial viability of Yorkshire Water in view of the anticipated investment programmes over the period and has taken account of identified company and industry trends. Yorkshire Water has performed a variety of stress tests including reverse stress tests. These tests enable it to model a range of external and internal events and to assess the effectiveness of mitigating actions. The reverse stress tests allow the Board to assess scenarios that would render the business model unviable, thereby identifying business vulnerabilities and enabling the development of mitigation plans.

The Directors have considered the appropriate length of time over which to provide the viability statement. In making their assessment, the Directors have taken account of the balance between timescale and robustness of analysis. The Directors consider that a three to seven year range is appropriate for a regulated entity depending upon where Yorkshire Water is within the current regulatory cycle at the point of assessment. As Yorkshire Water is currently at the end of the first year of the current regulatory cycle, a time period of four years is considered the most appropriate at the present time. This takes into account that the final determination provides clarity for this four year period and that the period is considered to be sufficiently long enough to take any remedial action necessary to resolve any potential impact on financial resilience. It is also noted that the significant regulatory changes expected at the Price Review in 2019 provide too many uncertainties to accurately forecast performance beyond 2020 at this stage.

Directors Remuneration

On behalf of the Remuneration Committee (the Committee), I am pleased to present the Directors' Remuneration Report for the year ended 31 March 2016. The Committee comprised of all of the non-executive directors and is chaired by a non-executive director, Ray O'Toole, in line with the OFWAT Principles. The terms of reference of the Committee are available on request from the Company Secretary and can be accessed on the corporate governance section of the Company's website (at <https://www.yorkshirewater.com/about-us/what-we-do/corporate-governance-and-structure>).

During the year the Committee met four times and amongst other things carried out the following activities:

- assessed the rules of the Kelda Group Long Term Incentive Plan (LTIP) established in July 2008 confirming its continued application and suitability;
- considered the terms of and agreed the award of the 2015 LTIP in accordance with the scheme rules;
- approved targets for the 2015/16 annual incentive plan;
- assessed the achievement of targets for the 2015/16 annual incentive plan;
- amended the 2013 and 2014 LTIP performance conditions in accordance with the scheme rules; and
- agreed the vesting of the 2012 LTIP award at 75%.

The salaries for managers on average increased by 1.73% with effect from 1 April 2015 compared to a general increase of salaries in the Company of 2.29%. The basic salary of the Chief Executive increased by 3.2% from £387,600 to £400,000 and the salary of the Group Director of Finance, Regulation and Markets rose by 1% from £276,019 to £278,779.

Annual bonuses are based on the achievements of targets measured across the Company's SBOs as described in the body of this report. Bonus payments of 60% for the Chief Executive and 60.5% for the Group Director of Finance, Regulation and Markets were awarded for 2015/16 (the maximum being 100% of salary) reflecting the overall performance achieved by the Company.

The Chief Executive and the Director of Finance, Regulation and Markets were executive directors of Kelda Holdings Limited during 2015/16 and their remuneration is shown in full however they carry out other Group responsibilities and an appropriate portion of their remuneration is recharged out of the regulated business. Details of the salary increases and bonuses for the rest of the Board are set out in detail.

The LTIP awarded in April 2012 was due to vest in this financial year subject to achievement of the Performance Conditions for that award. The 2012 LTIP vested at 75% based on achievement of the Performance Conditions of Service Incentive Mechanism (SIM), Cash available for distributions and Serviceability.

The LTIP awarded in April 2013 is due to vest in 2016. Based on achievement of Performance Conditions of Service Incentive Mechanism (SIM), Cash available for distributions and Serviceability, the vesting of the 2013 LTIP scheme at 50% was determined by the committee on 28 June 2016.

Ray O' Toole
Chair of the Remuneration Committee

Introduction

During the year ended 31 March 2016 the Committee comprised of the Chairman of the Company and four independent non-executive directors. Richard Flint, Chief Executive and Chantal Forrest, Company Secretary attended all meetings. Pamela Doherty, previous Director of Human Resources and Health & Safety attended one out of a possible two meetings during the financial year and Shauna Purdey, current HR Director attended 2 out of a possible 2 meetings during the financial year. Pamela Doherty and Shauna Purdey acted as advisers to the Committee during their attendance. Liz Barber, Director of Finance, Regulation and Markets attended by invitation. During the year ended 31 March 2016 the Committee was chaired by Ray O' Toole, one of the non-executive directors.

The table below shows the number of meetings of the Committee attended by each director out of possible attendances.

The table below shows the number of meetings of the Committee attended by each Group director out of possible attendances.

	Rem Com
Richard Parry - Jones	4/4
Ray O' Toole	4/4
Anthony Rabin	3/4
Kath Pinnock	4/4
Martin Havenhand	3/4
Richard Flint	-

For guidance in recommending remuneration packages, the Committee used internal research, to support the objective of ensuring competitive and sustainable remuneration.

In 2015/16, New Bridge Street were not required to attend the Committee. However they provided remuneration benchmark data to assist management in considering salary levels of the executives and senior management. In 2015/16 they were paid a fee of £4,200. The Company did not use New Bridge Street Consultants in any other capacity.

The Committee determined the remuneration and conditions of employment of the executive directors and the next most senior category of executives. It also operated the Company's long term incentive plan. In determining the remuneration of executive directors and other senior executives, the Committee also takes into account the level of remuneration and pay awards made generally to employees of the Company. The design of performance-related remuneration for executive directors and other senior management of the Company took into account the provisions of Schedule D of the UK Corporate Governance Code.

The Company's remuneration policy is set out in detail below. The Company's policy is to establish remuneration packages which enable the Company to attract, retain and motivate people with the skills and experience necessary to lead and manage a business of the Company's size and complexity. Remuneration packages should be aligned with the interests of the Company's stakeholders, in particular its shareholders and customers.

In recommending remuneration packages, the Committee followed the principle of recognition of the individual's contribution to the business. The Company intends that remuneration packages continue to be developed to enable executive directors to receive remuneration which is positioned in the upper quartile of the market for upper quartile performance, compared to relevant market and industry comparators and taking into account

individual performance, responsibilities and experience. Accordingly, a significant proportion of directors' remuneration is performance related through annual and long term incentive plan awards. Further details of the proportions are included in the sections below and in the directors' emoluments table on page 74. The design of the total remuneration package is intended to achieve a weighting of each component to ensure that above average remuneration is available through performance related elements rather than base salary.

The Company treats remuneration strategy and its people resource as key components in delivering its vision to the shareholders of Kelda and to its customers. At the same time, the Company recognises fully the sensitivities of such matters and the need for due care and attention to be taken when considering such issues.

Statement of Remuneration Policy

Remuneration Policy in 2016/17

The overall remuneration policy for executives remains unchanged for 2016/17. The structure of the annual incentive scheme is unchanged. However, clear targets have been determined based on the approved 5 year business plan which takes effect from 2015/16 and these will be material in determining actual performance and therefore any bonus payable.

The relevant measures and targets for the long term incentive scheme for 2016 have been determined.

The LTIP scheme continues to consider three performance conditions, Service Incentive Mechanism (SIM), Serviceability and Cash Available for Distributions. The SIM performance condition is based on actual performance against business plan with a further incentive to be the leader in SIM when compared to other water and sewerage companies. The performance conditions are set out below on pages 68 to 69.

During the year the Committee determined all aspects of remuneration for executive directors. In addition, the Committee retained discretion over the application of performance related pay policy.

The policy for determining the remuneration package for a new executive director is detailed below:

- basic pay will be determined to a maximum of the median market salary 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, e.g. following up to 12 months in the role;
- the annual incentive and LTIP schemes will be applied subject to approval of the committee; and
- all other benefits will apply in accordance with the contractual and non-contractual terms of the role.

The current remuneration package for directors and other senior executives comprises the elements set out in the table below which also sets out how the policy on the package is currently proposed to be implemented in the future.

Board executive directors

Component of remuneration	Purpose	Operation	Potential	Change of policy compared to 2015/16
Base salary	To provide competitive pay to enable attraction and retention. Overall remuneration is heavily performance related so 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.	Any increases are determined by the Remuneration Committee.	No changes to policy.
Annual incentive	To drive the delivery of in year targets. Targets link to a breadth of long term business priorities. Ensure a balanced approach rewarding 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 or misconduct.	Maximum of 100% of base salary. Incentive payments are non-pensionable.	No changes to policy. All measures and targets are agreed at the start of the year.
Long term incentive	To ensure focus on the long term sustainability of the business for customers and shareholders. A significant element of the overall remuneration package and incentivises outperformance of targets.	A three year scheme awarded on 1 April each year and based on three performance conditions – SIM, Serviceability and Cash Available for Distributions. The range of measures ensures Executives are focused on customer service, managing assets responsibly and providing appropriate returns to shareholders.	Maximum award is equal to 200% of base salary. Award vests following the three year period subject to performance conditions. Incentive payments are non-pensionable.	No changes to policy.
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 which reduced member benefits and introduced higher member contributions. A stakeholder scheme is available for all new colleagues including Executives.	Choice of a company contribution into the defined contribution stakeholder scheme of a maximum of 30% or a cash allowance of up to 25% or a combination of both of the above approaches providing this is cost neutral to the company.	No changes to policy.
Other benefits	To provide market competitive benefits.	Private healthcare provision for self and spouse. Company lease car (4 years) or cash allowance is provided. Private fuel provision is optional.	Healthcare is based on self and spouse cover. The car benefit is based on individual circumstances.	No changes to policy.

