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Part of Appendix 8k:
i. Ofwat Proforma
Author: Yorkshire Water

Cost adjustment claim summary form

Name of claim	Cellared Properties	
Name and identifier of related claim submitted in May 2018	YKY WWN+01 Cellared Properties	
Business plan table lines where the totex value of this claim is reported	WWn8 - Wholesale wastewater network plus special cost factors – Line 1-4 WWS1 (and 1a) – Line 7 (opex), Lines 12, 13, 14, 15 (capex) WWS2 (and 2a)– Lines 30 and 38	
Total value of claim for AMP7	£105.9m	
Total opex of claim for AMP7	£40.4m	
Total capex of claim for AMP7	£65.5m	
Depreciation on capex in AMP7 (retail controls only)	N/A	
Remaining capex required after AMP7 to complete construction	£0.0m	
Whole life totex* of claim	£294.7m <i>*Estimated as a proportion of our total WLC of internal flooding investment using the same methodology used to calculate the size of our claim; in present value terms.</i>	
Do you consider that part of the claim should be covered by our cost baselines? If yes, please provide an estimate	No. <i>We have calculated our claim for this regional operating circumstance such that the anticipated implicit allowance within the cost baseline has already been removed.</i>	
Materiality of claim for AMP7 as percentage of business plan (5 year) totex for the relevant controls.	4.2%	
Does the claim feature as a Direct Procurement for Customers (DPC) scheme? (please tick)	Yes	No
		X

	Brief summary of evidence to support claim against relevant test	List of accompanying evidence, including document references, page or section numbers.
Need for investment / expenditure	<p>We operate over 50,000km of sewer network which if not effectively operated and maintained can overflow and flood customer properties.</p> <p>We invest significant operational and capital expenditure to avoid collapses, blockages and hydraulic issues that can cause internal flooding incidents to occur.</p> <p>We have proportionally 4.6 times the number of cellared properties in our area when compared to the national average. These are greater risk of flooding due to their characteristics.</p> <p>The comparative industry measure of internal sewer flooding does not normalise for this factor. It therefore costs us a disproportionate amount to achieve same level of service as other companies (we are targeting a 70% reduction to UQ) and this is the basis of this claim.</p>	<p>‘Appendix 8k: ii. Ofwat Evidence’ Section 1.1 (all) Section 1.2 (all) Section 1.4.1</p> <p>‘Appendix 8k: iv. Not Just Water – Strategic Direction 2018’ Page 26, 59, 72 & 73</p> <p>‘Appendix 8k: iii. MORI report 1998’</p>
Need for the adjustment (if relevant)	<p>Our region has a high proportion of cellars compared with the national average (17% compared to 3.7%). We have 69% of flooding occurring in cellared properties. We have estimated 54% of our flooding costs could be attributed to the higher proportion of cellars in our region.</p> <p>Our adjustment claim is for the additional cost that we expect to incur above the industry and is on top of any implicit allowance we expect to be allowed in cost modelling.</p>	<p>‘Appendix 8k: iii. MORI report 1998’</p> <p>‘Appendix 8k: ii. Ofwat Evidence’ Section 1.2 (all) Section 1.4 (all)</p>

Outside management Control (if relevant)	This is a regional operating circumstance claims where the type and form of the housing stock in our area is outside of our control.	'Appendix 8k: ii. Ofwat Evidence' Section 1.2.1 Section 1.4.1
Best option for customers (if relevant)	<p>Our customers tell us that internal flooding is important, and we should improve our performance.</p> <p>They have indicated internal sewer flooding is in the top 5 performance commitments.</p> <p>We have engaged widely with the Yorkshire Forum for Water Customers (YWFC) who support the cost adjustment claim. We have also assessed the investment as being cost beneficial.</p>	<p>'Appendix 8k: ii. Ofwat Evidence' Section 1.3 (all) Section 1.5 (all)</p> <p>'Appendix 8k: iv. Not Just Water – Strategic Direction 2018' Page 26, 59, 72 & 73</p> <p>'Appendix 8k: v. PR19 Outcomes Debrief 11.04.18 – Extract'</p> <p>'Appendix 8k: vi. Cost Adjustment Claim Research - Redacted Report'</p> <p>'Appendix 8p: Yorkshire Forum for Water Customer Statement of Support'</p>
Robustness and efficiency of claim's costs	We have used our Decision Making Framework to help determine and optimise the level of investment required in AMP7 and included our plan efficiencies on top of this. The learning of our work in Years 4 and 5 will be applied in AMP7. We are re-investing an extra £40M of outperformance money in AMP6 to reduce the number of properties that flood	'Appendix 8k: ii. Ofwat Evidence' Section 1.4.1 Section 1.5.2 Section 1.5.3
Customer Protection (if relevant)	We are not proposing a mechanism to protect customers from the reduction or cancellation of the investment relating to this claim. Justification for this is provided in the section referenced	'Appendix 8k: ii. Ofwat Evidence' Section 1.6 (all)

Affordability (if relevant)	Overall customer support for our plan is that 86% of customers support our business plan. Of that 76% of our financially vulnerable customers are also supportive of our plan (with a sample of 487 customers classed as financially vulnerable in the survey). Please see Section 1.3.3 of the accompanying evidence for further details.	'Appendix 8k: ii. Ofwat Evidence' Section 1.3.3
Board assurance (if relevant)	The Yorkshire Water Board has reviewed this cost adjustment claim. As part of this they have signed a board assurance statement which includes a statement relating to our use of cost adjustment claims.	'Appendix 8k: ii. Ofwat Evidence' Section 1.7 (all)

Part of Appendix 8k:
ii. Ofwat Evidence
Author: Yorkshire Water

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Cellared Properties (YKY WWN+01)

1. Summary

- Claim: Cellared Properties
- Reference: YKY WWN+01
- Type: Regional Operating Circumstance
- Totex value: £105.9m
- Materiality: 4.2%
- Date: 03 September 2018

1.1. Overview of Claim

We have committed to achieving a 70% reduction in internal sewer flooding, reducing the number of incidents to no more than 345¹ by the end of the next AMP. This commitment features in our long-term strategy namely goal 3 of our 5 big goals². Our customers have indicated that the reduction and management of flooding is a key priority³. We believe that we face regionally operating circumstances that directly impact our costs to achieve and sustain our ambition of an upper quartile service level in AMP7.

Of the number of properties that do flood each year, a significantly high number of these properties (63%) have cellars. In the Yorkshire region we have a higher proportion of cellared properties (4.6 times as many) when compared with the national average. These two factors combined mean that the costs of achieving a comparable upper quartile level of service for Yorkshire Water is higher than for companies with lower numbers of cellared properties in their operating areas.

The cost adjustment claim set out in this document is for an adjustment of:

- CAPEX costs of £65.5M;
- And OPEX of £40.4M.

¹ Based on convergence definition

² 'Appendix 8k: iv. Not Just Water – Strategic Direction 2018', Pg72-3

³ 'Appendix 8k: iv. Not Just Water – Strategic Direction 2018', Pg26

This cost adjustment claim only considers the disproportionate expenditure required to manage and reduce sewer flooding due to the relative higher number of cellared properties within the region. It is only part of our total investment to improve and maintain internal sewer flooding incidents in the next AMP.

1.2. Need for Investment

1.3. Factors Driving the Need for Investment

Historically we have targeted levels of service that maintain a consistent performance in the number of properties flooding internally each year. However, our customers tell us that we need to improve, and as such we have publicly committed to a step change in our performance, reducing the number of properties that flood internally on a yearly basis.

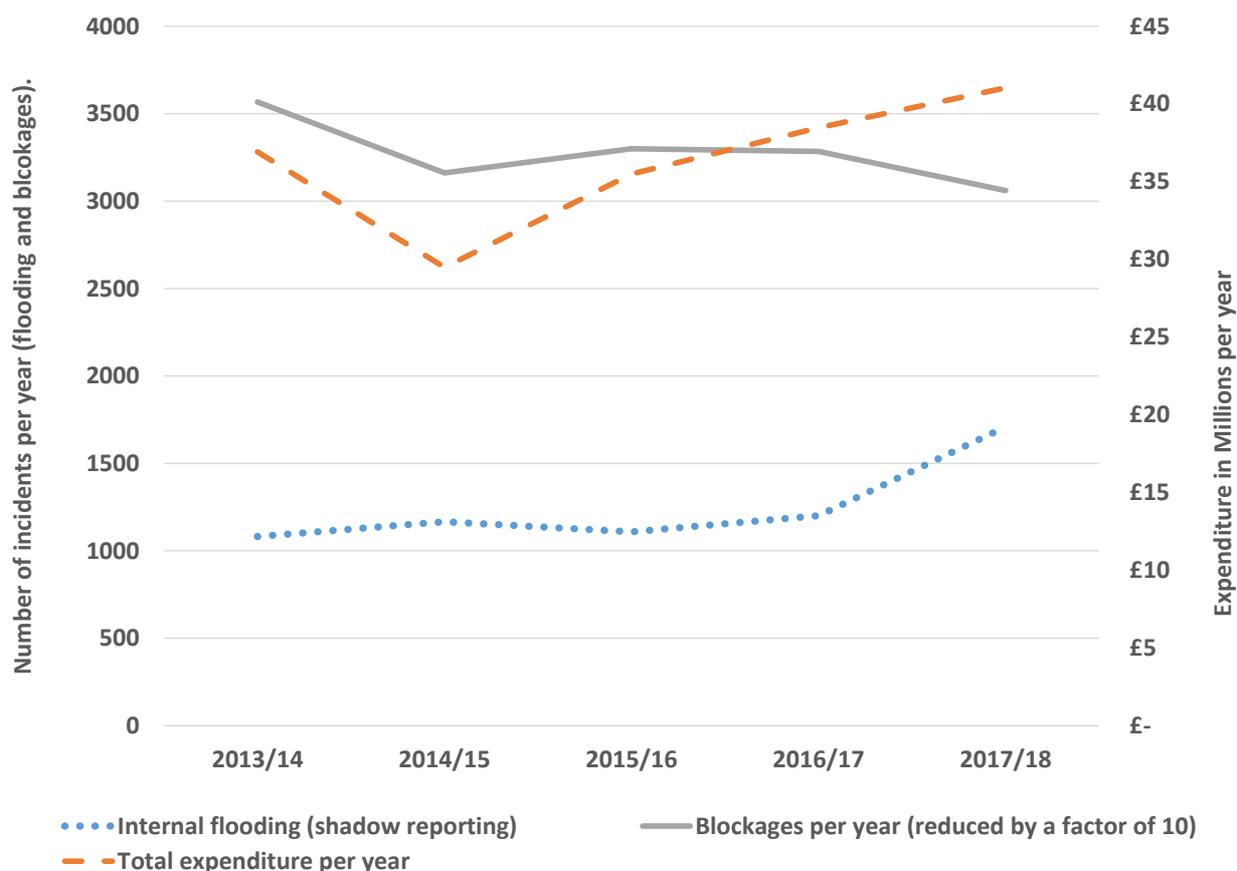
As part of this commitment we will start to reduce the number of flooding incidents in this AMP funded by reinvesting outperformance money. We have committed to reinvesting over £40m across years four and five of this AMP. Our target, based upon the revised flooding definitions and shadow reporting for the end of AMP6, is to have less than 582 incidents per year, this is regardless of whether the cause is hydraulic overloading or other causes.

Additionally, our commitment overall is to achieve a 70% reduction in the number of flooding incidents (1,201 that occurred in 2016-17) to no more than 345 by the end of AMP7 with the aim of achieving an upper quartile level of performance¹ for our customers.

It is recognised that to achieve a long term and continuous step change in performance requires increased efficient investment to reduce and maintain the lower number of incidents and improved levels of service for our customers.

Our current performance has over the five years (2013-14 to 2016-17) been reasonably constant with similar year on year expenditure related to all flooding (Figure 1). We do note that there is an exception in 2017-18 where there was a significant number of repeat incidents which related to the number of internally flooded properties and number of blockages.

Figure 1: comparison of expenditure and performance 2013-14 to 2017-18⁴



We have compared our performance to that of other companies using the shadow reporting data for 2016-17. We have used this as a fair and consistent benchmark rather than using previous year’s data with different reporting definitions and standards.

Our analysis is that we have 5.3 properties flooding per 10,000 properties, compared with Wessex Water, Anglian Water and Welsh Water where the rate is below 2 flooding properties per 10,000 properties. We believe in the round, that the proportion of cellars and basements heavily influences our performance in this area, corresponding with the large proportion of flooding incidents occurring in the cellars and basements. It can be demonstrated that 63.1% of our internal flooding incidents occur in cellars over the 5 year period up to 2018⁵.

⁴ Note: incident numbers are based on the revised definitions for reporting and hence differ to our performance commitment values.

⁵ as reported within Table 3 of the Annual Performance Reporting Non-Financial Submission, 2018.

To achieve an improved performance, we will need to reduce the number of repeat incidents occurring as well as reduce the likelihood of cellared properties flooding. This will require a more proactive approach to how we prevent incidents occurring and how we identify and react where a problem is occurring that could lead to internal flooding.

1.3.1. Actions Taken to Control Cost

Our average spends over the five years up to 2017-18 to keep flooding incident levels stable in line with our AMP6 performance commitment was c.£36m per annum.

However, to reduce internal property flooding by 70% from 2016-17 levels by the end of AMP7 will be an unprecedented rate of change. We will be delivering a significant proportion of that reduction by the end of AMP6 through re-investment of outperformance c.£40m over years four and five of AMP6 at no additional cost to customers. However, similar levels of expenditure will need to continue throughout AMP7 to further reduce incidents and maintain them at this improved service level.

In recent price reviews we have not submitted any cost adjustments and managed the cost of this regional operating circumstance in the round, although we did submit cost factor claims, most recently for PR04. We were able to manage this issue as our commitment was to maintain incident levels rather than reduce. However, with our commitment to reduce flooding based on our customers appetite for improvement, we believe it is now appropriate to recognise the extra investment required due to our regional operating circumstance.

1.3.2. Benefits Arising from this investment

We consider that the need for this investment is clear and unavoidable and historically we have taken every step to control costs, but due to the improvement in service it would seem appropriate that some costs are now passed on to customers. We consider however that this investment will yield significant additional benefits for customers, society and the environment including:

- Greater visibility of the network performance
- A reduction in area flooding (within the property boundary and the highway) thus reducing the impact on customers at a property level as well as disruption to traffic.
- A reduction in the number of blockages occurring
- A reduction in the number of pollution incidents, and the associated environmental benefit for this reduction

- Greater network resilience to cope with extreme weather
- Improved customer understanding and behaviour related to disposal habits

1.4. Stakeholder Support for Investment

1.4.1. Initial Engagement with Customers

Our commitment to reduce flooding inside property aligns with our customers and stakeholders' expectations.

Our customers⁶ have stated it is important for us to manage flooding, with 75% of them indicating it is an important issue to resolve, and only 2% indicating it is unimportant. This was the fourth most important issue to our customers when asked to prioritise our service measures. Additionally, 79% of customers indicate they want the appropriate plans and resources in place to provide resilient sewage services in the event of extreme weather. Furthermore, Rob Light, Northern Chair for Consumer Council for Water has stated that we can do more to help businesses and consumers protect against flooding³.

Through recent workshops and focus groups held with customers⁷, flooding was one of the key areas of importance, with internal flooding recognised as the most important of all the environmental areas. This engagement also indicated that sewer flooding performance should improve both now and in the future.

We have undertaken subsequent customer engagement⁸ relating to seven cost adjustment claims we submitted as part of our early submissions in May 2018. Out of all the claims tested with customers, 'Reducing Cellar Sewer Flooding' ranked as sixth in a priority list. The claim was behind other issues that were considered more important to them e.g. safe drinking water and reducing leakage.

The description of the claim provided to customers may have influenced them by indicating that this was an additional cost to the customer. In reality, Yorkshire Water's

⁶ 'Appendix 8k: iv. Not Just Water - Strategic Direction 2018' outlines the customer support to reduce flooding and its overall priorities

⁷ 'Appendix 8k: v. PR19 Outcomes Debrief 11.04.18 – Extract' – Customer research undertaken by DJS research outlines the customer importance placed on internal sewer flooding

⁸ 'Appendix 8k: vi. Cost Adjustment Claim Research - Redacted Report' – undertaken by Qa Research.

customers (as do all customers across the country) contribute to minimising the number of incidents, for example through reactive interventions when a blockage occurs and is cleared prior to it causing flooding or removing network faults through rehabilitation. This claim recognises that flooding is far more likely to take place in cellars and that the higher number of cellars means there is a disproportionate cost to prevent cellared properties flooding.