Other senior executives

Component of remuneration	Purpose	Operation	Potential	Change of policy compared to 2015/16
Base salary	To provide competitive pay to enable attraction and retention. Overall remuneration is heavily performance related so 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.	Any increases are determined by the Remuneration Committee.	No changes to policy.
Annual incentive	To drive the delivery of in year targets. Targets link to a breadth of long term business priorities. Ensure a balanced approach rewarding 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 or misconduct.	Maximum of 70% of base salary. Incentive payments are non-pensionable.	No changes to policy. All measures and targets are agreed at the start of the year.
Long term incentive	To ensure focus on the long term sustainability of the business for customers and shareholders. A significant element of the overall remuneration package and incentivises outperformance of targets.	A three year scheme awarded on 1 April each year and based on three performance conditions – SIM, Serviceability and Cash Available for Distributions. The range of measures ensure Executives are focused on customer service, managing assets responsibly and providing appropriate returns to shareholders.	Maximum award is equal to 150% of base salary. Award vests following the three year period subject to performance conditions. Incentive payments are non-pensionable.	No changes to policy.
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 which reduced member benefits and introduced higher member contributions. A stakeholder scheme is available for all new colleagues including Executives.	Choice of a company contribution into the defined contribution stakeholder scheme of a maximum of 24% or a cash allowance of up to 20% or a combination of both of the above approaches providing this is cost neutral to the company.	No changes to policy.
Other benefits	To provide market competitive benefits.	Private healthcare provision for self and spouse. Company lease car (4 years) or cash allowance is provided. Private fuel provision is optional.	Healthcare is based on self and spouse cover. The car benefit is subject to a maximum of lease costs of £5,904 pa (reduced from £6,780 due to a move from 3 year to 4 year lease) or cash allowance of £7,500 pa.	No changes to policy.

Independent non-executive directors (INEDs)

Component of remuneration	Purpose	Operation	Potential	Change of policy compared to 2015/16
Fee	To provide competitive pay to enable attraction and retention.	Reviewed when required subject to market trends.	<p>Fee for Chairman was £275,000 pa.</p> <p>Current fee for INEDs is £30,000 pa.</p> <p>Any increases are determined by the Remuneration Committee.</p>	No changes to policy.

Annual salary and benefits

The base salary is a fixed figure and does not vary in relation to business or individual performance. The annual salary for each executive director is reviewed each year. The review takes into account relevant market comparators and the individual responsibilities and experience of each director. Benefits in kind include a car and health insurance. Base salary is pensionable.

It is the intention of the Committee to hold basic pay at market median across the sector. A significant proportion of total remuneration is performance related to incentivise upper quartile performance.

Annual incentive plan

Under the annual incentive plan, each director has the opportunity to earn an annual incentive award based on a percentage of their salary. Awards are entirely performance related as described below.

During the 2015/16 financial year, the Chief Executive and the Director of Finance, Regulation and Markets had the opportunity to earn an annual incentive award of up to 100% of their salary representing their Group roles. Each other executive director on the Board had the opportunity to earn an annual incentive award of up to 70% of their salary. Any bonus payment is made in June based on performance in the year ending on the preceding 31 March.

Incentive payments at the higher end of the range are payable only for demonstrably superior company and individual performance. Annual incentive payments are not pensionable.

In April 2015 the Company Committee reviewed the annual incentive scheme measures to ensure alignment with the 5 year business plan 2015-2020. The use of discretion was also clarified. Under this plan the annual incentive award is calculated as a percentage of basic salary as at 31 March as follows:

- 50% of the total maximum annual bonus payable was dependent upon delivery of agreed personal / individual objectives set at the start of the financial year;

- 50% of the total maximum annual bonus payable was dependent upon delivery of agreed corporate objectives which supported the Company's strategic business objectives. The same corporate objectives were shared by all directors. For the financial year 2015/16 these are set out in the table below with the percentage payable.

Strategic Theme	Measure	% of corporate bonus awarded (% of overall bonus)
Strong financial foundations	<ol style="list-style-type: none"> 1. EBITDA (Kelda) 2. EBITDA (YW) 3. Capital Expenditure 4. ODI Net Penalty/Reward 	40% (20% of max)
Trusted company	<ol style="list-style-type: none"> 1. SIM qualitative (out of 5) 2. SIM quantitative (score) 3. Kelda Media score (score) 4. Employee trust score 	12% (6% of max)
Water efficient regions	<ol style="list-style-type: none"> 1. Water Supply Interruptions 2. Leakage rolling average MI/d 3. Demand MI/d 	12% (6% of max)
Safe water	<ol style="list-style-type: none"> 1. Mean zonal compliance* 2. Lost Time Injury Incident Rate (Kelda) 3. Lost Time Injury Incident Rate (YW) 4. Internal Flooding 	12% (6% of max)
Excellent catchments, rivers and coasts	<ol style="list-style-type: none"> 1. Category 1 & 2 pollution incidents* 2. Category 3 pollution incidents* 3. No of WWTW's failing numeric consent * 	12% (6% of max)
Sustainable resources	<ol style="list-style-type: none"> 1. Renewable energy generation GWh 2. GHG emissions tCO2e 	12% (6% of max)

Annual incentive scheme targets and actual performance 2015/16

Theme	Measure	Bus Plan 15/16	Actual 15/16	% of bonus to be paid (max)
Strong financial foundations	1. EBITDA (Kelda)	£594.3m	£585.5m	20% (40%)
	2. EBITDA (YW)	£568.6m	£564.9m	
	3. Capital Expenditure	£349.1m	£251.9m	
	4. ODI Net Penalty/Reward	Zero	Zero	
Trusted company	1. SIM qualitative (out of 5)	4.44	4.39	10% (12%)
	2. SIM quantitative (score)	118.8	119.9	
	3. Kelda Media score (score)	10.0	12.0	
	4. Employee trust score	7.0	6.9	
Water efficient regions	1. Water Supply Interruptions	13.63 mins	12.13 mins	10% (12%)
	2. Leakage rolling average MI/d	297.1	289.3	
	3. Demand MI/d	1,255	1,255	
Safe water	1. Mean zonal compliance*	99.960	99.954	0% (12%)
	2. Lost Time Injury Incident Rate (Kelda)	8.0	10.7	
	3. Lost Time Injury Incident Rate (YW)	8.4	12.8	
	4. Internal Flooding	1,877	1,812	
Excellent catchments, rivers and coasts	1. Category 1 & 2 pollution incidents*	8	6	6% (12%)
	2. Category 3 pollution incidents*	237	189	
	3. No of WWTW's failing numeric consent *	0	2	
Sustainable resources	1. Renewable energy generation GWh	75.6	65.5	10% (12%)
	2. GHG emissions tCO2e	356,000	347,000	
TOTAL				56%
* Calendar year measures	46 % of corporate bonus to be paid At the committee's discretion, as per the scheme rules, a further 10% reduction was applied for safety performance during 2015/16. The above targets and actuals relate to the reporting criteria of the year 2015/16. There will be differences between the audited actuals and those stated above due to changes in accounting standards or revised regulatory reporting requirements.			

Considering the actual Company performance as detailed (which makes up 50% of the total annual incentive), and following a review of the delivery of individual objectives and contribution, the following total awards for 2015/16 were determined by the Committee.

	Max. Bonus	Bonus for 2015/16	Bonus for 2015/16
	%	%	£
Liz Barber	100	60.5	£168,661
Richard Flint	100	60.0	£240,000
Charlie Haysom	70	35.35	£56,527
Nevil Muncaster	70	37.1	£59,535

These payments were approved by the Committee on 23 March 2016 and were paid in June 2016.

Richard Flint and Liz Barber were executive directors of Kelda Holdings Limited during 2015/16. 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.

The annual incentive scheme policy is unchanged for 2015/16. A range of performance measures and targets have been agreed at the start of the year across all strategic business objectives. The measures and targets for the Company element of the annual incentive scheme are detailed in the table below.

Annual incentive scheme targets for 2016/17

* Media score is under review and may change in year

Theme	Measure	Bus Plan to 31/03/17	% of corporate bonus awarded (% of overall bonus)
Strong financial foundations	<ol style="list-style-type: none"> EBITDA (Kelda) EBITDA (YW) Capital Expenditure ODI Net Penalty/Reward 	** ** ** Zero	40% (20% of max)
Trusted company	<ol style="list-style-type: none"> SIM qualitative (out of 5) SIM quantitative (score) Kelda Media score (score) Employee trust score 	4.44 110.8 * 7.0	12% (6% of max)
Water efficient regions	<ol style="list-style-type: none"> Water Supply Interruptions Leakage rolling average MI/d Demand MI/d 	12.81 mins 297.1 1,255	12% (6% of max)
Safe water	<ol style="list-style-type: none"> Mean zonal compliance* Lost Time Injury Incident Rate (Kelda) Lost Time Injury Incident Rate (YW) Internal Flooding 	99.960 7.1 7.9 1,898	12% (6% of max)
Excellent catchments, rivers and coasts	<ol style="list-style-type: none"> Category 1 & 2 pollution incidents* Category 3 pollution incidents* No of WWTW's failing numeric consent * 	6 224 0	12% (6% of max)
Sustainable resources	<ol style="list-style-type: none"> Renewable energy generation GWh GHG emissions tCO₂e 	74.97 342,000	12% (6% of max)

** Not disclosed on the basis of commercial and regulatory sensitivity

Long term incentive plan (LTIP)

Under the plan, executive directors may receive, at the discretion of the Remuneration Committee, a conditional monetary award. The plan provides for a cash award based on a percentage of salary. For the Chief Executive and the Director of Finance, Regulation and Markets this is a value of up to 200% of base salary. For each other executive director on the Board this is a value of up to 150% of base salary.

The proportion of the award to be vested for the participants after a period of three years will depend upon the Company's performance during the three year period against a predetermined set of performance conditions as described below.

The performance conditions as set are considered by the Remuneration Committee to be the most appropriate measure by which the interests of the executives can be aligned and balanced with those of the shareholders, the Company and its customers.

No award will vest unless the Committee is satisfied that Kelda's underlying financial performance has been satisfactory over the performance period, taking into account the Company's circumstances, including the regulatory regime in place over the period. The Committee can scale back vesting to any extent considered appropriate in the light of the Company's financial performance.