However, irrespective of this, to manage our levels of internal flooding incidents we must reduce the number of incidents that occur on properties with cellars, as these account for 63% of our internal flooding incidents.

Please refer to 'Appendix 5a: PR19 Customer and Stakeholder Engagement', section 7.14 for additional information.

1.4.2. Engagement with the Yorkshire Forum for Water Customers (YFWC)

As well as engaging widely with our customers, we have also engaged extensively on our cost adjustment claims with the Yorkshire Forum for Water Customers (YFWC).

We gained a letter of support from the YFWC for our early submissions in May which included our proposed cost adjustment claims. We have continued to make revisions and challenge ourselves with regards to our cost adjustment claims and this process has been run in conjunction with the YFWC. The output of this engagement is that the YFWC are supportive of the inclusion of three cost adjustment claims submitted as part of the final plan.

This can be seen in the Forum report⁹ as well as a further specific letter of support from the YFWC relating to our final submission of cost adjustment claims and performance commitments which has been provided as evidence for this cost adjustment claim¹⁰.

1.4.3. Affordability and Acceptability

In addition to the above customer surveys and engagement with the YFWC we have undertaken further consultation around the scope of our final plan, which included the three cost adjustment claims that we are submitting. The engagement was to gauge customers acceptability and affordability of the plan as a whole.

⁹ 'Yorkshire Forum for Water Customers' PR19 Assurance Report, Yorkshire Water's Customer Challenge Group's comments on the company's 2020-2025 Business Plan submitted to Ofwat

¹⁰ Appendix 8p: Yorkshire Forum for Water Customers, statement of support, September 2018

The results of this testing are as follows, where the percentage represents the proportion of customers that are in support of the package as a whole, including our proposed cost adjustment claims.

Overall customer support for our plan is that 86%¹¹ of customers support our business plan. Of that 76% of our financially vulnerable customers are also supportive of our plan (with a sample of 487 customers classed as financially vulnerable in the survey).

In addition, 67%¹² of household customers find the plan good value for money. 52% of our financially vulnerable customers also believe the plan is good value for money. Where it should be noted that roughly a third of our customers registered an indifferent response to the value for money question.

A full breakdown is below within tables 1 and 2.

Table 1: “Question: Please rate how much you support Yorkshire Water's entire plan, based on the Big Goals and the forecast for future bills?”

	Household	Financially Vulnerable
Very supportive	37%	25%
Supportive	49%	51%
Unsupportive	4%	7%
Very unsupportive	3%	7%
Not sure	8%	10%

Table 2: “Question: Given the plan that you have seen, to what extent would you say that the Yorkshire Water Business Plan represents value for money?”

	Household	Financially Vulnerable
Very good value for money	17%	10%
Good value for money	50%	42%
Neither good nor poor value for money	23%	30%
Poor value for money	4%	9%
Very poor value for money	3%	7%
Don't know	4%	3%

¹¹ 'Appendix 5a: PR19 Customer and Stakeholder Engagement', section 7.16

¹² 'Appendix 5a: PR19 Customer and Stakeholder Engagement', section 7.16

We note that the values we tested with customers for cost adjustment claims specifically differ slightly to those included in the plan and in this document. As part of affordability and acceptability testing we presented a value of £114m, whereas the final claim value is £105.9m. We have constantly been scrutinising and challenging the final claim value to ensure that this is most appropriate and protects the interests of our customers. Therefore the final value of the claim has been revised down, which we don't believe would change customers overall acceptability of the plan.

1.5. Need for Cost Adjustment

1.5.1. Atypical cost drivers relevant to this claim

Our region contains a disproportionately large number of cellared properties when compared to the national average. We have previously submitted successful claims, equivalent to cost adjustment claims, such as in PR04. Subsequently we had decided to manage the implications of our higher than average number of cellars in the round. However, with our commitment to significantly reduce flooding inside properties, we believe it is appropriate to fully recognise the impact cellars has on our performance and the inherent impact this has on achieving and maintaining an upper quartile service level.

Following survey work carried out in 1997 by MORI¹³, the Yorkshire region was found to have a significantly higher proportion of properties with cellars than the industry generally. The survey that included nearly 20,000 respondents found that, in Yorkshire, 17% of properties have cellars or basements. This is compared with the average 3.7% for the rest of the UK. Based on this Yorkshire has proportionally more cellared properties than the national average at a factor of 4.6.

Even when compared to the company with the second highest percentage of cellars or basements, Yorkshire has 2.5 times as many properties with cellars or basements. Figure 2 illustrates the MORI survey results and how the Yorkshire region has significantly more cellars and basements than other areas.

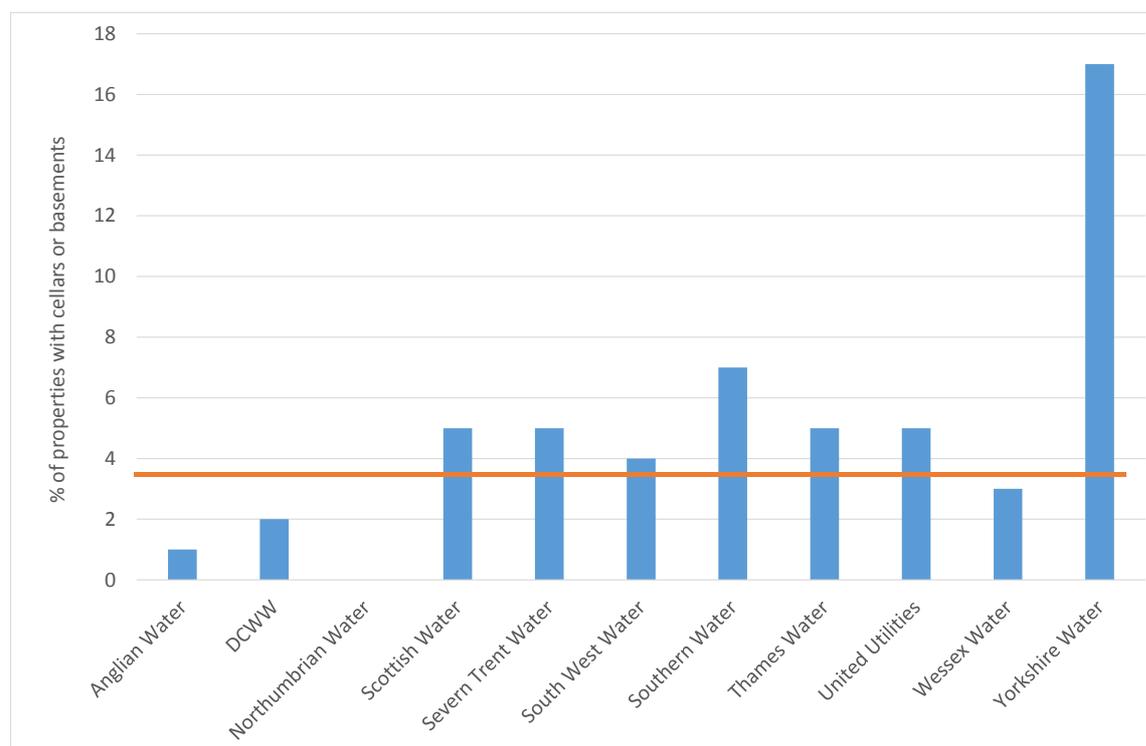
¹³ Appendix 8k, iii. MORI report of cellar and basement survey results and historical context of developments in Yorkshire.

Although this data is 24 years old, we would argue there have been no major changes to the number of properties with cellars, and whilst some parts of the country has seen an increase in number of properties in this time (typically non-cellared), the indications of the survey still hold true. The construction of cellars was part of the normal building process in Yorkshire up to the 1940s. Cellar construction clearly pre-dates the Water Company and is a feature of the properties within the region that is outside of management control.

As cellars are below ground they are more vulnerable to flooding from sewers. Some are connected directly to the sewer network and have a floor level only marginally above, and in some cases below, sewer soffit level (the top of the inside of the pipe). Sewers were generally designed to surcharge in periods of wet weather and therefore properties with cellars are at a greater risk of flooding through foul and surface water flows backing up and entering directly, or through exfiltration from the pipe seeping into the cellar.

We are not able to manage or control the historic development that has taken place in our region and hence the creation of these properties that are vulnerable to flooding is beyond our control. This regional operating circumstance means that our flooding incidents proportionally will be higher than other regions as the likelihood of flooding within those properties with cellars is greater. This is demonstrated through the high proportion of flooding properties with cellars. Comparing a 5-year average from 2016-17, our records show 63.1% of property flooding is in cellars or basements, with the majority, more than 90% in the last 5 years, due to 'other causes'.

Figure 2: Percentage of cellars and basements found per region compared with the average for the rest of the UK (Orange line)



To determine the cost of this claim, we have allowed for the fact that our number of cellars are a higher proportion than the national average and adjusted the Capex and Opex to account for this.

We have developed our costs to manage and reduce the number of properties that flood internally, and we explain this in more detail in section 1.5. In summary, this is through deterioration modelling and optimisation within our decision making framework (DMF), our overloaded sewer programme, proactive and reactive sewer maintenance repair and specific upper quartile projects. Table 3 summarises the costs and calculations.

Our proactive sewer maintenance budget is driven through our asset deterioration modelling and optimisation within DMF. This helps to reduce the flooding to properties (habitable and cellars) as well as reducing pollution. Therefore, a proportion of the expenditure (£126m) connected to improving each element has been calculated related to flooding (67%) overall, with 39% specifically related to cellars (£49.2m).

Our remaining expenditure as part of this claim, target both flooding in cellars and habitable areas, and we have taken 49.4% of these values. To arrive at this estimate, we consider both the greater proportion of cellars in the region and the evidence that flooding occurs within a large number of cellars. We outline the approach below:

- The proportional number of cellars in the Yorkshire region is $17/3.7 = 4.6$. This is Yorkshire's multiplier for the number of cellars above the average in the UK.
- If we had an average of 1, then it would be expected that the number of cellars was low and that no additional cost would be attributed (i.e. above that normally spent).
- However, to account for that greater expenditure required, a proportion of this expenditure can be determined using:

$$\text{Adjusted regional expenditure} = \text{Expenditure} - \left(\frac{\text{Expenditure}}{\text{Proportional no. of cellars}} \right)$$

- Additionally, to take account for actual historical rate of the number of cellars flooding (63.1% over 5 years), this value can be used to revise the Adjusted regional expenditure further resulting in a 0.494 multiplier overall:

$$\text{Adjusted expenditure for cellar flooding} = \text{Adjusted regional expenditure} \times 63.1\%$$

Table 3: Overview of the investment and calculation for cellars

Investment Category	Internal Sewer Flooding Over (£m)			Proportion applied for cellars (£m)		
	capex	opex	totex	capex	opex	totex
DG5 Other Causes Repair (a)	56.5	11.5	68.0	27.9	5.7	33.6
DG5 Overloaded Sewer (b)	41.5	2.9	44.4	n/a	n/a	n/a
Proactive Sewer Maintenance(c)	55.9	28.7	84.6	32.5	16.7	49.2
Reactive Sewer Maintenance(d)	n/a	29.2	29.2	n/a	14.4	14.4
UQ Other Causes Repair (e)	10.3	7.3	17.6	5.1	3.6	8.7
Total	164.2	79.6	243.8	65.5	40.4	105.9

Notes:

(a) Includes defined scheme and UQ Base expenditure. Overall flooding investments multiplied by 0.494 for cellar proportion

(b) Minimal expenditure attached to cellared properties for overloaded sewers and therefore not included within calculation

(c) Internal sewer flooding spend is 0.67 of circa £126M (total on proactive sewer maintenance expenditure) and 0.39 applied for proportion of cellars of circa £126M (total proactive sewer maintenance expenditure).

(d) Expenditure based on current spend for reacting and minimising internal sewer flooding and factored by 0.494 to account for the proportion of the flooding.

(e) Includes UQ expenditure (enhancement) and flooding investments multiplied by 0.494 for cellar proportion

Our comparative investment over the last 5 years (to 2017-18) is circa £175m. This has maintained the current flooding levels despite the challenge of our regional operating circumstances. We note that historically when compared to other companies our performance is notably below average.

Table 3 shows the expenditure to achieve upper quartile performance, based upon our analysis of solutions and optimised costs, including efficiencies. This indicates that investment in the region of £243M (excluding the specific investment for Hull and Haltemprice) is required to achieve the level of flooding we have committed to.

Our claim includes our internal efficiency challenge and accommodates our regional circumstance such that the total size of this claim is above our anticipated implicit allowance within cost assessment models.

Our calculation of this cost adjustment claim of £105.9m demonstrates that the increased allowance required represents an efficient incremental cost, over and above that which would otherwise be required within this price control, if flooding was to remain similar to AMP6 levels. However, we know from customer engagement, that the current levels of performance need to improve as set out in section 1.3 of this document.

1.5.2. Consideration of allowances in the round

We have set out above the reasons why we consider it is unlikely that the factors influencing our costs of reducing flooding and moving to upper quartile performance would be captured within Ofwat's econometric models.

We are mindful however, that it is possible that those models may overcompensate Yorkshire Water in other areas and price controls, where our regional circumstances may be favourable relative to other companies. In order to ensure that we are only submitting cost adjustment claims which are prudent and efficient, we have commissioned economic consultants Oxera, to examine the possibility of such overcompensation.

The report found that on a historical assessment basis, there is no evidence to suggest that the claims set out are adequately accounted for in the models produced by ourselves and Ofwat. Further that it is likely that our costs are incremental to those captured in the models. When considered with a history of efficient assessment as set out in the report, that there would not be opportunity to offset the claims through overcompensation in the round.

A copy of their report is appended to this submission and should be considered in conjunction with this claim document and the other supporting evidence we have provided.

1.6. Identifying Best Value Solutions

1.6.1. Option Identification and Evaluation Process

Our approach to reducing flood risk looks to address the multiple causes that can lead to flooding. The clear majority of our flooding incidents relate to other causes, and hence the focus of the options and the amount spent to address this type of flooding is considered here. We recognise that the successful management of sewer flooding requires a basket of interventions that includes:

- **Proactive sewer maintenance:** Inspection (physical, CCTV) and monitoring (the use of sensors) to identify when interventions such as jetting needs to occur (e.g. when a blockage is forming)
- **Reactive sewer maintenance:** Through customer information or where sensors indicate a more urgent response is required
- **Replacement and rehabilitation:** When the asset condition is poor
- **Relining:** To remove minor defects and prevent exfiltration and root ingress
- **Developing higher granularity predictive tools:** To indicate where blockages are more likely to happen
- **Educational campaigns:** Tackling high frequency flooding areas, and running repeat campaigns

We have selected the interventions to cover the range of scenarios that we are faced with. Our approach enables us to balance up the need of being reactive, proactive, pre-emptive and predictive. Our approach will remain flexible over the next AMP, therefore through improved monitoring and evaluation of performance, we may prioritise investment where greater efficiencies are being gained. Furthermore, by regularly reviewing emerging and new technologies, we will enhance the service we provide.

1.6.2. Option Selection

In developing the investment requirement to reduce internal flooding, we have taken three main approaches to:

- Managing deteriorating assets, considered within the proactive sewer maintenance costs.

- Reactive maintenance requirements.
- Further interventions to achieve upper quartile.

Proactive Sewer Maintenance - Deteriorating assets

We have worked with SEAMS and AECOM to update and rebuild our wastewater Asset Deterioration Model¹⁴. This has formed part of our Decision Making Framework (DMF)¹⁵ which is our new optimisation system for PR19.

The deterioration models enable us to quantify risk profiles based on predicted asset failure and identify a set of Capex and Opex interventions to mitigate the risk and prevent the associated service impact. These interventions can be both proactive and reactive as indicated in Table 4.

Table 4: Overview of the interventions for service failures.

Intervention	Proactive capex	Reactive capex	Proactive opex	Reactive opex
Replacement – creates asset life ‘as new’	●			
Renewal – extends asset life	●	●		
Repair – extends asset life locally	●	●		
Cleansing – no change to condition grade			●	●
Customer behaviour campaigns	●			
Combined investments (of above)			●	

Cost models for each intervention were built from different sources. For cleansing, we used data from jobs completed between 2010 and 2017 based on historic costs for operational expenditure to clean the sewer to derive average rates.

¹⁴ Wastewater Infrastructure Asset Model Report by SEAMS

¹⁵ Our Decision Making Framework is explained within section 9 ‘Decision efficiency’ of our Business Plan.

Whereas to determine the rehabilitation costs we used our extensive unit cost databases to derive the capital interventions to replace, renew or repair the network, typically considering location, depth, pipe size and material.

These cost models are built into the DMF, which enables combinations of investments to be evaluated. This occurs for each Drainage Area Zone (300 in total), with different scenarios applied to understand service and cost (as different DAZs require different interventions depending upon the type and magnitude of the service failures). These are then optimised at a Portfolio level using our DMF system to identify the most beneficial, affordable combination of solutions to achieve service (as described in the Decision Efficiency section of our business plan)¹⁴. The scenarios include:

- **No Investment:** The “do-nothing” or “fail and fix” option, in which there is no proactive intervention
- **Maintain:** The maintain scenario tasks the optimiser with finding the lowest cost means of maintaining the current performance i.e. do not allow the number of events for blockages, collapses, flooding (both external and internal) to increase.
- **Improve:** The optimiser is tasked with improving the level of service in every time step.
- **ODI:** The ODI model has no artificial targets and the optimiser is tasked with finding the most cost beneficial solution by balancing the cost of investment in the cohorts against the ODI performance penalties and potential rewards.

The DMF provides an optimal suite of intervention options based upon achieving the required level of service, to address the predominant flooding caused through ‘other causes’. This has driven our cost estimation with additional efficiencies built in. The expenditure for proactive sewer maintenance is £126m, however this provides multiple benefits to reduce pollution and flooding (cellars and habitable areas). Based on proportion of spend that could contribute to each of these areas, flooding in total is 67%, and flooding in cellars is 39%.

Operational expenditure

We evaluated our reactive spend to hold our current position and used this as the basis for the operational expenditure. This considers the number of incidents to respond to (greater than the number of flooding incidents that take place) and make operational interventions across the sewer network. This is typically £5.85m/annum.

Upper quartile focused expenditure

Our third area of focus is the increase in investment to help achieve and maintain the upper quartile performance during AMP7. These were developed by bringing a number of our wastewater experts together from planning and operations to identify, develop and outline interventions that would reduce internal flooding within our region. Table 5 provides an overview of the different elements of investment. The Upper Quartile Investment related to flooding for AMP7 is distributed within two investment categories, 'DG5 other causes repair' and 'UQ other causes repair'.

Table 5 – Overview of the main components of the UQ interventions

Upper quartile intervention	TOTEX (£m)	Description
Network Protection	£3.1	This will provide resource and support to tackle a key element of blockages occurring by engaging the customers and running support initiatives to reduce the inappropriate disposal of solids, fat, oil and grease.
CCTV Resource	£1.3	Dedicated CCTV crews working on proactive and planned investigations to enhance the asset condition knowledge to improve decision making.
Enhanced R&M	£29.8	Covers a wide range of rehabilitation and maintenance activities to fix identified defects, as well working with customers to reduce impacts.
Proactive Find & Fix	£22.5	Replacement, repair and lining interventions based upon the increased proactive investigations.
Service Changes to Operational Contract	£19.1	Increases in the number of units that are targeted to resolve incidents first time and minimize follow up engagement.
AIMS	£0.2	A system that will help manage the flow of data and information from site and enable the real time collection of data that can easily be viewed, combined with historical data and used to make intervention decisions quickly, reducing the impact to our customers.
Blockage Predictor	£0.7	Predictor tool to support the targeting of proactive activity. Developed and enhanced during the AMP.
Total*	£76.7	

*includes base as well as enhancement flooding and pollution expenditure and as such will not reconcile to table 3 in this document.

1.6.3. Efficient Cost

We are currently in the first year of our plan to reduce the number of internal flooding incidents, as such we are still establishing our programme of work that aligns with our upper quartile element outlined in section 1.5.2. We will be monitoring and evaluating its success in reducing the number of incidents and will subsequently apply the learning to our approach within future years. Through this process we will further challenge our costs to ensure the value of the cost adjustment claim is as efficient as possible.

There is a complex mix of potential opex and capex interventions with diverse asset lives which amount to the total investment of £105.9m, we have provided a whole life cost (WLC) in the profoma for this claim, we provide further detail of how this was derived in section 1.5.4. The claim relates to a regional operating circumstance that is likely to endure, and the complex mix of multiple, small-scale interventions both Capex and Opex that will be required means that the issue does not lend itself to a direct procurement (DPC) approach.

1.6.4. Cost Benefit Assessment

1.6.4.1. Methodology

The cost-benefit analysis of schemes for the Cost Adjustment Claims (CAC) compares present value costs and benefits in the need or 'do nothing' scenario with present value costs and benefits in the scenario where the solutions are implemented.

The costs referred to in this instance are the capital and operational expenditure (i.e. Capex and Opex, or Totex), where the costs in the solution are the same as those presented in this claim and in the relevant data tables.

1.6.4.1.1. Cost

The whole life cost calculation is as follows:

- Using the Spackman approach to discounting, Capex is annuitised over 40 years using an annuity rate of 2.4% reflecting the Weighted Average Cost of Capital. This reflects the annual cost of Capex if Yorkshire Water borrows money over 40 years to fund capital expenditure.
- Annuitised Capex and Opex are combined to establish a Totex value, and these are discounted using the HM Treasury Green Book discount rate of 3.5% for the first 30 years, dropping to 3% for the next 10 years. The discounting converts future values into present value terms.

1.6.4.1.2. Benefits

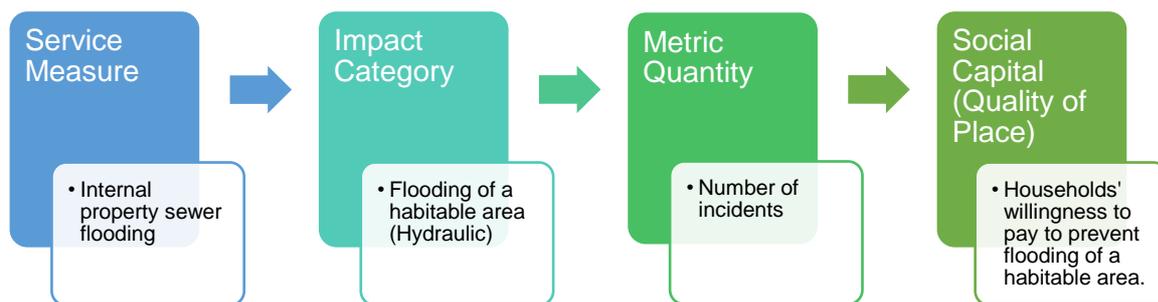
The benefits are measured and valued according to the different service measure impacts on natural, social, human, financial and manufactured capital. The monetary values of the different relevant capitals for each service measure has been estimated using different techniques, including benefits transfer (i.e. using available and relevant information from existing studies and adjusting where necessary), desk-based studies and primary research.

Additionally, different economic valuation approaches were used in the estimation of these values. This includes price or cost approaches (using market price as a proxy for economic value), revealed preference valuation and stated preference valuations. The diagram below shows an example of how a change in service translates to a benefit impact (please see Section 9 ‘Decision Efficiency’ of our main narrative for a description of Yorkshire Water’s Service Measure Framework).

The introduction of a solution leads to an improvement in service relative to the need scenario (e.g. reduction in number of incidents of internal sewer flooding affecting habitable areas).

The total benefit value of a service measure impact at a point in time equals the unit benefit value for that service measure impact (e.g. the customer willingness to pay (£) (WTP) to prevent one incident of sewer flooding of a habitable area) multiplied by the quantity of service impact (e.g. number of incidents).

Figure 5 process flow



As with costs, benefits are also adjusted in present value terms.

The cost-benefit analysis is performed for the needs and associated solutions for each Cost Adjustment Claim, where the net present value benefit is calculated by:

$$\left(\sum PVcost_{need} - \sum PVcost_{solution} \right) + \left(\sum PVbenefit_{need} - \sum PVbenefit_{solution} \right)$$

For a given period, a net beneficial scheme is one where the total present value costs and benefits in the need scenario are greater than the total present value costs and benefits in the solution scenario. We have used a 40-year period for the cost-benefit analysis.

1.6.4.2. Cost Benefit Analysis results

In the Proforma at the front of this claim we have estimated a Whole Life Cost for the claim value only. This has been calculated on the same basis as our claim value (as a proportion of the total cost associated with sewer flooding).

However for the cellar flooding claim CBA, we have included all costs and benefits associated with internal flooding. This is because the modelling of the relationship between internal flooding incidents and costs considers both above (habitable areas) and below (cellars) ground flooding.

The table below shows the results of the cost-benefit analysis for internal flooding.

Table 6 – Internal sewer flooding cost benefit analysis

Investment Need	Cost/Benefit	AMP7 total PV	40-year total PV
Internal flooding schemes	$\sum PVcost_{need} - \sum PVcost_{solution}$	-£35.117m	-£698.445m
	$\sum PVbenefit_{need} - \sum PVbenefit_{solution}$	£52.211m	£1,097.867m
	net benefit	£17.094m	£399.423m

The benefit values are associated with four Capitals: Social, Human, Financial and Manufactured Capitals.

The Social Capital value comes from household customers' willingness to pay to avoid internal flooding and the monetised impact on customer bill payments following an internal flooding incident (as used as a proxy for the value of trust). The present value of this Social Capital benefit over AMP7 is around £48m and just over £1bn over 40 years, highlighting the large benefits of reduced internal flooding to our household customers.

The Human Capital value comes from business customers' willingness to pay to avoid internal flooding, valued at around £3.1m in AMP7 and around £66m over 40 years.

The Financial and Manufactured Capitals value come from avoided private costs associated with clean-ups and investigations after an internal sewer flooding incident. The present value of this benefit is around £877.6k over AMP7 and around £12.6m over 40 years.

Whilst an overall assessment through CBA concludes that the scheme(s) are not net beneficial over 40 years, we would argue that we have ensured that it is the most cost

effective solution to deal with the consequences of complying with our statutory obligations.

Table 7 – Benefit breakdown by associated capital category

Capital benefits	AMP7 total PV (£m)	40-year total PV (£m)
Social Capital	£48.220m	£1,019.133m
Human Capital	£3.113m	£66.117m
Financial and Manufactured Capitals	£0.878m	£12.617m
Total	£52.211m	£1,097.867m

In table 8 to 10 we show the total benefit for only cellar flooding incidents at cellared properties by their cause whether that is hydraulically overloaded or other causes. In table 9 and 10 we further breakdown these benefits in to the associated capital benefits by category, for example whether it is a social or human capital by hydraulically overloaded cellar flooding incidents.

Table 8 – Benefit breakdown by cause – cellared properties only

Benefits by cause	AMP7 total PV	40-year total PV
Flooding of a cellar (hydraulics)	£9.675m	£136.471m
Flooding of a cellar (other causes)	£3.808m	£28.873m
Total	£13.484m	£165.344m

Table 9 – Benefit breakdown for flooding of a cellar (hydraulics) by associated capital category

Capital benefits	AMP7 total PV	40-year total PV
Social Capital	£8.621m	£121.602m
Human Capital	£0.537m	£7.577m
Financial and Manufactured Capitals	£0.517m	£7.293m
Total	£9.675m	£136.471m

Table 10 – Benefit breakdown for flooding of a cellar (hydraulics) by associated capital category

Capital benefits	AMP7 total PV	40-year total PV
Social Capital	£3.393m	£25.727m
Human Capital	£0.211m	£1.603m
Financial and Manufactured Capitals	£0.204m	£1.543m
Total	£3.808m	£28.873m

1.7. Protecting stakeholders' interests

1.7.1. Alignment with Outcomes and Incentives

The primary outcome that this claim links to is Internal sewer flooding. Our plan has set an ambitious target to allow us to achieve a comparable level of upper quartile performance (on a forecast basis). The claim supports delivery of this performance commitment target given our regional operating circumstance with regard to the proportion and number of cellared properties within our area.

There are secondary links to Operational Carbon, Sewer Collapses, Wastewater flooding risk and External Sewer Flooding as shown in table 11 below.

Table 11 – Cellared properties links/alignments to outcomes (as shown in APP1)

Performance commitment	Cellared properties cost adjustment claim
Operational Carbon	Part
Internal Sewer Flooding	Part
Sewer Collapses	Part
Wastewater flooding risk	Part
External Sewer Flooding	Part

Our underperformance payment for our internal sewer flooding PC is set at the value that customers place on an internal property flooding based on a weighted average incident type (whether that be habitable or cellared). It is therefore higher than the value they place on a internal incident in a cellar only.

The claim is clearly linked to a performance commitment and outcome that is appropriately incentivised with the underperformance payment being larger than customers valuation of incidents on cellars which this claim relates to.

See Appendix 19c: Performance commitments & ODIs' for additional information.

1.7.2. Reduction or Cancellation of Investment

We are not proposing a mechanism to protect customers from the reduction or cancellation of the investment relating to this claim for the following reasons:

- **Service improvement:** The claim relates to the increased cost, due to our regional operating circumstance, of achieving comparable levels of service for internal sewer

flooding. As such there will be no reduction of or cancellation of this investment as it is required to achieve what will be our contracted regulatory targets with respect to internal sewer flooding.

- **Claim type:** This is a regional operating circumstance due to the proportion of cellared properties we have in our operating area in comparison to other areas. As such the issue, and therefore the claim, is enduring in that the costs will be required in the AMP as the proportion of cellared properties in our area will not materially change.
- **Incentive rate:** As set out in section 1.6.1 we think that customers are adequately protected through the underperformance rate set for internal sewer flooding incidents.

1.8. Assurance

The Yorkshire Water Board has reviewed this cost adjustment claim and satisfied itself that the investment proposals are robust and deliverable and result from an appropriate option appraisal process and that the proposed solution is in the best interests of our customers.

As part of this they have signed a board assurance statement that relates to the whole of the business plan, including a statement relating to our use of cost adjustment claims.

“The Board has made responsible use of cost adjustment claims ensuring that the majority of costs are exposed to the efficiency challenge. It has only proposed claims where there are conditions it considers to be specific to the Company’s operating circumstances.”¹⁶

To support this statement relating to cost adjustment claims the board were presented with the findings of our external assurance. All of the cost adjustment claims submitted as part of our plan have been subject to third party independent assurance from Jacobs. We have taken on board all of the audit actions and queries and provided sufficient responses and amendments that means all claims submitted have no outstanding material audit issues (red or amber status).

¹⁶ ‘Chapter 3, Board assurance statement’, Page 6, paragraph 5.

YORKSHIREWATER.COM

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Part of Appendix 8k:
iii. MORI Report 1998
Author: Market & Opinion Research International

From: Simon Matthews on 15/01/98 09:04
To: Paul Freckleton/Operations/YWS/Yorkshire Water@Yorkshire Water
cc: Steve Howard/Capital Development/YWS/Yorkshire Water@Yorkshire Water
Subject: Cellars Research & Customer Impact Survey

1.i. Cellars Research - Resume of the Reasons for the Preponderance of Cellars in Yorkshire

The expansion of West Yorkshire's economy in the late 18th and 19th centuries resulted in a phenomenal and unprecedented growth in population, much of which was concentrated in the towns and villages of the manufacturing districts.

The immigration of workers from the surrounding countryside and places such as Ireland increased the demand for urban housing. The vast majority of urban houses built to accommodate the working classes were back-to-backs - these could achieve the greatest density of housing and economised on building materials. The back-to-back house is a peculiarity of the North of England, but in West Yorkshire (particularly Leeds), the back-to-back was literally so, with no back door and no back yard. Cellars were common in the later back-to-backs as a means of providing additional storage space for food and fuel.