The rules of the plan provide for early vesting of awards in cessation of employment in certain circumstances, such as death, disability, redundancy, retirement and business transfer. Early vesting is subject to the same performance conditions as apply to vesting at the end of a three year performance period. On early vesting, the amount vested is reduced pro-rata to the number of days of the performance period in which the director was in office.

No benefits under the plan are pensionable.

A summary of the LTIP performance conditions and relative values for the 2015 Award is detailed in the table below followed by a more detailed description of each performance condition.

Performance condition	Description	Overall weighting
Step 1 – Ofwat comparative measure (SIM)	Performance in customer service is used as a gateway.	Gateway (go / no go depending on performance)
Step 2 – Cash available for distributions	On target performance equals 70% of award. Incentivises outperformance. 90% of CAFD must be achieved to vest LTIP.	Range – 0% to 100% subject to step 1 above.
Step 3 - Serviceability	Potential for reduced LTIP award if not stable or improving on each asset group.	Range – 0% to 100% subject to steps 1 and 2 above.
Step 4 – SIM bonus	Further 10% of LTIP award available if ranked 1 st in SIM.	Range – value of award achieved at step 3 x 110%.

Step 1 - Ofwat Performance Condition

The SIM Performance Condition is met only if the Company SIM performance for 2018/19 is at or above 86 points. If SIM Performance is below 85 points in 2018/19 then the SIM Performance Condition shall not be met and the 2015 Award shall not vest. If SIM performance is 86 points or higher, the Award shall vest in accordance with the following table.

Performance in 2018/19	Vesting
Less than 86 points	Gateway is closed; therefore the LTIP will not vest.
86 points and less than 87 points	Gateway is open, but overall vesting is capped to maximum of 50% of award once the calculation of performance conditions have been carried out
87 points and less than 89 points	Gateway is open, but overall vesting is capped to maximum of 75% of award once the calculation of all performance conditions have been carried out
89 points or higher	Gateway is open and the LTIP will vest in accordance with the remaining performance conditions. No cap will be applied.

The table above is based on the Yorkshire Water SIM Business Plan target of 87 points in 2018/19.

Step 2 - Cashflow Performance Condition

Following the end of the three year performance period, the Committee is to determine the Cashflow Measure. The Cashflow Performance Condition is that, subject to the Serviceability Performance Condition set out in step 3 below, a percentage for vesting of the 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 below 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%

The targets for this Condition are not disclosed on the basis of commercial sensitivity.

Step 3 – Stability and Reliability Performance Condition

The Stability and Reliability Performance Condition is that 25% of the percentage determined under Step 2 shall vest in respect of the awards for each Ofwat serviceability measure as assessed in the Ofwat Report (or where replaced by such regulatory self reporting procedures as assessed by those regulatory self reporting procedures for performance in the financial year 2014/15 for the 2012 award, 2015/16 for the 2013 award, 2016/17 for the 2014 award, 2017/18 for the 2015 award and 2018/19 for the 2016 award) as “stable” or “improving”.

Step 4 – SIM Bonus

In the event that the Ofwat Ranking of Yorkshire Water 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 2018/19) then a further 10% will be added to the amount to vest in respect of the 2016 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 Yorkshire Water 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 2018/19) then no SIM bonus will be paid and the amount to vest would be as derived after step 3.

The vesting of the 2013 LTIP scheme was determined by the Committee on 28 June 2016 as follows.

2013 LTIP	Performance conditions	Date of award	End of performance period	Measure achieved	Base value of award	Value of award vested
Richard Flint	See above	25 April 2013	31 March 2016	SIM – achieved 82.5 points.	£760,000	£380,000
Liz Barber	See above	25 April 2013	31 March 2016	Cash Available for Distribution – achieved 101.3% of target.	£541,214	£270,607
Charlie Haysom	See above	25 April 2013	31 March 2016		£225,000	£112,500
Nevil Muncaster	See above	Not eligible	Not eligible	Serviceability – achieved Stable in each of the four asset groups. Overall vesting of 50%.	Not eligible	Not eligible

Total remuneration

A summary of executive directors' remuneration elements as a percentage of salary is detailed in the table below

Chief Executive and Group Finance and Regulation Director

Component of remuneration	2015/16		2016/17	
	Value (% of salary)		Value (% of salary)	
	On target	Maximum	On target	Maximum
Base salary		100%		100%
Annual incentive	85%	100%	85%	100%
Long term incentive	140%	200%	140%	200%
Pension*		14.6%		14.6%
Total remuneration as % of salary	339.6%	414.6%	339.6%	414.6%
Variable pay (bonus and LTIP as a % of total)	66%	72%	66%	72%
Long term pay (LTIP and pension as a % of total)	46%	52%	46%	52%

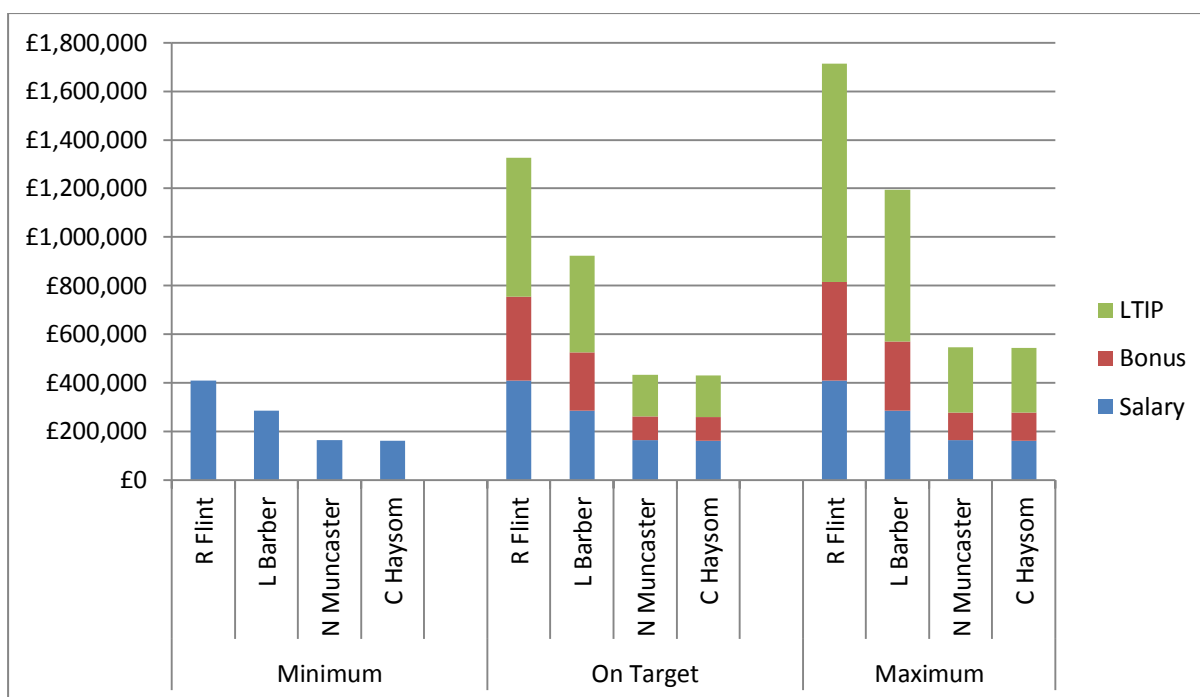
* Pension scheme categories - KGPP employer contribution 14.6% / stakeholder employer contribution 30% or cash alternative 25%.

Other executive directors

Component of remuneration	2015/16		2016/17	
	Value (% of salary)		Value (% of salary)	
	On target	Maximum	On target	Maximum
Base salary		100%		100%
Annual incentive	60%	70%	60%	70%
Long term incentive	105%	150%	105%	150%
Pension*		14.6%		14.6%
Total remuneration as % of salary	279.6%	334.6%	279.6%	334.6%
Variable pay (bonus and LTIP as a % of total)	59%	66%	59%	66%
Long term pay (LTIP and pension as a % of total)	43%	49%	43%	49%

*Pension scheme categories - KGPP employer contribution 14.6% / stakeholder employer contribution 30% or cash alternative 25%.

For the executive directors only the bar charts below provide an indication of the level of remuneration that would be received by the director in accordance with the directors' remuneration policy in the year 2016/17 on the basis of performance levels that achieve fixed pay only, on-target reward and maximum reward. The percentages for on target and maximum reward are set out in the tables above.



A significant proportion of executive remuneration is performance related and therefore “at risk”. All colleagues in the Company participate in a performance related pay scheme, the quantum of which is appropriate for the level of role and ability to influence company performance.

Senior managers (44 colleagues 1st April 2016) participate in the LTIP. All managers participate in an annual incentive scheme with potential bonuses of up to 10, 15 or 30% of salary depending on seniority. All other colleagues participate in a quarterly bonus scheme, with payments which vary depending on company performance in that quarter.

Pension Scheme eligibility is consistent for all colleagues. The defined benefit scheme (KGPP) is now closed to new members. All new colleagues have the option (subject to auto-enrolment provisions) to join the Company’s stakeholder scheme which is a defined contribution scheme.

Non-executive directors

The Chairman of the Board and the other non-executives are paid an annual fee in respect of their roles on the Board of Kelda Holdings Limited and any other Group companies where applicable. The fees are set out in the table of directors emoluments. Richard Parry-Jones was appointed as a non-executive director from 1 January 2015 to 31 May 2016 as Chair of the Company, and the Kelda Group, from 25 March 2015 until 31 May 2016. His annual fee for services to the Group was £275,000.

The non-executive directors do not participate in the annual incentive scheme, the LTIP or Group pension plan.

The non-executive directors do not participate in the annual incentive scheme, the LTIP or Group pension plan.

Service contracts

The Company's policy on the duration of contracts with executive directors 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. The notice periods have been selected to be consistent with current corporate governance best practice. Termination payments are made in accordance with the terms of the contract. Service contracts do not generally contain payment in lieu of notice clauses, and terminate automatically on retirement.