While most areas of the country saw a cessation of the building of back-to-backs from the late 19th century as a result of the Public Health Act, builders in Yorkshire (particularly in Leeds) ignored the bye-laws and went on building back-to-backs (with cellars) until 1937. A Government report in 1888 noted that 'in all of the large manufacturing towns of Yorkshire, back-to-back dwellings have been, and are still being, built to a considerable extent.'

An alternative to back-to-backs were the cellar dwellings which were common in all West Yorkshire towns during this time (eg. there were some 300 in Halifax in 1851) - cellar dwellings comprised a single room built beneath a cottage, and were occupied by the poorest town-dwellers. In addition, the vast majority of 2 storeyed mill workers' houses built in the second half of the 19th century were provided with cellars, which were often provided in preference to outshut pantries to economise on land. Cellar workshops were also a feature of some cottages in the industrial areas of Yorkshire. For example, dwellings with cellar loomshops were a characteristic building type in Barnsley, the principal linen-weaving town in the county in the 19th century, though not many survive today.

In the late 19th century, slum clearances (under the Housing of the Working Classes Act of 1890) removed many cellared properties across the country. However, this was permissive legislation (allowing local authorities to clear areas if they wanted to) and many 'slum' areas in West Yorkshire were left untouched. As a result, many cellared properties have survived in Yorkshire.

1.ii. List of Organisations & People Consulted

Royal Commission on the Historical Monuments of England Colum Giles	Dr Ian Goodall &
University of Leeds (School of Geography)	Dr Martin Pervis
West Yorkshire Archaeology Service (Industrial Archaeology Section)	Helen Gomersall
Yorkshire Archaeological Society (Industrial History Section)	Margaret Tyler

2. Customer Impact Survey

Following on from the cellars research, MORI have been commissioned to conduct a telephone-based survey which aims to establish the impact that internal property 'flooding' (including escapes of water or sewage) has on customers.

It is hoped that the survey will capture the views of up to 200 customers whose properties have been thought to have been affected by 'other causes' 'flooding' in the last 9 months. The survey seeks to determine the customers' perception of the 'flooding', the degree to which it caused them inconvenience and affected their property (particularly if they have a cellar/basement), and their perception of the service provided by Yorkshire Water in dealing with the event.

The interviews will last 10 minutes and are set to be conducted by MORI in the next 7 days. The results of the research will be available by early/mid February.

Cost of survey: £8,000

From: Simon Matthews on 16/03/98 14:15

To: Paul Freckleton/Operations/YWS/Yorkshire Water@Yorkshire Water

cc: Steve Howard/Capital Development/YWS/Yorkshire Water@Yorkshire Water

Subject: Cellars Research

1. Cellars Research - Resume of the Reasons for the Preponderance of Cellars in Yorkshire

The expansion of the English economy in the late 18th and 19th centuries resulted in an increase in population, much of which was concentrated in the towns and villages of the country's manufacturing districts. In this regard, West Yorkshire was particularly noteworthy, experiencing a phenomenal and unprecedented growth in population - Bradford, for example, had an astonishing growth rate of 5.9% per year in the decade from 1821, while in Leeds the population rose from 152,000 in 1841 to 429,000 by 1901.

During this time, the immigration of workers from the surrounding countryside and places such as Ireland increased the demand for urban housing. The vast majority of urban houses built to accommodate the working classes were back-to-backs - these could achieve the greatest density of housing and economised on building materials. The back-to-back house is a peculiarity of the North of England, but in West Yorkshire, the back-to-back was literally so, with no back door and no back yard. Cellars were common in the later back-to-backs as a means of providing additional storage space for food and fuel.

An alternative to back-to-backs were the cellar dwellings which were common in all West Yorkshire towns during this time (eg. there were some 300 in Halifax in 1851) - cellar dwellings comprised a single room built beneath a cottage, and were occupied by the poorest town-dwellers. In addition, the vast majority of 2 storeyed mill workers' houses built in the second half of the 19th century were provided with cellars, which were often provided in preference to outshut pantries to economise on land. Cellar workshops were also a feature of some cottages in the industrial areas of Yorkshire. For example, dwellings with cellar loomshops were a uniquely characteristic building type in Barnsley, the principal linen-weaving town in the country in the 19th century.

While most areas of the country saw a cessation of the building of back-to-backs from the late 19th century (the Public Health Act of 1909 banning them "except in streets already approved"), builders in Yorkshire (almost uniquely) made use of this loophole and continued building cellared back-to-backs until 1937. A Government report in 1888 noted that 'in all of the large manufacturing towns of Yorkshire, back-to-back dwellings have been, and are still being, built to a considerable extent.' It is estimated that in the 30 years to 1914, 40,000 back-to-backs were built in Leeds.

In the late 19th century, slum clearances (under the Torrens and Cross Acts of 1868 and 1874, and the Housing of the Working Classes Act of 1890) removed many cellared properties across the country. However, this was permissive legislation (allowing local authorities to clear areas if they wanted to) and many 'slum' areas in West Yorkshire were left untouched. Such reticence by the West Yorkshire authorities to embrace improvements in housing, can be contrasted with the actions of other urban areas of the country. Manchester, for example, took the lead in the 1830s and 1840s with a determined effort to prevent the building of new slums and to eliminate the worst aspects of those it already had. Indeed, while there is evidence that this initiative lost its momentum in later years, the programme of house demolitions and re-conditioning in Manchester between 1868 and 1872 still led to over 2,400 cellar dwellings being closed down. It is believed that 'skewed survival' partly explains why West Yorkshire is home to such a relatively high proportion of cellared properties compared with other major urban areas such as Greater Manchester.

Geographically-selective legislation also played its part in creating regional differences in housing. The Building Act of 1878, for example, sounded the death-knell for cellars and basements in London as it imposed minimum requirements for foundations and damp-proof

courses for new houses in the capital city which made cellars more difficult and expensive to construct.

In addition, Professor Daunton of University College London postulates that differences in pre-First World War architectural forms across England and Wales may be explained, in part, by variations in workers' wages and housing rents. In Bradford, for example, where the ratio of wage:rent was 1.4 in 1905, the typical architectural style in the West Riding of Yorkshire was the back-to-back which divided the terraced cottage vertically rather than horizontally. Elsewhere in England and Wales, the through terraced house was the overwhelming form of working class accommodation, varying in size from the simple 'two up, two down' of Lancashire (Blackburn had of wage:rent ratio of 1.7), to the larger properties in the Midlands and the South which had back extensions on one or more floors (Leicester having a 2.0 ratio).

2.i. List of Organisations & People Consulted

English Heritage	Richard Bond
Historic Buildings Consultants Robinson	John Martin
Royal Commission on the Historical Monuments of England	Dr Ian Goodall
University of Leeds (School of Geography)	Dr Martin Pervis
West Yorkshire Archaeology Service (Industrial Archaeology Section)	Helen Gomersall
Yorkshire Archaeological Society (Industrial History Section)	Margaret Tyler

2.ii. References

Caffryn, L. 'Workers Housing in West Yorkshire' (1973)

Daunton, M.J. (ed) 'Housing the Workers, 1850 - 1914' (1990).

Roberts, J. 'Working Class Housing in Nineteenth Century Manchester' (1993).

INTRODUCTION

This report presents the findings of a survey conducted by MORI (Market & Opinion Research International) on behalf of Yorkshire Water.

Background

The aim of the survey is to establish the consequences of recent water escapes (either flooding, a water or sewage escape or a damp patch) which affected customers' homes (mainly cellars and basements). This includes the degree of use made of cellars, the amount of damage, the inconvenience and hassle caused by the water escape losses incurred. In addition, customer perceptions of Yorkshire Water after the water escape are also established, including satisfaction with treatment, overall efficiency, the resulting outcome, awareness of a guaranteed standard of service, compensation and expectations.

Methodology

57 pocs / docs

A total of 110 interviews were conducted via telephone between the 19th and 28th of January 1998 with either the complainant, the billpayer or their spouse/partner. On average, the interviews lasted for a duration of 12 minutes.

Yorkshire Water provided a sample of names and addresses of customers who have experienced either flooding, an escape of water or sewage or a damp patch, and have made a complaint about the event. The sample was stratified to include POC, DOC and IOC customers. Unfortunately the sample provided included a substantial number of duplicates (names, addresses and/or phone numbers) making 110 interviews the maximum attainable.

Interpretation of the Findings

Details of statistical reliability, a marked-up questionnaire and computer tables are to be found in the Appendices.

Where an asterisk (*) appears, it indicates a percentage of less than one half of one per cent, but greater than zero.

MAIN FINDINGS

Cellars and Basements

Respondents were asked whether any part of their home is a cellar or basement. Four per cent say they have a cellar within their home, and one per cent that they have a basement; less than one per cent have both.

There are differences in the proportion of homes having cellars between water regions, with Yorkshire recording the highest (14%). The variation is considerably less for basements, although Yorkshire again has the highest proportion (three per cent). Within the Yorkshire Water region, the proportions again vary widely for those having a cellar, with the highest in Sheffield Central (49%), followed by Halifax and Leeds West (33% and 28% respectively). The latter - Leeds West - also has the highest level of basements (11%).

There are also differences between tenures. Households living in "other" tenures (mainly private rented accommodation) are most likely to have cellars and/or basements (nine and three per cent respectively), while those in council/housing association homes are the least (one per cent each).

QB1 Is any part of your home a basement or cellar?

	%			
Yes:				
Cellar				5
Basement				4
Both				1
No				*
				95
	Yes			No
	Cellar	Basement	Both	
	%	%	%	%
Total	4	1	*	95
Water Region				
Yorkshire	14	3	*	84
Welsh	1	1	0	98
North West	5	*	*	94
Northumbrian	*	*	0	100
Southern	5	2	*	93
Anglian	1	*	0	98
Wessex	1	2	*	97
South West	2	2	0	97
Thames	3	2	*	96
Severn Trent	5	*	*	95
Scottish	4	1	*	95
Yorkshire Water Region				
Barnsley East & Mexborough	14	0	0	74
Bradford South	16	2	0	72
Halifax	33	3	1	54
Hull East	0	0	0	89
Hull North	1	0	0	89
Keighley	7	7	1	77
Leeds West	28	11	0	55
Pudsey	15	2	0	72
Rotherham	8	3	0	82
Selby	0	0	0	91
Sheffield Central	49	6	0	36
Sheffield Hallam	19	0	0	73
Vale of York	5	1	0	83
City of York	*	2	0	89
Yorkshire East	1	1	0	89
Tenure				
Owner-occupier	5	1	*	94
Council/HA tenant	1	1	*	99
Other	9	3	*	88

Base: All (19,656)

Property Type

Respondents in homes with a cellar were asked, in eight of the ten waves of the Omnibus, about the type of property they live in. Nearly all (94%) are living in houses or bungalows, mainly mid-terrace (46%), with six per cent in flats or maisonettes.

Yorkshire is above average for respondents with cellars living in houses, particularly mid-terrace (99% and 65% respectively).

QB5 *Can I just check, what type of property is your home?*

	%
House/bungalow:	94
Detached	18
Semi-detached	18
End terrace	13
Mid-terrace	46
Flat/maisonette:	6
Purpose-built	2
Converted	4

	Total	House/bungalow				Flat/maisonette	
		Det- ached	Semi- det- ached	End terrace	Mid- terrace	Purpose- built	Con- verted
	%	%	%	%	%	%	%
Total	94	18	18	13	46	2	4
Water Region							
Yorkshire	99	14	7	14	65	0	1
Welsh	93	7	7	0	79	7	0
North West	100	6	20	20	53	0	0
Northumbrian	100	0	0	0	100	0	0
Southern	98	34	13	15	35	0	2
Anglian	100	59	31	0	10	0	0
Wessex	88	34	0	23	25	0	18
South West	100	26	25	0	48	0	0
Thames	86	17	23	7	39	2	12
Severn Trent	98	16	19	16	47	0	2
Scottish	73	20	37	5	11	17	10

Base: All with cellar at Waves 3-10 (585)

Use of Cellars

Respondents who say their home has a cellar were asked from a list what, if anything, they use it for. Nine in ten (89%) say they do use it, while 11% do not. The most frequently mentioned use is to store non-valuable or discarded items (64%). Around one in four (26%) say they use it to store valuable goods, followed by storing utility or domestic appliances (18%). One in eight mentions using their cellar for a hobby and the heating or boiler system (13% and 12% respectively), while eight per cent store fuel there.

There is little variation in usage by region or tenure.

Part of Appendix 8k:
**iv. Not Just Water – Strategic
Direction 2018**
Author: Yorkshire Water

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OUR STRATEGY IN BRIEF

The 5.4 million people who live in Yorkshire and the millions of people who visit Yorkshire each year rely on our services for their basic health needs and lifestyles. 140,000 businesses use our water to provide goods and services that support the economy, not just of Yorkshire, but the whole of the UK.

This document sets out Yorkshire Water's proposed strategy for the decades ahead of us. We've not developed this in isolation, but have looked closely at the future economic, social and environmental issues which Yorkshire faces and spoken at length to our varied and diverse customers and stakeholders.



We've taken care to analyse the pressures we face such as population growth and changing weather patterns and to understand the rich and diverse community that we serve here in Yorkshire. We've looked at how that community is made up now and how that will change in the future.

We set out to better understand what people value in their lives and the role water plays in that. We've investigated how customers with different lifestyles rely on water in different ways and we've looked at how some people are much more dependent on their supply for a range of religious or medical reasons.

We have also taken a step back and thought about how we, as a company, impact on Yorkshire's environment, its people and economy as we carry out our activities.

We have asked where we can do better to improve what we do, how we do it and how we can work better with others to make sure that the people of Yorkshire get the best all round value for what they spend on water. We have also realised that people need to have trust in our ability to serve them now and into the future, whatever the conditions, and that they want to be able to trust in us.

As well as talking directly to thousands of our customers about what they want and need from us, we've also engaged with the Yorkshire Forum for Water Customers, which has given us valuable insight into what our customers want from us now and into the future. The Yorkshire Forum for Water Customers is an independent challenge group that is responsible for ensuring our customers' views are fairly reflected in our business plan and ensuring we meet the performance commitments we have made to customers.

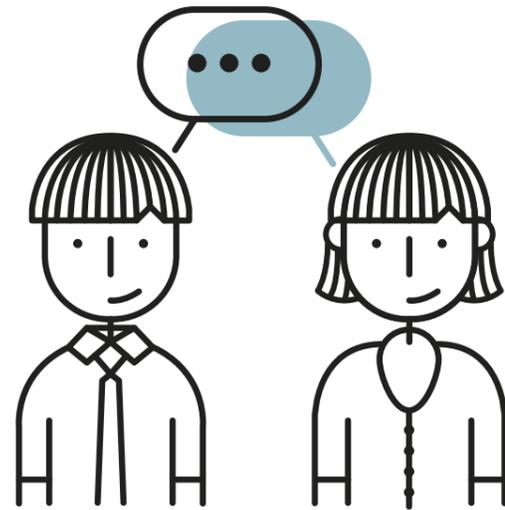


Research into customer lifestyles and analysis from data.

Research to understand customers with special water needs.

Research on customer satisfaction with service and value for money.

Research into customers' hopes for the future.



CUSTOMER RESEARCH AND ENGAGEMENT PROGRAMME

We have carried out extensive research, using new and innovative methods alongside tried and trusted ones.

We have worked with customers and stakeholders in lots of different ways including research projects, monthly customer trackers, focus groups, round table events with our directors, stakeholder briefing sessions and new ideas like the Hull and Haltemprice Charrette. In the Charette we engaged with various customers and stakeholders to collaboratively design a vision for future flood alleviation schemes in Hull.

We have created an online community which has over 1000 customers in it who regularly comment on and take part in research on a host of different subjects related to topics like customer service, reporting, our plans for the future or even just the way in which we communicate with them.

This engagement, alongside our regular interactions with customers and stakeholders has given us a much improved insight into the diverse and changing needs of our customers and stakeholders.

THIS IS HOW YOU HAVE HELPED SHAPE OUR STRATEGY SO FAR:

1. Understanding your perceptions of our service
2. Identifying what services have the greatest value to you
3. Determining your long-term aspirations, helping us create our five big goals
4. Understanding your own personal needs and wants from our services
5. Understanding the priorities of Government, regulators and customer representative bodies, such as the Consumer Council for Water, Citizens Advice and the Alzheimer's Society

FROM OUR ENGAGEMENT SO FAR OUR CUSTOMERS' MAIN PRIORITIES ARE:



They want a secure supply of drinking water and for any service failures by us to have a minimal impact on their lives



Customers expect us to lose much less water in leakage



We are expected to prevent sewage escapes damaging homes and the environment



They want us to help prevent flooding



Customers expect us to keep our bills affordable

OUR 5 BIG GOALS:

The proposed strategy sets out five big goals, based on our analysis of future pressures and what our customers and stakeholders have told us. It says how we're going to meet them. It asks five questions that we're hoping customers will help us to answer so that we can refine and finalise the plan, knowing that it meets the needs of all stakeholders.

1. CUSTOMERS: We will develop the deepest possible understanding of our customers' needs and wants and ensure that we develop a service tailored and personalised to meet those needs.

2. WATER SUPPLY: We will always provide you with enough safe water, we will not waste water and always protect the environment.

3. ENVIRONMENT: We will remove surface water from our sewers and recycle all waste water, protecting the environment from sewer flooding and pollution.

4. TRANSPARENCY: We will be a global benchmark for openness and transparency.

5. BILLS: We will use innovation to improve service, eradicate waste and reduce costs so no one need worry about paying our bill. We will not waste money.

WE WANT YOU TO TELL US WHAT YOU THINK ABOUT OUR PLANS.

Signed on behalf of the members of the Board of Yorkshire Water

HOW TO GET INVOLVED

This document will tell you everything we've learned from talking to customers, the Yorkshire Forum for Water Customers and from other stakeholders. It sets out how we'll be facing future challenges in a way that is resilient, sustainable and affordable for all.

We want to check if you think we have got this right.

HERE ARE SOME QUESTIONS WE'D LIKE YOU TO ANSWER:

1. Have we got our understanding of our customers' wants and needs right and are there other issues that we should be considering?
2. Are the assumptions we're making about the economy and environment of Yorkshire correct and are there any further factors that we should consider?
3. Are there any other ways in which we should be looking at our impact on society?
4. Do you agree with the reasons why we think we need to change the way we work?
5. Do you think that our five big goals are the right ones - are there any other big issues we've missed?

TO TELL US WHAT YOU THINK YOU CAN ANSWER THESE QUESTIONS ON OUR SURVEY PAGE YORKSHIREWATER.COM/BIGGOALS



YORKSHIRE'S PROFILE - ITS PEOPLE

A GROWING POPULATION

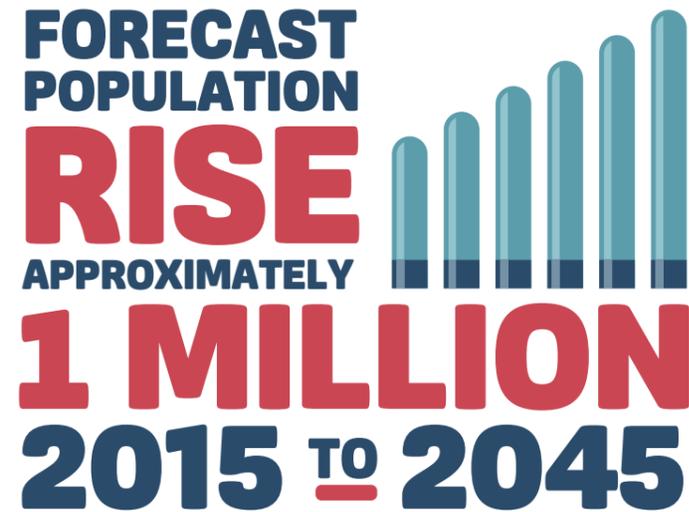
Our research tells us that there will be many more people in Yorkshire as we move into the future. The population has increased sharply over the last 35 years and is expected to keep growing. Yorkshire households are predicted to increase by 30% by 2033, with a third of that growth coming from an increase in single person households.

This will have an impact on our services, as we will need to meet the needs of more people in the future.

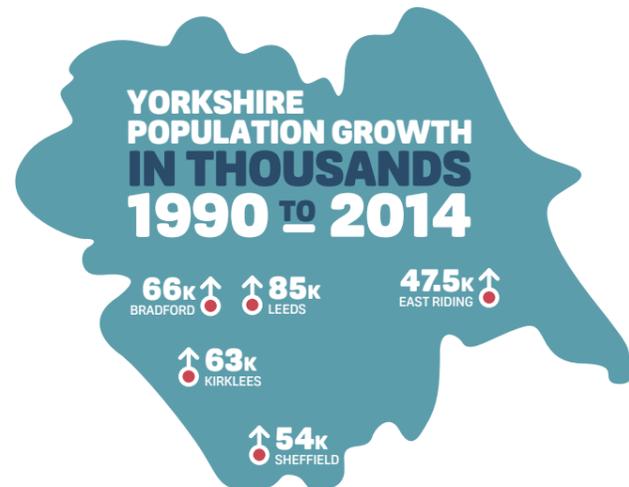
We need to meet the demands of a growing population without increasing our impact on the environment and without impacting on people who are struggling to pay their bill. To do this we need to find new ways of managing increasing demand for water and waste water services.

OUR CHANGING COUNTY

We need to be sure that we can continue to provide our services into the future. To help us do this we work with experts to understand what the population of Yorkshire will look like in the future. The population of Yorkshire is likely to increase by around 1 million people by 2045. We need to make sure that we have plans in place to meet the needs of a growing population whilst keeping our bills as low as possible.



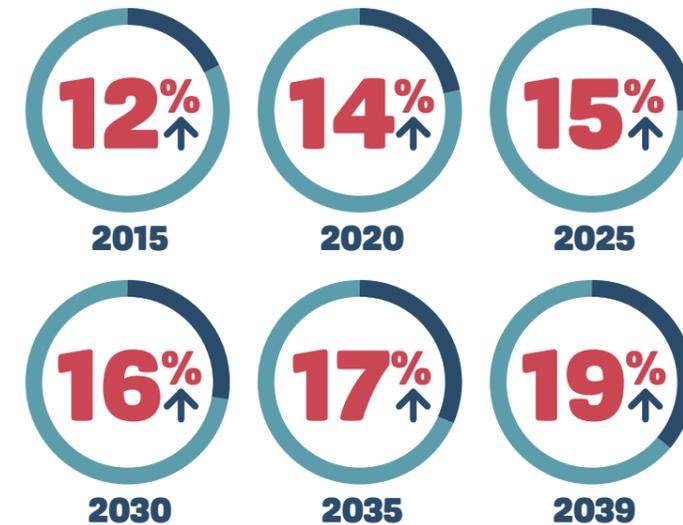
We also understand that the population is likely to grow more in the towns and cities than in the countryside. To plan properly we need to understand where population growth is most likely to occur.



WE ARE LIVING LONGER

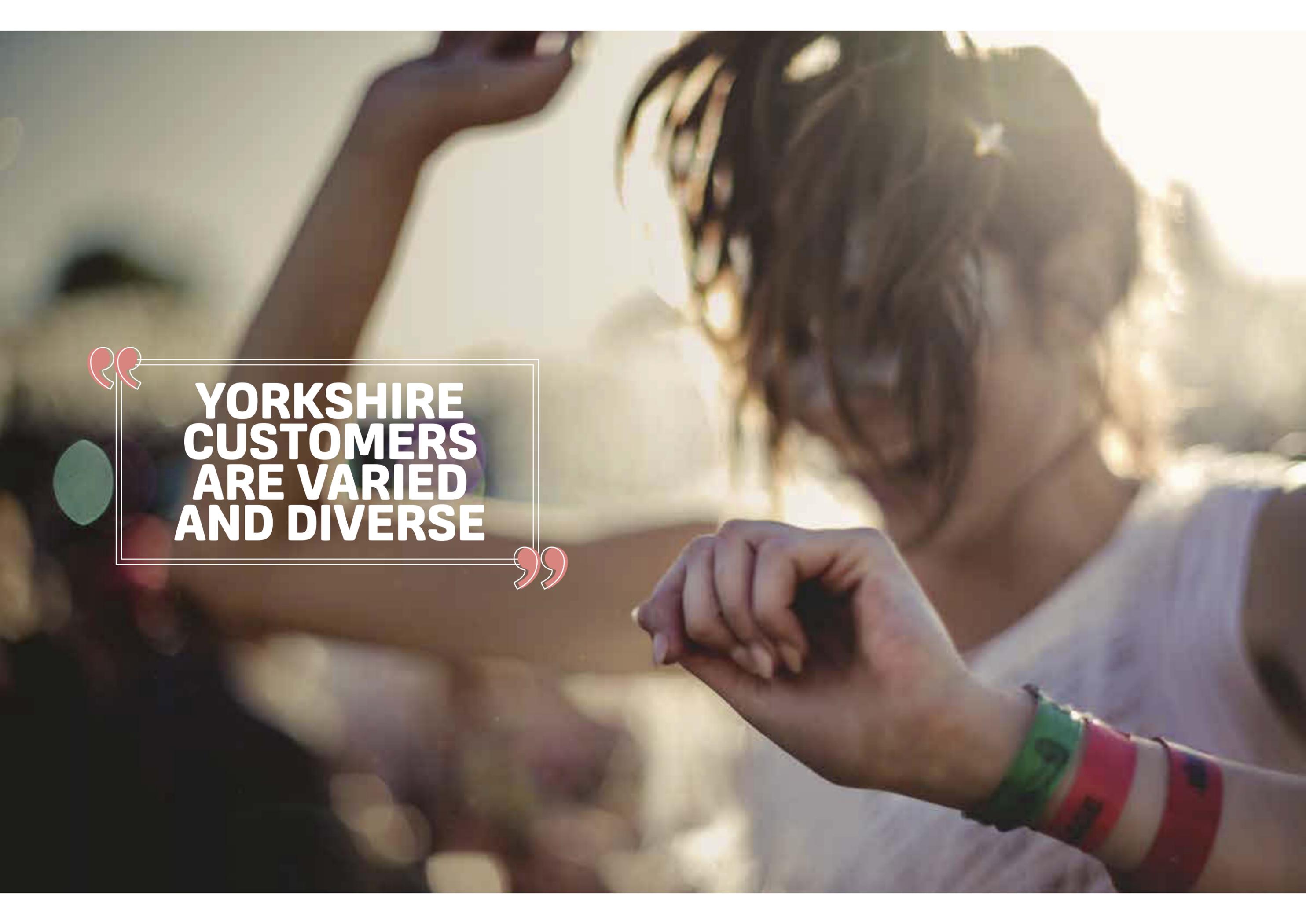
To make sure that we meet the needs of our varied and diverse communities we also try and understand who lives in Yorkshire so that we can make sure they have access to the services they need from us.

WHAT WE DO KNOW IS THAT PEOPLE ARE LIVING LONGER. THE BELOW DIAGRAM SHOWS % OF YORKSHIRE POPULATION OVER 70 YEARS OLD.



So what does this mean to us? We want to do things differently to meet the needs of a growing population. Rather than abstracting more water, we will use innovation and technology to help us massively reduce leakage. We're also working with big industrial water users to find other sources of water to use where drinking water is not needed. This means that the same amount of high quality drinking water we produce now, can meet the needs of more people - keeping bills low for everyone.

Source 1: Office of National Statistics, Population estimates
Source 2: Office of National Statistics, Population estimates - local authority based by five year age band, 2016
Source 3: Office of National Statistics



**YORKSHIRE
CUSTOMERS
ARE VARIED
AND DIVERSE**



THE CHARACTERISTICS OF YORKSHIRE CUSTOMERS ARE VARIED AND DIVERSE

Whilst water is important to the day-to-day function of all households in Yorkshire, a disruption to our water supply however could be critical to some of our customers.

We set out to better understand what people value in their lives and the role water plays in that. We've investigated how customers with different lifestyles rely on water in different ways and we've looked at how some people are much more dependent on their supply, perhaps for religious or medical reasons.

WE UNDERSTAND THAT PEOPLE IN DIFFERENT TYPES OF CIRCUMSTANCES HAVE DIFFERENT NEEDS OF US. SO, IT IS IMPORTANT WE IDENTIFY THIS QUICKLY AND PROVIDE TAILORED SERVICES AND A LEVEL OF RESILIENCE TO MAKE SURE THOSE SERVICES ARE NOT INTERRUPTED. FOR EXAMPLE:

- A changing demographic will often mean customers spend more time at home, increasing water usage and making them more reliant on supplies.
- People with many long-term health conditions rely on water for treatment and medication. Access to regular washing and cleaning is also more important in these circumstances.
- Around 20% of people in Yorkshire have a disability or life-limiting long-term health condition.¹
- Economic conditions and small or no growth in wages mean that customers can be vulnerable to financial pressures and at risk of arrears.
- In 2016, there were an estimated 308 people of a pensionable age for every 1,000 people of a working age. By 2037, this is projected to increase to 365 people.²
- Some religious practices are heavily dependent on clean water.

THIS INSIGHT SHOWS US THAT WE NEED TO

- Know our customers and their specific needs.
- Tailor our services even more than we do now.
- Be aware of the impact of our services on customers' lives.

Our colleagues have millions of interactions with the people of Yorkshire each year. We take our role in society seriously and are committed to playing our part in safeguarding our colleagues and those we meet.

Protecting those at risk relies on early intervention. Our dedicated Safeguarding Officer is leading our partnerships with local authorities, charities and the police to empower our colleagues to report safeguarding issues. We intend to lead the way in raising awareness of these risks and showing how businesses can play a part in protecting those who are most vulnerable.

There is a lot that we already do to provide specific services, for example by providing Braille bills, and our Resolve and Water Sure support schemes. However, when we look at the numbers of people who may need some additional support it doesn't match what we would expect to see when we look at national statistics about people who have specific needs or may be struggling to pay their bills.

We want to know the people living in Yorkshire better so that we can be sure we offer and deliver what is needed to provide a much more inclusive service; reaching more people who need help and support.

We are forming relationships with local charities and organisations who can provide us with a much more detailed picture about people. We will do this either through data sharing or by working with them to open up a communication channel to people we haven't previously been able to talk to. This will develop the services we offer so that we know they are effective.

Our improved customer knowledge will allow us to better plan for emergencies, arrange planned disruptions to our services in specific areas around customers needs such as religious holidays and ensure we are supporting all the communities in Yorkshire.

¹Papworth Trust, Disability in the United Kingdom 2013, Facts and Figures
²Office of National Statistics

TAILORING OUR SERVICES

We now have a detailed picture of the diverse communities and cultures that we serve.

We have had conversations with our customers and they've told us about their specific needs and how we can tailor our services to meet them better. We will continue this conversation with our customers to make sure that we never lose sight of what people want or need from us, or the impact we have on the people of Yorkshire.



YOUNG FAMILIES

Having to use bottled water if supplies are interrupted causes problems for families with young children who need to be bathed - many would be worried about heating it up to the right temperature. This also applies to parents of very young children as making up baby formula with bottled water is not recommended.



MANUAL WORKERS

Customers who have more manual occupations have told us that it's important for them to be able to shower, particularly in summer, after a physically demanding day at work.



CARERS

If a customer is caring for someone, an interruption to the water supply can cause real problems with things like administering medication, cleaning and washing.

Providing bottled water in these situations does not solve the problem.



UNDERSTANDING SPECIFIC NEEDS

For some customers the worst aspect of an unplanned disruption would be the psychological and emotional impact of an unexpected cut-off and the disruption this would cause. It could be particularly disruptive for those who need particular types of care as it can often be very important to maintain a set routine. Plus the shock and uncertainty of a situation could cause anxiety which could exacerbate some conditions.