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 further two year periods subject to a total period of nine years' service with the Company.

The executive directors entered into service agreements with the Company on the dates set out in the table below. The contracts are not of fixed duration and each provide for notice periods of twelve months by the Company and six months by the director. The agreements do not contain any specific provision for compensation payable on early termination, and any termination payment would be calculated to take account of the contractual notice period and any annual incentive payment which would have been paid, subject to the achievement of performance objectives, and taking into account the period actually worked.

Executive Directors

Richard Flint	11 November 2009
Liz Barber	30 April 2010
Charlie Haysom	1 April 2011
Nevil Muncaster	13 March 2013

Non-Executive Directors

Richard Parry-Jones	1 January 2015
Martin Havenhand	1 October 2007
Ray O'Toole	27 June 2014
Kath Pinnock	1 February 2008
Anthony Rabin	1 August 2013

The appointments of the non-executive directors originally took effect from the dates set out above for a period of two years in each case, subject to renewal.

At its meeting on 27 January 2016, following a recommendation made the Nomination Committee the Board resolved that Anthony Rabin's term of appointment be extended for a further two year period to 31 July 2017 and that Kath Pinnock's term of appointment be extended for a one year period to 28 February 2017. Martin Havenhand's term of appointment expires on 30 September 2016. Recruitment will take place for two new independent non-executive directors.

The terms of appointment do not contain any provisions for notice periods or for compensation in the event of early termination.

Table of Directors' emoluments

Set out below is the amount earned by the directors in the year ended 31 March 2016 for their duties to the Company and any related party.

	Salary/ fees for the year ended 31 March 2016 £000	Taxable benefits for the year ended 31 March 2016 (see note 1) £000	Annual bonus for the year ended 31 March 2016 (see note 2) £000	LTIP for 3 year period ending 31 March 2016 (see note 3) £000	Total emoluments for the year ended 31 March 2016 £000	Total emoluments for the year ended 31 March 2015	Pension Related benefits for the year ended 31 March 2016 (See Note 4 and separate table below) £000	Total emoluments and pension related benefits for the year ended 31 March 2016 £000
Executive directors								
Richard Flint	400	12	240	380	1,032	1,291	199	1231
Liz Barber	279	10	169	270	728	917	74	802
Charlie Haysom	157	14	57	112	340	412	39	379
Nevil Muncaster	160	21	60	-	241	272	38	279
Non-executive directors								
Richard Parry-Jones	275	-	-	-	275	69	-	275
Martin Havenhand	30	-	-	-	30	30	-	30
Kath Pinnock	30	-	-	-	30	30	-	30
Ray O'Toole	30	-	-	-	30	23	-	30
Anthony Rabin	81	-	-	-	81	81	-	81
Total	1,442	57	526	762	2,787	3,125	350	3,137

Note 1 the benefits included in this column relate to the provision of a car or cash equivalent, car fuel or cash equivalent, healthcare.

Note 2 the annual bonus is for achievements in 2015/16 and this will be paid in 2016/17.

Note 3 The LTIP award is for the 3 year period to 31 March 2016 and this will be paid in 2016/17.

Note 4 The pensions figure for KGPP members for 2015/16 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 2015/16 is calculated as the contributions made on their behalf by the Company.

Richard Flint, Liz Barber, Richard Parry-Jones and Anthony Rabin were also directors of Kelda Holdings Limited during 2015/16. Their emoluments are shown here in full. However the proportion of their time spent on activity other than for Yorkshire Water is recharged to the relevant Group company.

Pension's information in respect of the Kelda Group Pension Plan

Richard Flint	Membership of the Kelda Group Pension Plan and unregistered arrangement, giving (from April 2013) pension of 1/40 th of pensionable pay for each year plus additional lump sum based on 3/40 th of Pensionable Pay for each year. 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. Currently total pension is £122,329 p.a. plus additional lump sum of £87,713.
Charlie Haysom	Membership of the Kelda Group Pension Plan, giving (from April 2013) pension of 1/77 th of pensionable pay for each year plus additional lump sum based on 3/77 th of pensionable pay for each year. 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. Currently total pension is £86,073 p.a. plus additional lump sum of £18,152.

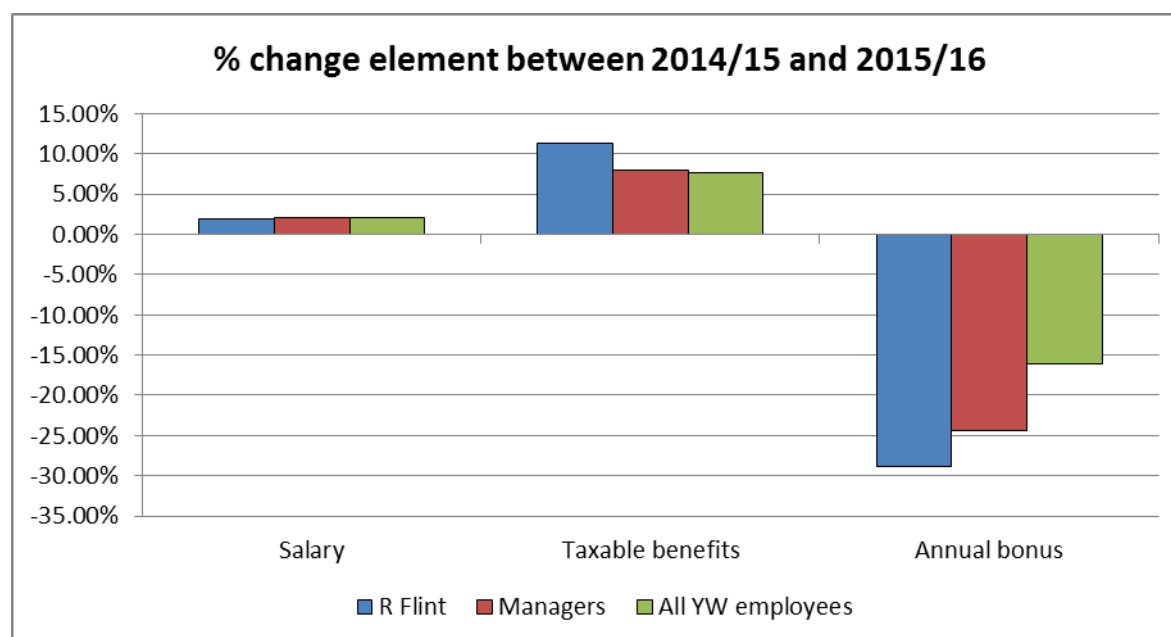
	Value of all pension related benefits accrued					
	31 March 2016	31 March 2015	31 March 2014	31 March 2013	31 March 2012	31 March 2011
Director undertaking role of Chief Executive*	£199,126	£184,025	£165,700	£197,909	£186,253	£322,837

*The value of all pension-related benefits for Richard Flint for the later six years are shown above. The figures shown are net of contributions paid by the Chief Executive, which were 6% p.a. of pensionable pay before the benefit changes which came into effect 1 April 2013 and 8.5% p.a. thereafter. These contributions were made by salary sacrifice.

Liz Barber and Nevil Muncaster are members of the Kelda Stakeholder+ arrangement (Defined Contribution) scheme.

The table and chart below show the percentage change in salary, benefits and annual bonus earned between the year ended 31 March 2015 and the year ended 31 March 2016 for the Chief Executive compared to the average company manager and employee for each year.

	% change in element between 2014/15 and 2015/16		
	Salary	Taxable benefits	Annual bonus
R Flint	2.00%	11.38%	(28.83%)
Managers	2.03%	8.03%	(24.33%)
All YW employees	2.06%	7.73%	(16.16%)



Details for managers and all Yorkshire Water employees include employees who were employed at both 31 March 2015 and 31 March 2016 and are based on their salary at those two points.

Annual bonus relates to the bonus paid in that year. For managers, this bonus relates to the previous financial year but paid in June of the next financial year. For all other employees, this bonus relates to the payments received in the current financial year.

In respect of the year ending 31 March 2016 and the preceding financial year the table below shows the actual expenditure of the Company, and the difference in spend between those years, on:

- (a) remuneration paid to or receivable by all employees of the Company; and
- (b) distributions both to shareholders by way of dividend and to repay interest and loans to the Company.

	2015/16 £m	2014/15 £m
Total spend on remuneration for all Yorkshire Water employees:	118.8	107.0
Wages and salaries	78.6	75.5
Social security costs	7.4	7.2
Other pension costs	32.8	24.3
Total distributions made	90.9	93.6
Distributions made to allow Kelda Holdco Limited to repay interest and loans to Yorkshire Water	70.7	70.9
Other distributions	20.2	22.7

Remuneration excludes costs which are capitalised.

External appointments

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.

Dividend policy

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-appointed business reflecting the profitability of those activities; and 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.

£90.9m of distributions have been made to the parent company during the period (2015: £93.6m), of which £70.7m (2015: £70.9m) was distributed to Kelda Eurobond Co Ltd in order to allow Kelda Eurobond Co Ltd to make an interest payment and loan repayment on their loan from Yorkshire Water. Net distributions made to fund group costs were £20.2m (2015: £22.7m). No distributions have been made to the ultimate shareholders of the Kelda group from Yorkshire Water.

The directors consider that the dividends paid in the year are in accordance with these principles.

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.

Accounting Policies

Price Control segments

Ofwat have implemented four price controls, there are one each for retail water and sewerage services to household and non-household customers, one for wholesale water services and one for wholesale sewerage services. Using targeted price controls allows all stakeholders to understand the costs of the company by activity.

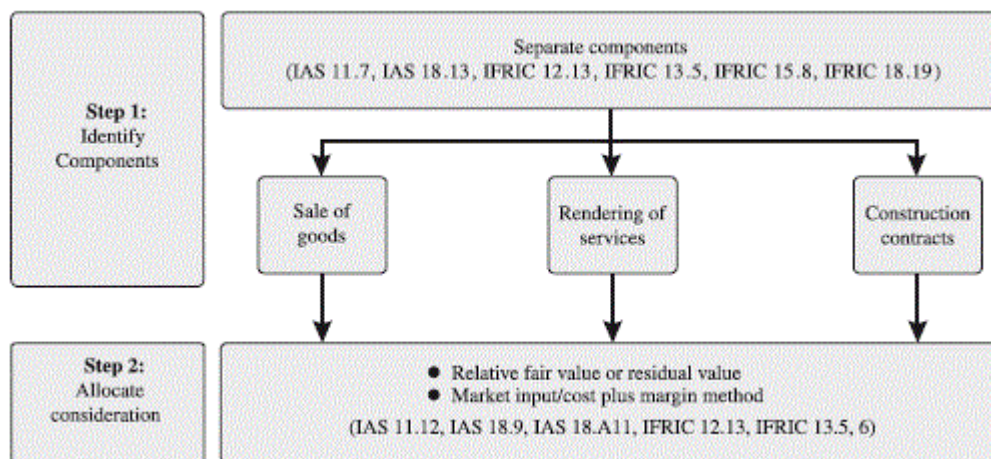
Yorkshire Water applies the regulatory accounting guidelines, as stated in the methodology statement, to ensure the costs that are reported by the price control segments are consistent, non-discrimination and transparent.

Evidenced in the governance section of this report Yorkshire Water applies various levels of segregation of duties to ensure the relevant level of objectivity is applied.

Revenue Recognition

Revenue is the gross inflow of economic benefits during the period arising in the course of the ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants.

The general steps involved in the recognition of revenue are illustrated in the diagram below (also applicable under FRS 102):



There is no difference between statutory and regulatory policy on revenue recognition. There is no turnover recognition for unoccupied properties.

Supply of water and sewage

The Group considers revenue to comprise charges to customers for water, waste water and environmental services, excluding value added tax. Revenue excludes inter-company sales.

Revenue is not recognised until the service has been provided to the customer. Revenue relates to charges due in the year, excluding any amounts paid in advance. Revenue for measured water charges includes amounts billed plus an estimation of the amounts unbilled at the year end. The accrual is estimated using a defined methodology based upon daily average water consumption, which is calculated based upon historical billing information.

The measured income accrual is an estimation of the amount of mains water and wastewater charges unbilled at the year end. The accrual is estimated using a defined methodology based upon weighted average water consumption by tariff, which is calculated based upon historical information. The measured income accrual is recognised within turnover.

Measured income of £490.2m (2015: £530.4m) has been billed (in arrears) to customers in the year. The measured income accrual of £59.4m (2015: £58.7m) is an estimation of the amount of water and waste water charges un-billed at the year end as described above. The accrual calculation is generated by system 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. For 2015/2016 these adjustments resulted in a reduction from the measured system accrual report by 2.52%. For 2014/15 these adjustments accounted for 2.94%. 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 2014/15 the review indicated an underestimation of the measured accrual of £0.8m (2013/14 £2.8m). A consistent approach has been taken in this area. Under accruals for the last two years has been less than c0.4% of the annual income in this area giving comfort over the accuracy of the approach.

Where an invoice has been raised in advance this bill value is not recognised until it is due. If a customer payment is made but the service has not been provided in the year this will be treated as a payment in advance and recognised in creditors.

Charges on income arising from court and solicitors' fees are credited to operating costs and added to the relevant customer account. They are not recognised within turnover.

It is company policy to regularly comment on revenue movements through the financial and operating reporting processes.

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:

Charges which are payable in full;
Charges which are payable in part; and
Not chargeable (void properties).

The circumstances in which each of the above applies are set out below.

Charges payable in full:

Charges are payable in full in the following circumstances:

Occupied and benefiting from supply; and
Unoccupied and benefiting from supply, these include properties where significant renovation, redecoration or building work is being undertaken and where there is any known regular use of water.

Exceptions to this, where water and sewerage charges are not payable, include 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.

Charges payable in part:

The following charges only are payable in certain circumstances:

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; and
Surface water and highway drainage, payable on occupied properties where the water supply is disconnected.

Not chargeable:

Properties which are unoccupied, not benefiting from supply or disconnected are not chargeable for water and sewerage therefore no billing is raised and no turnover recognised in respect of these properties.

Occupied properties

The occupier is any person who owns a premises or who has agreed with us 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.

The property management process may comprise customer contacts, mailings, meter readings, residency checks using credit reference agencies and physical inspections.

Yorkshire Water adopts a risk based approach to its voids in order to get right balance between early pro-active work on high risk areas.

Unoccupied properties

A property is deemed to be unoccupied when the Company has completed the property management process and not identified the property as occupied. 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; and
- the company has been informed that the customer is in a care home, long-term hospitalisation, prison or overseas long-term.

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.

Capitalisation Policy

Property, plant and equipment comprises infrastructure assets, residential properties, non-specialised properties and rural estates, buildings, fixed plant, vehicles, mobile plant and computer equipment. Depreciation is charged so as to write off the cost, less estimated residual value, over their estimated useful lives, using the straight-line method, for the following class of assets:

Land & Buildings

Buildings	25 to 100 years
Residential properties, non-specialised properties	60 years

Infrastructure assets

Water mains and sewers	30 to 125 years
Earth banked dams and reservoirs	200 years

Non-infrastructure assets

Fixed plant	5 to 40 years
Mobile plant	3 to 10 years
Vehicles	3 to 10 years
Computer equipment	3 to 10 years

The estimated useful lives of property, plant and equipment and their residual values are reviewed on an annual basis and, if necessary, changes in useful lives are accounted for prospectively. The gain or loss arising on the disposal or retirement of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in the Income Statement for the relevant period.

Initial Recognition

An item of property, plant and equipment is recognised only if:

It is probable that future economic benefits associated with the item will flow to the entity;

The asset's cost can be measured reliably;

The asset has a useful life greater than 1 year.

An item of property, plant and equipment is initially recognised at cost.

There have been no changes to the capitalisation policy, judgements or apportionments since the prior year (2014/15).

Cost of purchased or self-constructed assets

- the cost of a purchased item includes the purchase price of the asset plus any directly attributable costs incurred in bringing the asset to the location and condition needed for its intended use.
- the cost of self-constructed property, plant and equipment comprise those costs that can be attributable specifically to the construction of the relevant asset.
- examples of directly attributable costs include:
 - purchase price, including import duties, non-refundable purchase taxes (after deducting trade discounts and rebates);
 - tools and spares which are consumed during construction;
 - computer hardware and software necessary for the operation of the plant;
 - staff costs directly related to the construction or purchase of the asset, including the proportion of the project manager's salary and on-cost attributable to the project starting with the drawing up of the specification and ending with the commissioning of the plant;
 - estimates of dismantling and removal costs of the asset and estimates of restoration costs to asset's site location at the end of the asset's life, when Yorkshire Water has an obligation to incur such costs;
 - initial delivery and handling costs;
 - site preparation and asset installation costs;
 - borrowing costs attributable to the asset's acquisition, construction, installation and assembly (this is applicable in the statutory accounts but is not applied in the regulatory accounts);
 - directly attributable costs of external parties, such as building contractors, legal advisers, engineers and architects;
 - costs arising from the testing of whether the asset is functioning properly (commissioning), net of any sales proceeds from the asset's output during the commissioning phase; and
 - site preparation costs such as demolishing any pre-existing buildings, excavation and restitution of land above below ground assets.
- the de-minimis level for capital expenditure is £3,000. Where individual items each costing less than £3,000 are part of an approved project, then the whole of the expenditure is to be capitalised.

Costs which cannot be capitalised

Examples include:

- items with estimated useful lives of less than one year;
- most consumable spare parts;
- most maintenance of assets;
- assets acquired which are consumed in the entity's day-to-day operations;
- costs of introducing a new product or service (including advertising and promotional costs);
- start-up costs relating to conducting business in a new location or with a new class of customer;
- staff training costs;
- costs incurred in the opening a new facility;
- costs incurred while an item capable of being used in the way intended by management has yet to be brought into use or has yet to reach full capacity;
- costs of relocating or reorganising part of the business;
- costs of aborting a project such as aborted initial designs; and
- administration and other general overhead costs.

Replacement using insurance proceeds

If a new tangible fixed asset is acquired from insurance proceeds when a previously held tangible fixed asset has been lost or destroyed, the asset is removed from the balance sheet and the resulting gain or loss on disposal is recognised in the profit and loss account. The replacement asset should be recorded at cost.

Income from insurance proceeds can only be recognised in the profit and loss when receipt of the income is virtually certain.

Bad debt

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 between the prior year (2014/15) and this 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 3 years old is fully provided for. For measured customers, all debt greater than 4 years old is fully provided for.

Actual amounts recovered may differ from the estimated levels of recovery which could impact on operating results.

There has been no change in this policy between the prior year (2014/15) and this year.

Available on the Yorkshire Water website is Yorkshire Water's guide to our debt recovery services. https://www.yorkshirewater.com/sites/default/files/24338%20Code%20of%20Practice%20Leaflets%20015_Debt%20Recovery.pdf

Diversification, protection of core business and Licence Condition F

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 obligation as a water and sewerage undertaker.

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 2016 and the Company's business plan for 2016/17;
- 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; and

- e) the Company's employment policies and strategy as described in detail in the Directors' Report for the year ended 31 March 2016.

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.

Licence Condition K

The Directors declare that in their opinion:-

1. the Appointee has retained sufficient rights and assets for the purpose detailed below; and
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.

Tax strategy

We are committed to acting with integrity and transparency in all tax matters. Our tax strategy and policies require that we:

- comply with both the letter of UK tax law and its application as it was intended;
- do not make interpretations of tax law considered to be opposed to the original published intention of the specific law;
- do not enter into transactions that have a main purpose of gaining a tax advantage; and
- Make timely and accurate tax returns that reflect our fiscal obligations to Government.