RELIGIOUS COMMUNITIES

Our understanding of our communities allows us to understand the impact we can have on cultural and religious activities and celebrations. For example, water quality is essential for customers during religious or cultural events:

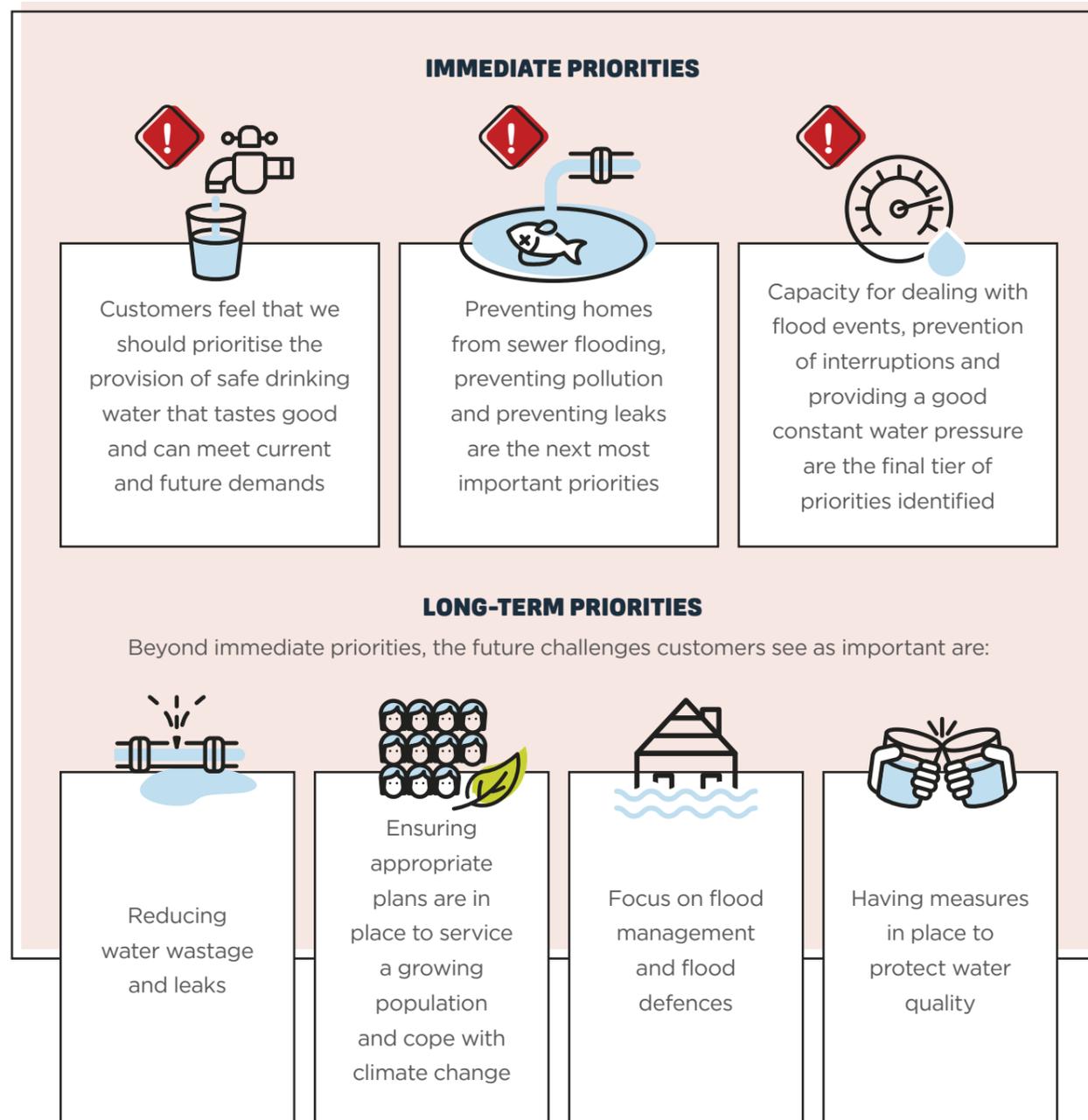
- Strict bathing practices prior to prayers.
- Availability of water at certain times during fasting periods.
- Water can be used as part of a prayer ritual.

Knowing the cultural and religious value of water enables us to understand how our services can have positive and sometimes negative impacts - we want to continue to improve our support of the diverse community we serve now and into the future.

We have talked with our customers about the things that worry them, now and into the future, in broad terms and in relation to water.

Our customers have a real concern about the future security of a safe, reliable water supply and how much this could cost. Water is an essential service and rising costs would cause customers anxiety, especially as they cannot choose a different supplier and have no control over the price. There is also a rising concern amongst our customers about the risk of widespread flooding in Yorkshire.

SUMMARY OF CUSTOMER PRIORITIES



WHAT'S IMPORTANT TO OUR YOUNG PEOPLE



The concerns of our customers reflect the challenges that we have identified; rising populations, changing weather patterns and the costs of the services we provide. We also know that our customers' expectations are changing - customers want to see a more tailored service, they want to contact us in a way that suits them and they do not want their lives and lifestyles impacted by our activities. We know that we need to think and act differently.

CHALLENGES



OUR CUSTOMERS HAVE IDENTIFIED

✦ SHORTER TERM

“I think the challenge facing Yorkshire Water at the moment is keeping prices affordable whilst investing in replacing old pipes and improving water storage.”

“I suspect the two current main challenges are how to fund the renewal of ageing infrastructure and extending that infrastructure to meet new demand without compromising services.”

“I think storing water is a major challenge to try and even out the demand on water throughout the year.”

“I think that the main challenges for Yorkshire Water at the moment are ensuring that they continue to provide a fairly priced water and sewage service combined with good customer service, particularly as their customers are in fact a “captive audience” as water charges are not optional.”

✦ LONGER TERM

“The immediate things that come to mind are the effects of global warming and issues with increased flooding in the country.”

“I think the main challenge going ten years down the line is ageing infrastructure and the cost of repairing.”

“The next ten years will bring increased demand and more extreme weather which could bring with it further problems, such as interruption in supply, mismatch of peaks and troughs in supply and demand, and modernising the network to cope.”

PRIORITIES FOR US

We all live in a fast-paced society where technological improvements are being made at an ever-increasing rate. We know that the people of Yorkshire will expect us to use these advances to ensure that we keep prices as low as possible for everyone and to enhance the experience of our service.

Our conversations with customers have helped us understand where people want us to focus our improvements when we ask them about specific parts of the services that we offer. They put an emphasis on long-term planning for water supply and water quality.

HERE'S A SUMMARY OF WHAT OUR CUSTOMERS HAVE TOLD US ARE IMPORTANT TO THEM:



We will use technology and innovation to reduce the amount of water that is wasted through leakage and to be able to deliver high quality water to a growing population, whatever extreme weather we experience.

We will to continue to work with others to protect and enhance the beautiful environment of Yorkshire and ensure that we protect raw water quality and do not harm the environment through our activities.

CUSTOMER EXPECTATIONS ARE CHANGING

We need to reflect how our customers want to receive our services. We want our services to be flexible so that we can tailor them to match our customers' needs. For example, some people wish to talk to us on the telephone to report a problem but other customers prefer to report and resolve problems online.

We will use innovative technology so that our services to our customers are delivered in a way they want. They will be able to choose how they access and pay their bill, how they contact us to report an issue and how we keep them updated. If our colleagues visit their homes, we'll make sure they are skilled to deal with any needs identified by the customer to make sure our service is accessible to them.

The Yorkshire Forum for Water Customers will help design our approach and review, challenge and input into our plans to improve how we support customers with specific needs using the expertise from organisations such as the Alzheimer's Society and the Consumer Council for Water.

Different groups of vulnerable customers all have different preferences with regard to communications. To reach out to all customers it is important to have a multi-channel approach to ensure that we meet everyone's needs.

Our multi-channel approach will move in line with our customers' expectations. In the last couple of years our offering has expanded to cater for this change. We now offer a free call back service where customers can pick a 10 minute slot for us to call them back at a time convenient to them. They can chat to us online or send us a message via Facebook or Twitter and we proactively send text messages to customers to warn them if there is disruption to their services.

No two customers are the same and suggestions made by customers as to the best way for Yorkshire Water to contact them varied greatly. We will make sure we cater for this now and into the future.



SOCIAL MEDIA



EMAIL



PHONE



TEXT



LETTER



FACE-TO-FACE



LIVE CHAT



YORKSHIRE'S PROFILE - ITS ECONOMY

WATER DEPENDENCY

As well as being a provider of essential services to Yorkshire, we make a significant economic contribution to the county. We currently employ 3,500 people directly across the county, including 145 apprentices. Indirectly, our contractors employ 1000's of people and we have invested more than £3.8 billion over the last five years. We recognise, however, that our contribution and impact is broader than purely financial and are working on an innovative project to evaluate the total impact we have, looking at environmental and social measures as well.

To be sure that we have as full a picture as possible, as well as understanding our customers better, we have taken time to understand the economy of Yorkshire and how water is vital to supporting economic growth.

Everything that we buy and use needs water as part of its manufacture so we started by looking widely at how much water is vital to the worldwide economy.

WATER AND US

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



Looking at industry in Yorkshire we can see that there are different economic activities and plans across our region. We need to know about these so we can understand what we need to do to ensure that there is enough water not just to keep all the people of Yorkshire healthy but also to keep the Yorkshire economy healthy too.

HULL'S PORT COMPLEX IS THE 4TH LARGEST IN NORTHERN EUROPE

LEEDS IS FIRST OUTSIDE LONDON FOR FINANCE AND BUSINESS SERVICES



2ND HIGHEST PROPORTION OF MANUFACTURING JOBS IN ENGLAND

29% OF THE UK'S OIL IS REFINED ON THE HUMBER

£7BN TOURIST EXPENDITURE

Knowing how different parts of Yorkshire intend to grow their economies means we can be sure that our strategy supports economic growth and productivity. We need to ensure that the water that is needed is available, but we also know that not all the things we use water for needs high quality drinking water. We want to work with businesses to make sure that they have got the water they need now and in the long-term. To keep prices down we will use innovative ways to do this.

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

We have engaged with local councils to understand how each area of Yorkshire intends to grow its economy, the East of the region is focusing on renewable energy, Sheffield is focusing on technology and the North is concentrating on advanced agriculture.

Knowing this enables us to plan ahead and ensure that we can reliably provide the water services that our economy needs now and into the future. It's also important that we do this without impacting on the environment through the energy and chemicals used to treat and distribute water and take away waste water.

This is why we are working with some of the large industrial water users, companies that use water for things like cooling, to provide them with alternative sources of water.

As a company, we also add to the economy of Yorkshire through the people we employ and the goods and services that we buy. So, it's important that we are a responsible company, that treats its people and service partners well. It is also important that we contribute to wider Yorkshire society. We've already started this commitment and have supported The Yorkshire Festival and the Grand Depart 2014; principal partners of the Hull UK city of Culture 2017; and supporters of the Leeds European Capital of Culture 2023 bid.

THE ECONOMIC FUTURE IN YORKSHIRE

FOUR LOCAL ENTERPRISE PARTNERSHIPS COVER THE AREA:

LEEDS CITY REGION



“Our diverse towns and cities each have distinctive assets and opportunities, sit in some of the most beautiful landscape in the country, and are becoming increasingly well connected. From our position at the heart of the North, we will make full use of these assets in addressing long term challenges, unlocking opportunities and fulfilling the City Region’s exceptional potential. Our transformative vision is: To be a globally recognised economy where good growth delivers high levels of prosperity, jobs and quality of life for everyone.”

SHEFFIELD CITY REGION LEP



“Our plan takes advantage of our unique position as a key business to business supply chain, designer and manufacturer – while we have sector specialisms (especially in digital technologies, advanced manufacturing, engineering and materials), we have the flexibility for these to support many traditional sectors, from energy to motor vehicles, construction to retail. Our plan will accelerate this trend, building on our strengths in ‘foundation industries’, and hence restructure the economy towards such high value, knowledge and data led, business activities.”

YORK, NORTH YORKSHIRE & EAST RIDING LEP



“Our vision is to make York, North Yorkshire and East Riding the place in England to grow a small business, combining a vibrant business location with an enviable quality of life. Leading edge assets in the food manufacturing, agri-tech and bio-renewables sectors (the ‘bio-economy’) will establish a worldwide reputation and create thousands of new jobs. Offshore opportunities and a new potash mine in Whitby have the potential to tackle head-on the declining role of the seaside town and make the Yorkshire Coast – ‘The Opportunity Coast’.”

HUMBER LEP



“The ambition is to maximise the potential offered by the Humber Estuary, leading the Humber to become a renowned national and international centre for renewable energy and an area whose economy is resilient and competitive. We will continue to develop our strengths in key sectors, supporting our businesses to grow and helping our residents to access the opportunities they need to lead prosperous and rewarding lives.”

2.7m EMPLOYED IN YORKSHIRE



5.1% UNEMPLOYED

22% OF PEOPLE IN YORKSHIRE ARE ECONOMICALLY INACTIVE (RETIRED, LONG TERM SICK OR LOOKING AFTER HOME)

YORKSHIRE IS ONE OF THE MORE DEPRIVED REGIONS IN ENGLAND

ECONOMIC GROWTH 2010 TO 2015 SECOND LOWEST OF UK NATIONS AND REGIONS

23% OF ALL HOUSEHOLDS STRUGGLE TO PAY THEIR WATER BILL

¹Office for National Statistics ²Office for National Statistics ³Nomis, Labour Market Profile, 2016 ⁴Wikipedia, LSOA deprivation data ⁵House of Commons, Regional and local economic growth statistics, 2015 ⁶creative research, Living with Water, 2014



Visit Langsett Reservoir, Yorkshire

YORKSHIRE'S PROFILE - ITS ENVIRONMENT

Yorkshire is a place of great natural beauty and part of our job is to make sure it stays that way. It is also a place where the natural environment has been improving steadily over many years.

In the past, the urban rivers of Yorkshire suffered from poor water quality and lower numbers of wildlife habitats. Over the last 25 years this has improved, in large because of our investments in treating waste water. This has supported the

recovery of our rivers, with iconic species like salmon starting to return to the Rivers Don, Rother and Aire.

We have also improved river flows by changing the releases from our reservoirs. By addressing the historical and unsustainable flows below 15 reservoirs, we have improved the health of rivers across five river catchments.

Between 2015 and 2020 our investment in river water quality and flow schemes will improve the quality of the water in 440km of Yorkshire's rivers.

We know that a lot of the challenges we face can be solved, at least in part, in a way which continues to enhance and improve the magnificent environment we can all enjoy. If we can use innovative ideas to make the most of all our water sources, we can protect raw water quality and our natural environment by not having to take more and more water from it, despite the demands of a growing population.

We will continue to work with farmers and landowners to reduce pollution of water from nitrates, pesticides and colour from degraded lowland catchments.

One of our big priorities is to take less from the environment and maximise reuse of the water that is abstracted. We will tackle losses and waste of water in every way. And we will start by looking at ourselves – we intend to reduce the amount of water we lose through leaks by 40% by 2025.

We'll also reduce our own use of water, for example recycling grey water to use less high quality drinking water where it isn't necessary.

We also know that our customers and the environment can play a key role in how we, as a region, make ourselves more resilient to wide scale flooding. We will continue to play our part in enhancing the region's resilience, by managing the landscape differently to slow the flow of rainwater across our land and help store floodwater.

We have mapped woodland creation opportunities across our entire landholding and will work with partners such as tenants, White Rose Forest and Woodlands Trust to replicate our Gorpley 'Landscape for Water' programme at other key locations in the region.

We know that these projects provide multiple benefits beyond simply contributing to reduced flood risk, including enhanced biodiversity, carbon capture, and recreational opportunities.

CASE STUDY

NATURAL FLOOD MANAGEMENT AT GORPLEY

THE CHALLENGE

The Calder Valley has a long history of flooding and we identified that the land we own above our Gorpley reservoir, which is in the Calder Valley, would be somewhere that we could implement natural flood management measures. This would improve flood resilience and help protect the towns further down the valley whilst also enriching the environment.

THE INSIGHT

In partnership with the White Rose Forest, the 200-hectare land at Gorpley will feature 200,000 trees planted around the reservoir and lower slopes. On the moor tops, we will be restoring the blanket bogs that are currently in poor condition due to damage from past drainage activities. Working with local community groups, volunteers and schools to plant the trees and create "leaky dams" that also help slow the flow present exciting opportunities to deliver this project in a collaboratively, engaging way and contribute to raising awareness of the natural environment and the role water plays in the environment. It will also help improve long term raw water quality.