We work openly and proactively with HM Revenue & Customs (HMRC) to maintain an effective working relationship. Each year we provide our accounts to HMRC and they have the opportunity to review and challenge our position. In cases which are complex or open to interpretation we work with HMRC to determine the correct tax position.

We do not use artificial tax avoidance schemes or tax havens to reduce the Group's tax liabilities. Our overseas companies were established for non-tax driven business decisions and are wholly and exclusively resident for tax purposes in the UK, or are inactive. We explain our corporate structure below.

The Government uses a range of legislative tax concessions and reliefs to facilitate investment and economic growth. We use these legitimate tax concessions and reliefs, as we manage all our operating costs, to keep customer bills as low as possible and to enable returns for our shareholders.

Our corporation tax credit in the 2015/16 accounts is £24.3m (2015: credit £75.4m), this consists of:

- current tax – the amount of corporation tax payable by the Company for the 2015/16 period, including any change as a result of new insight on historic corporation tax liabilities. Yorkshire Water's expected 2015/16 corporation tax liability is nil; and
- deferred tax – the amount we expect to arise in the future due to timing differences between when amounts are deductible for tax purposes and when they are charged through the accounts. Our tax credit in the 2015/16 accounts is almost entirely a result of deferred tax. This represents

a reduction in the deferred tax liability that the Company must provide for and is mainly due to changes in legislation to reduce the corporation tax rate in future periods.

Yorkshire Water's expected 2015/16 corporation tax liability is nil. This is mainly due to capital allowances available for capital investment; tax deductible interest we pay to fund that investment; wider Kelda Group tax losses surrendered to Yorkshire Water; and tax regulations that require movements in the fair value of a company's swaps, recognised in accounting profit for the year, to be excluded from a company's taxable profits.

Total tax credit recognised in the profit and loss account and other comprehensive income

	2016 £m	2015 £m
<i>Current tax</i>		
Current tax on income for the year	0.1	0.3
Adjustments in respect of prior periods	-	(8.6)
Total current tax	<u>0.1</u>	<u>(8.3)</u>
<i>Deferred tax (note 21)</i>		
Origination and reversal of timing differences	9.0	(67.5)
Change in tax rate	(39.4)	3.2
Adjustments in respect of prior periods	5.9	(2.8)
Total deferred tax	<u>(24.5)</u>	<u>(67.1)</u>
Total tax credit	<u>(24.4)</u>	<u>(75.4)</u>

	2016			2015		
	Current tax	Deferred tax	Total tax	Current tax	Deferred tax	Total tax
Recognised in profit and loss account	0.1	(24.5)	(24.4)	(8.3)	(67.1)	(75.4)
Recognised in other comprehensive income	-	(6.9)	(6.9)	-	46.8	46.8
Total tax credit	<u>0.1</u>	<u>(31.4)</u>	<u>(31.4)</u>	<u>(8.3)</u>	<u>(20.3)</u>	<u>(28.6)</u>

Reconciliation of effective tax rate

	2016 £m	2015 £m
Profit/(loss) for the financial year	236.2	(90.3)
Total tax credit included in profit or loss	(24.4)	(75.4)
Profit/(loss) excluding taxation	211.8	(165.7)
Tax using the UK corporation tax rate of 20% (2015: 21%)	42.4	(34.8)
Non-deductible expenses	5.3	2.1
Adjustments in respect of prior periods	5.9	(11.4)
Income not taxable for tax purposes	(0.3)	(0.6)
Group relief received for no charge	(38.2)	(31.3)
Transfer pricing adjustments	0.2	0.2
Permanent differences	-	(2.5)
Gains/ rollover relief etc.	(0.2)	(0.3)
Tax rate changes	(39.5)	3.2
Total tax credit included in profit or loss	(24.4)	(75.4)

Summary Reconciliation of Current Tax

Tax on profit before tax at standard UK corporation tax rate of 20%	42.4
Expenses not deductible	5.1
Transfer pricing adjustments	0.2
Income non taxable	(0.3)
Debt and derivative fair value movements ignored for tax purposes	(26.5)
Capital allowances in excess of depreciation	32.2
Movement in short term timing differences	(0.5)
Effect of gains including rollover relief	(0.2)
Utilisation of tax losses	(38.0)
Transitional adjustments	(14.3)
Current tax charge / (credit)	0.1

The corporation tax rate of 20% enacted in the Finance Act 2013 and applicable from 1 April 2015 has been used in preparing these financial statements.

The Finance (No 2) Act 2015 set the main rate of corporation tax rate at 19% from 1 April 2017 and 18% from 1 April 2020. These rates were substantively enacted on 25 October 2015 and the deferred tax liability at 31 March 2016 has been calculated based on these rates.

The Chancellor announced in the Budget on 16 March 2016 that the main rate of corporation tax will be reduced to 17% from 1 April 2020. This had not been substantively enacted at the balance sheet date and therefore is not included in these financial statements.

The effect of this change would be to reduce the deferred tax liability provided at the balance sheet date by £22.1m.

Further detail of our corporate taxation and deferred tax accounting are set out in note 9 to the financial statements on pages 124 and 125 of the ARFS. A summary of the Kelda Group tax strategy and policies is available at: www.yorkshirewater.com/tax

The table below shows a reconciliation from the FD to the current tax charge.

	£m
Tax allowed per Final Determination	4.1
Variances due to:	
Changes in profit before interest and tax	-7.1
Changes in interest costs	6.8
Assumptions regarding allowable depreciation and capital allowances claimed	36
Losses claimed from other group companies	-37.9
Assumptions regarding change in accounting framework	-4.6
Assumptions regarding non tax deductible expenses	2.8
Current tax charge per regulatory accounts	0.1

Appendices

Appendix 1 – Wholesale / retail allocation

Activity	Company	2015/16 Cost Driver	2015/16 Why considered appropriate	2014/15 Cost Driver
Wholesale / Retail				
Customer Services - Billing	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Customer Services - Payment handling	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Customer Services - Charitable trust donations	YWSL	N/A	N/A	N/A
Customer Services - Vulnerable customer schemes	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Customer Services Non-network customer enquiries and complaints	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Customer Services- Network customer enquiries and complaints	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Customer Services - Investigatory visits / first visit to customer	YWSL	First time investigatory visits charged to retail only where not a network problem (including water stop tap)	Per Ofwat RAG 2.05	First time investigatory visits charged to retail only where not a network problem (including water stop tap)
Customer Services Other customer services	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Debt management	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Doubtful debts	YWSL	All put to retail with the exception of wholesale sundry billing debt	Per Ofwat RAG 2.05	All put to retail with the exception of wholesale sundry billing debt
Meter reading	YWSL	Wholly in retail	Per Ofwat RAG 2.05	Wholly in retail
Services to developers	YWSL	Providing information and administration for new connections in retail, all other services within wholesale	Per Ofwat RAG 2.05	Providing information and administration for new connections in retail everything else in wholesale
Disconnections and reconnections	YWSL / LCML	Administration and decision retail, physical activity is within wholesale.	Per Ofwat RAG 2.05	Administration retail, doing is wholesale
Demand side water initiatives	YWSL	All expenditure is retail except where expenditure is to meet wholesale outcomes	Per Ofwat RAG 2.05	All expenditure is retail except where expenditure is to meet wholesale outcomes
Customer side leaks	YWSL	All expenditure and income is retail except where expenditure is to meet wholesale outcomes	Per Ofwat RAG 2.05	All expenditure is retail except where expenditure is to meet wholesale outcomes
OOE - Other direct costs	YWSL	Other direct costs which are wholesale in nature	Per Ofwat RAG 2.05	Other direct costs which are wholesale in nature
OOE - General and Support - IT costs	YWSL	Split based on headcount - proxy to number of computers	Ofwat RAG 2.05 allows the choice of an appropriate cost driver	Split based on headcount - proxy to number of computers
OOE - General and Support - motor vehicles	YWSL	N/A	N/A	N/A
OOE - General and Support - Finance, HR, payroll, general management	YWSL	HR on headcount, everything else FTEs	Timesheets are not available so Ofwats second preference has been used	HR on headcount, everything else FTEs
OOE - Executive directors remuneration	YWSL	FTEs	Timesheets are not available so Ofwats second preference has been used	FTEs
OOE - Non-executive director's remuneration	YWSL	FTEs	Timesheets are not available so Ofwats second preference has been used	FTEs
OOE - General and support - Facilities, building / grounds maintenance	YWSL	Facilities is recharged based on FTE, buildings & grounds maintenance is directly allocated to the associated site.	Per Ofwat RAG 2.05	Floor area & FTE
OOE - General and support - insurance	YWSL	FTEs for staff related insurance, GMA values for asset insurance	Per Ofwat RAG 2.05	FTEs for staff related insurance, GMA values for asset insurance
OOE - Other general and support costs	YWSL	FTEs	Timesheets are not available so Ofwats second preference has been used	FTEs
OOE - Regulation Licence costs	YWSL	One ninth to retail, eight ninths to wholesale	Per Ofwat RAG 2.05	One ninth to retail, eight ninths to wholesale
OOE - Regulation MOSL Costs		Wholly in wholesale	Per letter to CEO 4 April 2014	n/a
OOE - Local Authority Rates	YWSL	Floor space & FTE	Per Ofwat RAG 2.05	Floor space & FTE
Third party services, e.g. rechargeable works	YWSL	All wholesale	Per Ofwat RAG 2.05	All wholesale