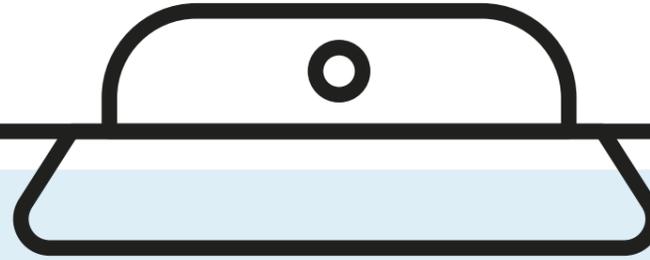
THE IMPACT

We are using natural ecological processes to slow the flow of water down the catchment. The benefits include capturing carbon in the blanket bog and enhanced habitats that enrich and support biodiversity. Importantly, our work will also contribute to enhancing the science around leaky dams and natural flood management. This natural flood management is also pleasing to look at and green whilst acting as a barrier to alleviate flood risks in the Calder Valley. By engaging the local community with the environment and getting people to go out and be active, we will also help to promote health, education and enhancing the value to society.

We also play our part, along with the emergency services, the Environment Agency and local authorities in managing flooding when it happens. We've started to trial reducing the levels of our reservoirs in the Calder Valley in the winter to see if this will help to reduce the flow of flood water down the valley.

The trees we are planting at Gorpley are just the start and we intend to plant many more. As well as all the benefits we have already talked about we want to support the Government's plans to create a Northern Forest stretching from Liverpool to Hull.

"leaky dams" are a flooding prevention measure, moderating the flow of water downstream. Barriers are added to a stream/river to prevent soil and silt escaping and allowing water to escape at a slower rate.



CASE STUDY

BIODIVERSITY ENHANCEMENT FUND

THE CHALLENGE

Through ongoing engagement, our customers have told us that we should understand our impact on the wider environment and act responsibly. One of the ways that we are doing this is by setting up the Biodiversity Enhancement Fund. This is a sum of money that charities, trusts and others can apply for to complete practical conservation work that will improve Yorkshire's environment. The projects are often carried out on land associated with our water or sewage treatment sites, and to be supported they must demonstrate clear benefits to the water environment which we rely on. In addition, the funding helps to ensure that we act in line with our regulatory duty to further the conservation of plants and animals.

THE INSIGHT

We know that the best outcomes for the environment come when conservation work is done in the right place with the right method. To make sure that projects were targeting the right areas, we worked with Natural England (NE) to create a map of Yorkshire which highlights priority areas for conservation work to be completed. With help from NE and the Environment Agency (EA) we then set criteria to identify projects that would align with national strategies and priorities. Finally, we welcomed charities and trusts to apply for funding by sending in their ideas. Information on the fund was distributed through Catchment Partnerships, EA Catchment Coordinators, Rivers Trusts and Wildlife Trusts.



THE IMPACT

Throughout 2016 and 2017 we have funded 12 projects in 20 locations across Yorkshire. The projects range from training up the next generation of environmentalists, to species conservation projects and large scale habitat creation. For example, The Conservation Volunteers are working hard to enhance a two mile stretch of the River Hull flood channel, whilst The Wild Trout Trust are working to empower local groups to restore, improve and maintain rivers and wetlands across Yorkshire.

Working with a variety of different groups has allowed us to learn a lot from their expertise, knowledge of their local area, and commitment to ongoing management of sites for lasting nature benefit. In addition we have found that projects are significantly cheaper to deliver through partnership working than solely through our traditional approaches, which means we aren't spending our customer's money unnecessarily. We have also learnt that we could improve our internal governance processes to encourage many more charities to apply, for example some people told us that they found the amount of administrative paperwork required off-putting.

After the success of the projects so far, we are continuing work with the teams delivering the projects to ensure they have a meaningful benefit to wildlife. We also hope to secure more money so that we can continue supporting conservation projects in Yorkshire through the Biodiversity Enhancement Fund in the future.





YORKSHIRE WATER'S PROFILE WHAT WE DO

We provide water and waste water services to the people of Yorkshire. To do this we collect 1.3 billion litres of raw water from the environment every day. We use energy and chemicals to treat the water so that it is safe to drink. To get the water to where it is needed we use gravity where we can but we also have to use energy to pump it through 31,600km of pipes.

We collect and treat about 1 billion litres of waste water from homes and businesses (and rainwater that goes into the 31,000km of sewers) every day as well. To do this we also use chemicals to help the treatment process and energy to run the treatment plants and pumps.

To deliver our services to you we currently employ 3,500 people and have a large fleet of vehicles

and other equipment so that we can look after all our pipes and pumping stations that deliver water and waste water services for Yorkshire.

We also own a lot of land, in fact we are Yorkshire's second biggest landowner, we own a lot of moors and upland to safeguard the quality of the water that is captured in our reservoirs.

Where we don't own the land that is the source of Yorkshire's drinking water, we also work with farmers, tenants and land owners to protect and improve raw water quality.

Over the last 25 years we have invested £8.5 billion of capital investment into our land, pumps, pipes and treatment works.

Our customers and stakeholders tell us that they are happy with the improvements we've delivered over the last 25 years, and we want to make sure we keep doing the things that matter to them whilst improving the parts that should be better.

In Yorkshire, we now have one of the most flexible and resilient water supply systems in the world, delivering quality drinking water to millions of homes and businesses every day.

Since 1995, when we experienced a period of drought, we have developed an extensive underground network of pipes that lets us move water to where it's needed most. We call this our

grid management system. Since we developed the grid, during periods of low rainfall, we have had the ability to move water around Yorkshire to where it is needed. The grid has also made us very resilient in cold weather. In the winter of 2010, despite record levels of pipe bursts caused by the extreme cold we could move water around Yorkshire to places it was needed.

Our rivers and beaches are cleaner than they have been for 50 years. Yorkshire's rivers are now supporting delicate ecosystems that have recovered as the water quality has improved. Our wastewater treatment works treat waste water to higher standards than ever before. This has supported the recovery of our rivers, with iconic species like salmon starting to return to the Rivers Don, Rother and Aire.

We aim to build on this recovery, working in partnership to create rivers and catchments that are healthier and provide wider benefits for our customers.

We have a part to play in reducing flooding in our region. Yorkshire has experienced repeated wide scale flooding, notably in 2007, 2011, 2012 and 2015. We continue to work in partnership with local agencies to understand the effect our sewer network has on flooding and to reduce its impact. We know that there is still more to do.

Three decades ago the River Don in Sheffield was one of the most polluted rivers in Europe. Our aspiration is to see salmon swimming through the centre of Sheffield once more. In partnership with the Don Network, a coalition of environmentally passionate people with an interest in the river and its surroundings, we've undertaken an innovative and engaging programme of work to improve water quality along the entire length of the river - from its source high on the moors above Sheffield to its confluence with the River Ouse in Goole.

WHAT WE DO

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



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



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



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



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



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



Recycling nutrients and generating energy from leftover human waste



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

We're one of Yorkshire's biggest land owners

We collect water from three main sources

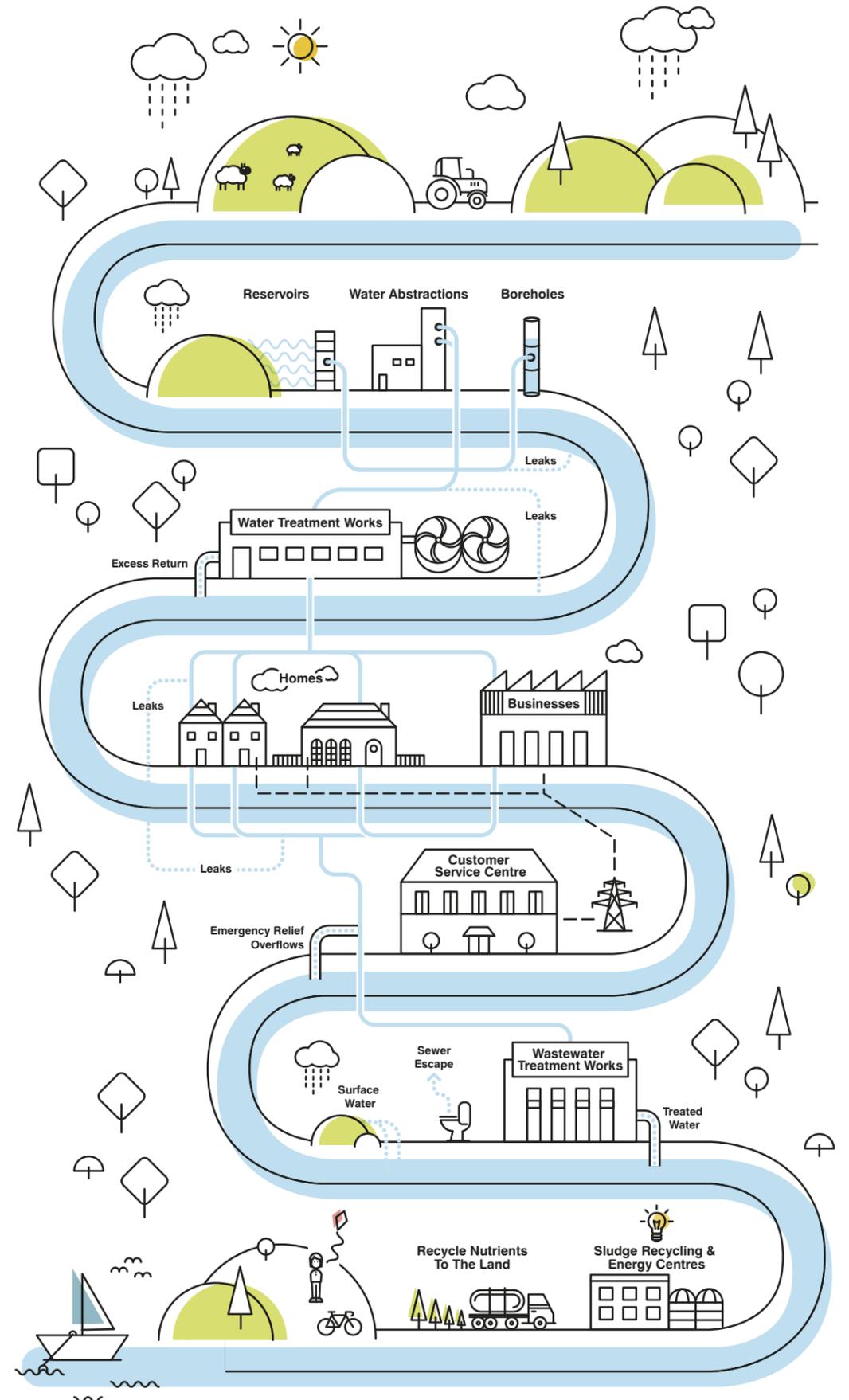
We manage 671 water and wastewater treatment works

We supply water to homes and businesses across the county

Our customer service team support our 5 million customers

We collect 1 billion litres of waste water every day

We safely return water back into the environment





Aldwarke Treatment Works, Rotherham

YORKSHIRE WATER'S PROFILE OUR IMPACT

We have explored Yorkshire and what Yorkshire Water does. We now want to explore what our impact is on Yorkshire, why it matters and later why it needs to change.

We provide water and waste water services to the people of Yorkshire. To do this we have many pipes, pumps, treatment facilities, offices, vehicles and people across the region. How well we look after and operate these assets impacts on the people of Yorkshire, the service they receive from us and our impact on the environment.

We work hard to make sure that this all works well, and most of the time it does. Occasionally things happen that mean things go wrong, for example there could be a burst water pipe which means that customers water supplies are interrupted, or sewage escapes from our pipes that can damage homes, businesses and the environment.

As part of creating this strategy we have worked hard to understand fully the impact of our activities now and into the future. This means that we need to understand our impact in two ways; how we impact on our customers and communities when we get it right and how we benefit society, but we're also looking hard at what this means to customers, communities and Yorkshire when things go wrong.

Knowing our impact, and changing it where we need to, will make us more sustainable and resilient. Measuring our impact also means that we can show that we are providing the best possible value for the money spent by our customers, ourselves and our partners.

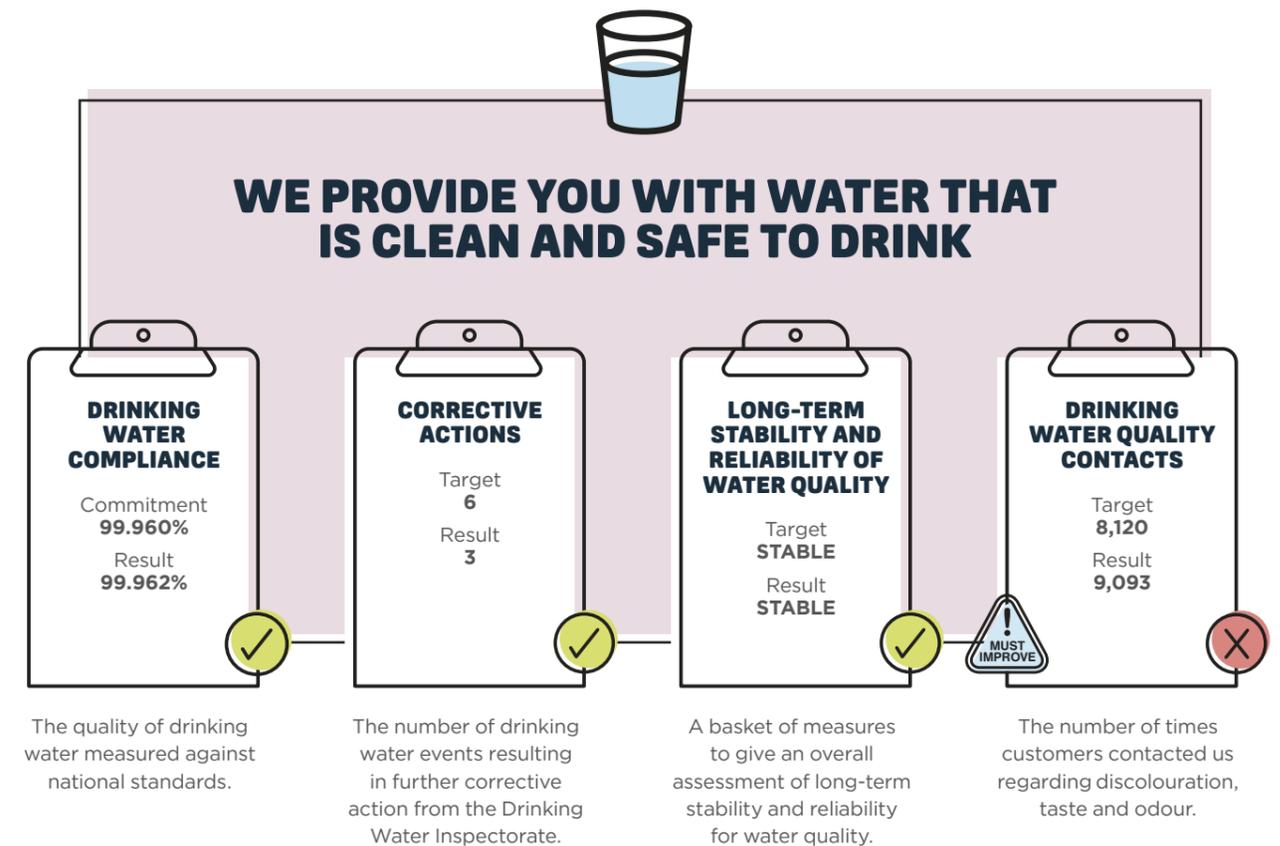


MEASURING OUR SERVICE IMPACT

We are measuring our impact on Yorkshire, its people, businesses and environment in two ways. The first way is by looking at how well we are delivering the services and improvements that we promised in 2015. The second way we measure our impact is to look much wider and understand our total impact on Yorkshire, its people and environment.

Working with the Yorkshire Forum for Water Customers and with the outcomes of our customer research, we agreed with you seven outcomes for Yorkshire covering the services we provide. To measure how well we are delivering those outcomes we agreed 26 measures, performance commitments, that show how well we are meeting our outcomes. We report on these commitments every year in our Annual Performance Report.