Appendix 2 – Retail Household / Non-household allocation

Activity	Company	2015/16	2015/16	2014/15
Retail household / non-household		Cost Driver	Why considered appropriate	Cost Driver
Customer Services - Billing	LCML	Number of bills	Per Ofwat RAG 2.05	Number of bills
Customer Services - Payment	LCML	Number of payments	Per Ofwat RAG 2.05	Number of payments
Customer Services - Charitable trust donations	YW	N/A	N/A	N/A
Customer Services - Vulnerable customer schemes	LCML	100% household	Per Ofwat RAG 2.05	100% non-household
Customer Services -Non-network enquiries and complaints	YW / LCML	Volume of contacts	Timesheets are not available so Ofwats second preference has been used	Volume of contacts
Customer Services - Network enquiries and complaints	YW / LCML	Volume of contacts	Timesheets are not available so Ofwats second preference has been used	Volume of contacts
Customer Services First time investigatory visits - Retail	YW	Volume of visits	Timesheets are not available so Ofwats second preference has been used	Volume of visits
Customer Services - Other customer services	YW / LCML	N/A	N/A	N/A
Debt management	YW / LCML	Debt o/s over 30 days	Per Ofwat RAG 2.05	Debt o/s over 30 days
Doubtful debts	YW	Direct allocation	Per Ofwat RAG 2.05	Direct allocation
Meter reading	YW	Number of meter reads	Timesheets are not available so Ofwats third preference has been used	Number of meter reads
Services to developers	YW	100% non-household	Per Ofwat RAG 2.05	100% non-household
OOE - Disconnections and reconnections	YW / LCML	100% non-household	Per Ofwat RAG 2.05	100% non-household
OOE - Demand side water efficiency initiatives	YW	Direct allocation		100% household
OOE - Customer side leaks	YW	Direct allocation		100% household
OOE - Other direct costs	YW / LCML	Appropriate cost driver (based on nature of cost)		Various
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	FTEs used to allocate to retail activity then activity cost driver used.
OOE - General and support - IT	LCML	Customer numbers	Ofwat RAG 2.05 allows the choice of an appropriate cost driver	Customer numbers
OOE - General and Support - motor vehicles	YW / LCML	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	LCML	Customer numbers	Timesheets are not available so Ofwats third 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 retail activity then activity cost driver used
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	LCML	Customer numbers	Timesheets are not available so Ofwats third preference has been used	Customer numbers
General and support - insurance	YW	FTEs used to allocate to retail activity then activity cost driver used	Per Ofwat RAG 2.05	FTEs used to allocate to retail activity then activity cost driver used
General and support - insurance	LCML	Customer numbers	Due to the efficient working of Loop FTE's are not specifically allocated between HH & NHH. Therefore a more consistent approach is customer numbers.	Customer numbers
General and support - other	YW	FTEs used to allocate to retail activity then activity cost driver used	Per Ofwat RAG 2.05	FTEs used to allocate to retail activity then activity cost driver used
General and support - other	LCML	Customer numbers	Per Ofwat RAG 2.05	Customer numbers
Regulation and licence fee	YW	Customer numbers	Per Ofwat RAG 2.05	Customer numbers
Local Authority Rates	YW	FTEs used to allocate to retail activity then activity cost driver used	Ofwats second preference has been used	FTEs used to allocate to retail activity then activity cost driver used
Local Authority Rates	LCML	Customer numbers	Per Ofwat RAG 2.05	FTEs
Third party services	YW	N/A	N/A	N/A

Appendix 3 – Wholesale water cost allocation

Expenditure line	Method of allocation	Why considered appropriate	How satisfied
Power	Optima system collects costs at meter level and this costed directly to the service where possible. Where site meters supply more than one service the account is split based upon estimated power usage of equipment on site	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
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	Where costs can be directly allocated this is done so. For other costs these 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)	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	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
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	One ninth to each service	Based on Ofwat guidelines	Agrees with guidelines
Other operating expenditure - Other direct costs - GSS & Ex gratia	Directly allocated	Directly allocated	Monthly Guarantee Standards Scheme & ex-gratia review to ensure directly allocated costs are correct
General and support - IT	Allocated using headcount	Each colleague has a PC or handheld device even if part time	Proxy for number of PCs and handheld devices
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 - Facilities	Floor space and FTE	Based on Ofwat guidelines	Agrees with guidelines
General and support - Other	FTE	Based on Ofwat guidelines	Agrees 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)	Four ninths to water. Four ninths to waste, one ninth to retail	All of this cost is regulation costs. The cost allocation used is per the Ofwat guidance	Complies with guidelines
Other business activities (MOSL Fee)	47% to water and 53% to sewerage	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	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	Confirmed approach with Ofwat via e mail

Appendix 4 – Wholesale waste water cost allocations

Expenditure line	How allocated costs	Why considered appropriate	How satisfied
Power	Optima system collects costs at meter level and this costed directly to the service where possible. Where site meters supply more than one service the account is split based upon estimated power usage of equipment on site	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
Income treated as negative expenditure	Directly allocated to sludge treatment	Directly allocated	Directly allocated
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	Where costs can be directly allocated this is done so. For other costs these 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)	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	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
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 & ex-gratia review to ensure directly allocated costs are correct
General and support - IT	Allocated using headcount	Each colleague has a PC or handheld device even if part time	Proxy for number of PCs and handheld devices
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 - Facilities	Floor space and FTE	Based on Ofwat guidelines	Agrees with guidelines
General and support - Other	FTE	Based on Ofwat guidelines	Agrees 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	Four ninths to water. Four ninths to waste, one ninth to retail	All of this cost is regulation costs. The cost allocation used is per the Ofwat guidance	Complies with guidelines
Local authority rates - Non-domestic (waste)	Use Gross Modern Equivalent Asset values (GMEA) to allocate costs	Based on value of assets assigned to the business unit which are reported in supplementary fixed assets tables	All operational
Exceptional items	Directly allocated	Analysis of costs carried out	Confirmed approach with Ofwat via e mail

Appendix 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	For the 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 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	For the 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 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 - 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 are allocated directly. Some other teams are allocated to this activity by management estimate but the costs are much smaller.	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.
Other operating expenditure			
General and support - IT	LCML costs are allocated directly. For YWSL costs are allocated based on headcount.	Assumed each person employed has a PC, Laptop or handheld	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 costs	YWSL is regulation costs. The cost allocation used is per the Ofwat guidance	Complies with guidelines

Appendix 6 – Non-appointed cost allocation

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 4.05 Appendix 1 Ofwat e mail following CEPA review
Operating costs	Associated operating costs with revenue stated above, fully loaded with depreciation when appropriate	RAG 4.05 & Ofwat e mail following CEPA review
Interest Income	Average bank balances x the average 3 month Libor rate over the year (from inter co. loans)	Management judgement
Uk Corporation tax	Calculated profit for non-appointed with depreciation added back x 21%	Current HRMC rates

Appendix 7 – Upstream Methodology

This section sets out our definitions of the different activities that Yorkshire Water carries out as part of delivering their upstream activities. It has been prepared in accordance with RAG 4.05 and the CEPA targeted review.

Water Service

Business Unit	Activity	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 within the accounting system SAP.	Licensed volume in MI
	Raw Water Abstraction	The Yorkshire Water (YW) costing structure is set up in such a way that the cost centres within the accounting system SAP reflect the definition, this 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.	Volume abstracted in MI
Raw Water Distribution	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. This has been updated in 2015/16 to reflect pumping from a borehole to WTW to be included within this BU not Water Treatment.	Volume transported in MI
	Raw Water Storage	The YW costing structure is set up in such a way that the cost centres within the SAP system reflect the definition of raw water storage.	Average volume in MI
Water Treatment	Water Treatment	Not all costs are posted to individual treatments works, for example salary costs are posted at service level. Provision of unit costing for individual works or at large / small works type is therefore not currently available.	Distribution input (potable) volume in MI.
Treated Water Distribution	Treated Water Distribution	<p>The YW costing structure is set up such that treated water distribution costs are at the level of Treated Water Transmission Section (TWT). Each section contains both above and below ground assets with no split between trunk treated water transport and local treated water distribution. Some larger assets, e.g. Grid Pumps, do have their own cost centre. In order to complete the upstream services table the above and below ground assets within each TWT were assigned to either trunk or local with the following assumptions being made.</p> <p><u>Above Ground Assets</u></p> <p>The following types of assets were split between trunk and local:</p> <ul style="list-style-type: none"> Water Pumping Stations (WPS) Water Towers (WTR) Service Reservoirs (SRE) Critical Supply Reservoirs (CRE) <p>The treated water storage assets (towers, services reservoirs and critical supply reservoirs) could be either trunk or local – but only a small number are deemed by operational colleagues to be local. Therefore all treated water storage costs have been dealt with as trunk.</p> <p>Water pumping stations could be deemed to be either trunk or local so an exercise has been carried out to determine of the operational Water Pumping Stations into which category they belong. Power costs by metered supply have been assigned based on this data. Other costs such as maintenance have been split pro rata.</p> <p>There is no specific field in the asset database to identify whether treated water distribution assets relate to trunk or local mains. However CCD is only found on above ground assets within this business unit, and the CCD value has been allocated in a consistent manner to operating costs.</p> <p><u>Below Ground Assets</u></p> <p>Below ground assets within the YW Asset Inventory System have a flag attached to them, indicating whether they are 'Main Treated' or 'Distribution Management Area' For the purposes of the 2015/2016 return, 'Main Treated' assets have been classed as trunk and 'Distribution Management Area' as local, this is consistent with last years data.</p> <p>The leakage 'proactive find and fix' activity on mains is dealt with differently from that mentioned above but does not cause any problems in relation to the split between trunk and local as detailed below.</p> <p>The find activity is carried out by both external contractor and by YW staff. Very little proactive leakage work is done on trunk mains so all contract costs and salary allocations for the leakage team have been allocated to local.</p> <p>The fix activity is not coded to the treated water transmission section but to area based codes. Few of the repairs carried out are as a result of find activity on trunk mains so all repair costs have been allocated to local.</p>	Distribution input (potable) volume in MI.

Waste Water Service

Business Unit	Activity	YW Methodology & assumptions	Volumes / Drivers
Sewage Collection	Foul	<p>YW splits its sewage collection assets into three categories, 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. An exercise has been carried out this year (2015/16) to look at sewer lengths in each of the three 'Network plus' categories. The table below shows the asset data which has been reported from YW's asset system and aligns with how costs are collected. The second table below shows the derived split for foul, surface and highways.</p> <p>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.</p> <p>Power costs have been booked direct to appropriate service (ie. foul, surface) with the costs attributed to combined being split per the table below.</p> <p>Repair and maintenance work (cyclical or reactive) on infrastructure assets is carried out by contractors on jobs raised via the WMS (job costing). Costs are collected at drainage area zone level only.</p>	Volume collected in ML.
	Surface Water Drainage		Volume collected in ML.
	Highway Drainage		Volume collected in ML.
Sewage Treatment	Sewage Treatment & Disposal	<p>Not all costs are posted to individual sewage treatment works 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 currently available.</p> <p>A small proportion of direct costs are allocated to this activity as most of the liquor is gravity returned to the front in-let of a sewage treatment works and therefore incurs very little cost. Salary costs are posted at service level based upon management assessment and power costs are a split of whole site costs based on management assessment of power usage on liquor treatment.</p>	Biochemical oxygen demand (BOD) in tonnes.
	Imported Liquor Treatment	<p>It is assumed that both liquid sludge and cake movements are included under transport.</p> <p>Transport costs within individual works manager's cost codes are difficult to identify as they are included within costs associated with other general types of hired and contracted services. Therefore these costs have not been included under sludge transport.</p> <p>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.</p> <p>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. Not all costs are posted to sludge treatment facility, 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.</p> <p>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. Not all costs are posted at site level, 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.</p>	Biochemical oxygen demand (BOD) in tonnes.
Sludge	Sludge Transport	<p>It is assumed that both liquid sludge and cake movements are included under transport.</p> <p>Transport costs within individual works manager's cost codes are difficult to identify as they are included within costs associated with other general types of hired and contracted services. Therefore these costs have not been included under sludge transport.</p> <p>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.</p>	Volume transported (m3)
	Sludge Treatment	<p>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. Not all costs are posted to sludge treatment facility, 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.</p>	Dried solid mass in tonnes of dried solids (ttds)
	Sludge Disposal	<p>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. Not all costs are posted at site level, 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.</p>	Dried solid mass in tonnes of dried solids (ttds)

Sewage collection split by function, as recorded in YW mapping system

Function	Length, Kilometres	Split by function, %
Combined	18,450,979	53%
Foul	7,172,951	21%
Surface water	9,022,346	26%
Total	34,646,276	100%

Sewage collection allocated to APR definitions

Function	Length, Kilometres	Split by function, %
Foul	13,323,277	38%
Surface Water	15,172,672	44%
Highways	6,150,326	18%
Total	34,646,276	100%

Biochemical Oxygen Demand (BOD) imported sludge liquor explanatory note

Sludge liquors are produced when sludge is dewatered or thickened. Due to the change in water content, far more volume of liquors is associated with dewatering than thickening. Sludge liquors may be characterised by volume, BOD load, solid load, COD load, or ammonia load. We have been requested to provide a total BOD load of sludge liquors for the company. A more accurate figure could be provided for volume, much of the uncertainty stems from the lack of quality data on the strength of sludge liquors. If sludge liquors were to be treated as an industrial waste, charging would be based on the volume, COD load, and solids load. Much of the aeration cost is dependent on the ammonia load (which can be high for digested sludge. It is not immediately apparent why BOD load is the correct metric to use in assessing the cost impact of sludge liquors.

Liquor BOD concentration

The strengths of different sludge liquors are provided by Metcalfe and Eddy as follows:

Gravity Thickening	Primary Sludge	100	400	250
Gravity Thickening	Primary Sludge and WAS	60	400	300
Flotation Thickening		50	400	250
Centrifuge Thickening	Air Activated Sludge	400	1200	800
Centrifuge Thickening	Oxygen Activated Sludge	1200	1600	1400
Anaerobic Digestion	Standard	500	1000	800
Anaerobic Digestion	High Rate	2000	5000	4000
Aerobic Digestion		200	5000	500
Heat treatment		3000	15000	7000
Vacuum Filtration	Undigested	500	5000	1000
Vacuum Filtration	Digested	500	5000	2000
Centrifugation	Undigested	1000	10000	5000
Centrifugation	Digested	1000	10000	5000
Belt Filter Press	Undigested	50	500	300
Belt Filter Press	Digested	50	500	300

The BOD load is calculated from the product of the concentration in the table above, and the volume. Items where the BOD concentration is high (for example see the highlighted figure for Centrifugation of Digested Sludge) and the volume is high (same table row – we have a lot of digested sludge that is centrifuged) will be significant.

Yorkshire Water does not use all of the above processes, but Centrifuges and Belt Presses are used for dewatering sludge. The bottom four rows will therefore be important in calculating a total BOD load. It will be clear that the relative proportion of sludge that is dewatered by belt filter press or centrifuge will make a significant difference to the assumed BOD load.

In addition, consider the range of values given in the table – from 1000 – 10000mg/l for the same process. This variation is of an order of magnitude.

An alternate version of the above table is repeated in Wiley, this is identical except that the range for centrifuged sludge liquors is given as 500-5000 with a typical figure of 2000. The table is credited as “adapted from Metcalfe and Eddy”, but with no further explanation.

A review of other texts provided no further significant information.

A small amount of analysis has recently been done at one site (Hull WWTW), where some of the recent compliance risks have been attributed anecdotally to sludge liquors. Six samples were taken with the following results 1050, 625, 466, 327,357,636 mg/l (BOD5Total). All these samples are below, or at the bottom end of the predicted range. However, these samples come from one site for a two week period in February and may not be representative of elsewhere. It should be noted that the Cod to BOD ratio was relatively high at 4 to 1. The samples are also taken at a point where there may be thickener liquors present, as well as dewatering liquors present, which may have diluted the results.

Therefore it is required to estimate a value for the strength of sludge liquors for centrifuged sludge. From the above considerations, it would seem plausible that the most likely figure is less than 5000, but a figure as high as 10,000 or as low as 500 could not be ruled out for some sites.

With no additional information our best assumption is 2000mg/l.

A similar discussion could be carried out for each row of the Metcalfe and Eddy table, but by far the most significant in terms of impact on the final answer is the strength of centrifuge liquors.

Liquor Volumes

Liquor volumes are easier to estimate, as they can be calculated from the Sludge throughput (tonnes dry solids) and the change in dry solids content across the thickener unit. Although we haven't for the purposes of this calculation done this on a site by site basis (it is pointless given the level of inaccuracy identified above), this is theoretically possible to do – we have (most of) the data just requiring a considerable amount of manipulation and calculation to get the answer. Any gaps in data could be filled readily with reasonable assumptions that would have only a minor impact on the end result.

Thickening Liquors

We have assumed that on our small sites (ones without polymer addition for thickening); sludge is “thickened” from 2% to 3%. This produces 344 thousand m3 of liquors/year.

We have assumed that on other thickening sites, sludge is thickened from 3% to 6%. This produces 4,370 thousand m3 of liquors a year, as these are larger sites with more throughputs.

The BOD load from thickening liquors is then assumed to be 690 tonnes a year from these sources. Note these figures are unlikely to be particularly accurate as we have no sample data to support the concentrations used. However, the total load from these assets is relatively small compared to the load created from dewatering.

Dewatering Volumes

We dewater sludge from both belt presses and centrifuges. Given the differences in the quoted liquor strengths, the assumed split between these activities will make a difference to the calculated answer for

the total sludge liquor BOD load. We do have a generally good understanding of which sludge is centrifuged and which is belt pressed, but last year this has been made more complicated due to the flooding of a key asset that uses belt presses, and maintenance issues at another asset, where the assets were replaced by temporary centrifuges (Knostrop and CVSI).

Some sludge is dewatered, and then transported to a site where it is rewet, and then dewatered again. Here, two lots of dewatering liquors are created, and we have made allowance for this.

Some sludge is also stored on conditioning pads, where rainfall can cause the contaminated rain to pass to drain and return to the head of the works. We have not accounted for this as not representing true sludge liquors.

We have assumed dewatering takes sludge from 3.5% dry solids to 22% dry solids. Different assets will of course perform differently at times.

Sludge is assumed to be dewatered from 3.5% to 22% DS, with either a belt press or a centrifuge. We produce 99904 TDS of sludge through centrifuges and 48452 TDS of sludge through belt presses. This gives us 4,800 Tonnes of BOD from centrifuge liquors and 349 Tonnes of BOD from belt presses.

Type of Liquors	Tonnes of BOD/year in liquors	% of total
Small site thickening	34	0.6%
Larger Site thickening	656	11.2%
Centrifuge Dewatering	4,800	82.2%
Belt Press Dewatering	349	6%
Total Liquor Production		100%

Due to the lack of real data to support this methodology, the confidence grade is best described as D. Insufficient data, particularly of the strength of dewatering liquors has been collected for extrapolation to be assigned a higher grade.

“D” HIGHLY UNRELIABLE

Actual: Unconfirmed verbal reports, cursory inspections or analysis.

Forecast: based on extrapolated information not complying with A, B or C.”

The accuracy band is 6, as a change to the figure for BOD strength of centrifuge liquor could reasonably be made which would adjust the final calculated figure by more than 50%. Many other assumptions could be changed which would affect the final total by around 10%.

Whilst the accuracy is of low grade, one simple check can be undertaken to understand if our answer is wildly out. The BOD load of the liquors can be converted to a population equivalent, and compared with the population of Yorkshire. Doing this suggests that the BOD load is equivalent to a PE of 267 thousand. The population of Yorkshire is 5.3 million people. The BOD load is therefore around 5% of the total load we would treat from the population of Yorkshire as a whole. This feels intuitively reasonable, but an error of 50% means this could be 2.5% of the total load, or 7.5% of the total load, not outside the

bounds of possibility. When using this figure as part of a comparative efficiency metric, therefore great care should be taken.