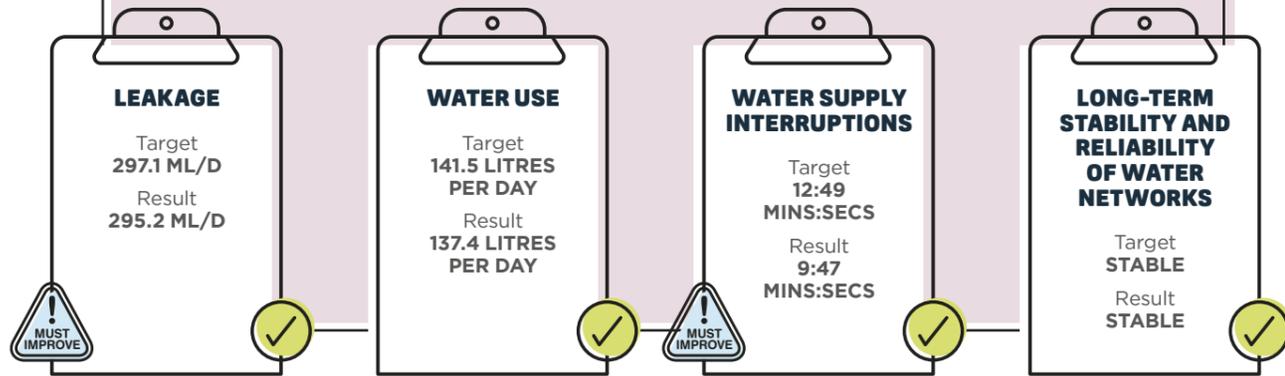
The following pages show a summary of how we did against our performance commitments in 2016/17.



Indicates if we are meeting our regulatory target.
 Indicates if we are not meeting our regulatory target.
 Although we are meeting our regulatory targets we are committed to going beyond these in the future making sure we deliver the best service to our customers possible.



WE MAKE SURE THAT YOU ALWAYS HAVE ENOUGH WATER



The amount of water lost from our network including when it's being transported between the treatment works and customer homes and businesses.

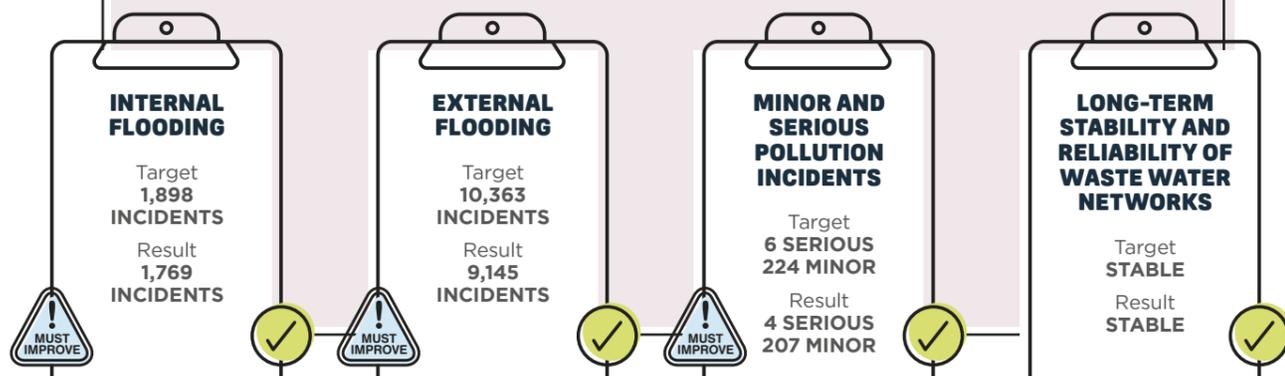
Average use (litres) of each person in the region each day.

Minutes lost due to water supply interruptions for 3 hours or more, per property served.

A basket of measures to give an overall assessment of long-term stability and reliability for water networks.



WE TAKE CARE OF YOUR WASTE WATER AND PROTECT YOU AND THE ENVIRONMENT FROM SEWER FLOODING



The total number of sewer flooding incidents experienced by homes and businesses in the year.

The total number of flooding incidents affecting external areas such as highways, car parks, footpaths, public open spaces, fields, agricultural land and woodland in the year.

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

An overall assessment of long-term stability and reliability for waste water networks.



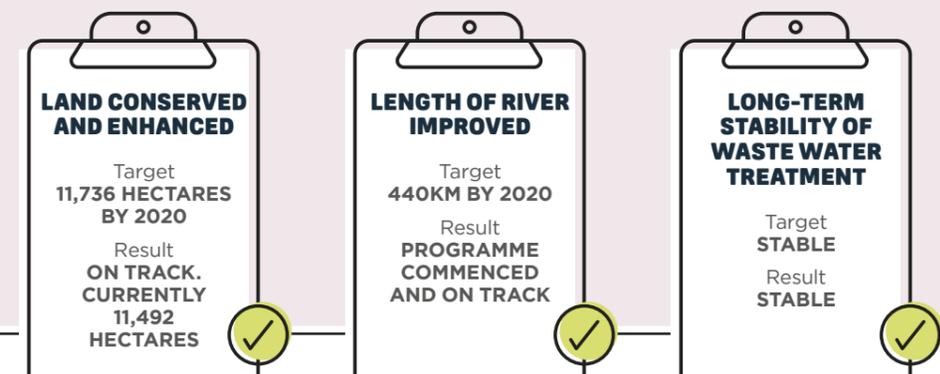
WE PROTECT AND IMPROVE THE WATER ENVIRONMENT



The number of Yorkshire's bathing water sites that exceeded the requirements of the EU bathing water standards.

Survey published measuring satisfaction of visitors with access to our recreational land and visitor facilities.

The number of solutions we deliver through working with other agencies, organisations or individuals. These can be delivered through various measures including joint funding, shared resources, investigations and feasibility studies.



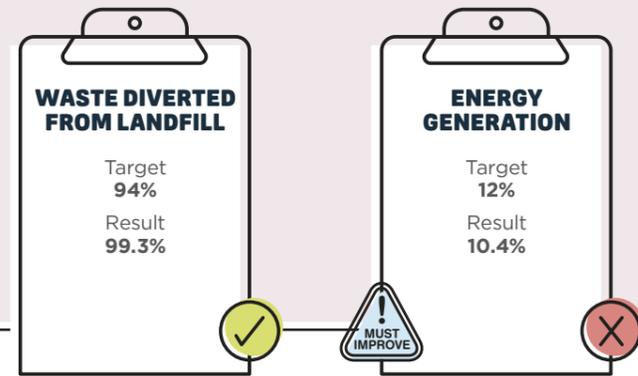
The amount of land in Yorkshire where we play an active role to conserve and enhance it. This is a 5 year commitment which will be confirmed in 2020.

The amount of river length in Yorkshire we will improve between 2015-2020. This is a 5 year commitment which will be confirmed in 2020.

A basket of measures to give an overall assessment of long-term stability and reliability for waste water treatment.



WE UNDERSTAND OUR IMPACT ON THE WIDER ENVIRONMENT AND ACT RESPONSIBLY



Waste from our Yorkshire Water activities that is recycled or reused.

The amount of electricity we generate through renewable technology expressed as a percentage of total energy consumption.



WE PROVIDE THE LEVEL OF CUSTOMER SERVICE YOU EXPECT AND VALUE



Measured by our regulator Ofwat's Service Incentive Mechanism.

The overall percentage of our household customers satisfied with their water and waste water services. This is based on the independent annual survey and report from CCWater. We have a commitment to improving customer satisfaction levels to ensure on average our performance between 2015-2020 is better than our performance during 2010-2015.

We must meet specific standards, by law, on the service we provide to customers. Our commitment is to improve on these, reducing the total number of events where we have failed to meet the Guaranteed Standards of Service.



WE KEEP YOUR BILLS AS LOW AS POSSIBLE



Number of people who we help pay their bill. We are committed to improving this year on year and will publish our progress annually.

Cost to each bill paying customer of the customer who does not pay their bill.

The percentage of customers, independently assessed by CCWater survey, who agree that our service is value for money.

In 2016 we met 24 out of the 26 commitments and we plan to meet all of them by 2020. We regularly review ourselves against the performance commitments with the Yorkshire Forum for Water Customers; it challenges us on our performance on behalf of our customers.

This is good, but our conversations with the Forum and customers tell us that we can do better. For example, we now understand in more detail how a water supply interruption that would not inconvenience one person very much, can impact badly on somebody else in different circumstances.

This is not good enough for us and we want to go further. Even if we meet all our commitments it still means that there will be people who experience sewer flooding in their homes, people who have their water

supply interrupted and people who find it hard to pay their bill. This strategy is about how we will do things differently in the future to improve our service and reduce our impact on you and the environment.

We have also shared with you how our performance on key measures such as pollution, leakage and sewer flooding compares to other water companies. Where we are not doing as well as some other companies our customers were disappointed and wanted us to improve. This is why we have launched a big service improvement plan that will see us comparing well with top performing companies on key service measures including leakage levels, pollution incidents, sewer flooding incidents and interruptions to water supplies.

MEASURING OUR WIDER IMPACT

Measuring performance on our core water and waste water services is central to our work. However, we know that our impact is far reaching.

We are examining our impact like never before, both the good and bad. By looking across the economic, environmental and social priorities associated with our activities, we are developing our understanding and finding new ways to maintain and grow our contribution to Yorkshire. This deep understanding is central to our long-term strategy and to the long-term resilience of our services.

To quantify our impact and the resulting economic value, we have recently completed a comprehensive assessment, which we have called Total Impact and Value Assessment. In this work, we have used a mix of traditional and innovative accounting and analysis techniques to give us a

We are embedding the concept of the Capitals, shown below, into our longer-term business planning, to help us ensure the affordability and resilience of our essential public services for current and future generations. You will see later in the document how we measure the capitals and you'll see which projects and future plans they relate to.

FINANCIAL CAPITAL
Our financial health and efficiency

MANUFACTURED CAPITAL
Our pipes, treatment works, offices and IT

NATURAL CAPITAL
The materials and services we rely on from the environment, especially water

rich understanding of our impact, including the standard financial and operational performance measures but also drilling deeper into other areas of impact that also matter, like diversity, education and environmental pollution.

This assessment has already helped us better understand the risks to our essential public services and a wide range of opportunities to further grow our contribution. For example, by improving resource efficiency, we reduce environmental damage and further strengthen the resilience of our services for customers.

The diagram opposite provides insight on our latest findings about our impact. You'll shortly be able to find more detail in a report we're publishing soon alongside this one, called Our Contribution to Yorkshire - the findings of our first total impact and value assessment.

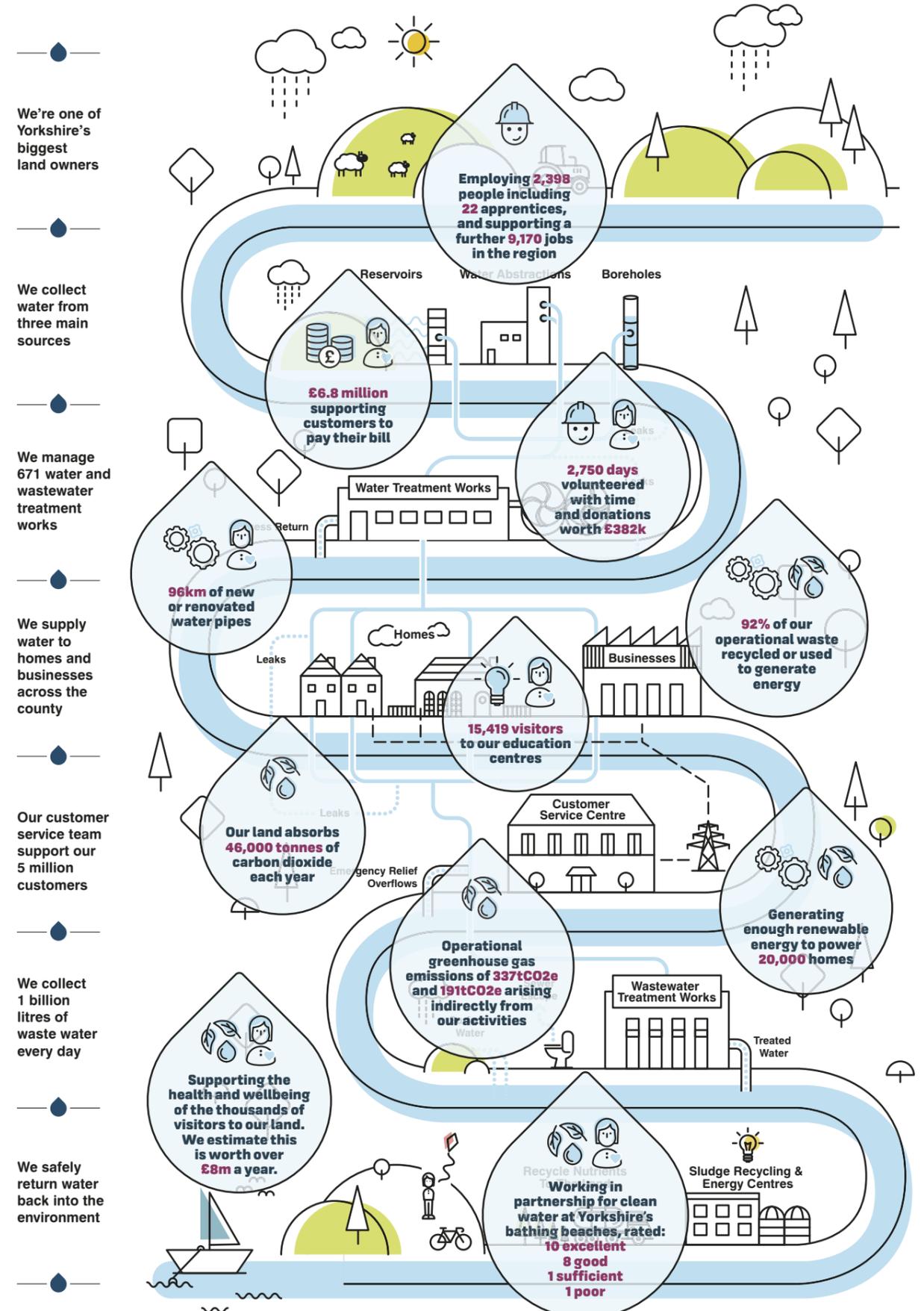
HUMAN CAPITAL
Our workforce's capabilities and wellbeing

INTELLECTUAL CAPITAL
Our knowledge and processes

SOCIAL CAPITAL
Our relationships and customers' trust in us

The capital icons above are used on the diagram on the next page, and throughout the document.

FROM SOURCE TO SEA STATISTICS BASED ON OUR IMPACT IN 2014/15





YORKSHIRE WATER'S PROFILE THE NEED FOR CHANGE

In the last four sections, we have talked about what we have learned; the future pressures that we face in Yorkshire, what our customers have told us and what is important to the economy and environment of Yorkshire.

We know that we need to meet the challenges that are facing the county in the future; how a growing population means that we need to change to ensure enough water is available and that we continue to take away and recycle waste water.

We know that the pattern of the weather may change in the future and we know that we need to change what we do to ensure our services are delivered irrespective of changing or adverse weather.

Feedback from the Yorkshire Forum for Water Customers and our research tells us that our customers want more from us – both in terms of the services we provide but also how we provide our services. People expect to be able to tailor the service they receive from us to suit them – so we need to be able to meet that expectation.

Finally, we know that the cost of our services – today and tomorrow – is a real concern for the people of Yorkshire so we need to face all the challenges, and deliver a sustainable, resilient service at a price that means that no one in Yorkshire should worry about paying their bill.

We want to share with you our plans and how we will change. Our plans have already been shaped by what people have said to us and what we know about ourselves. We now want to share our plans so that everyone has the chance to say what they think, what they want to change and if they want to get involved.

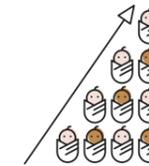
DO YOU AGREE WITH WHY WE THINK WE NEED TO CHANGE?

IS THERE ANYTHING ELSE YOU WANT US TO BE THINKING ABOUT?

THE BIG CHALLENGES WE FACE

OUR GROWING POPULATION

How do we continue to supply a growing population with water and waste water services?



DIVERSE CUSTOMERS

How do we tailor our services to meet the needs of the diverse society we serve?



ECONOMIC CHALLENGES

How do we ensure that nobody has to worry about paying their water bill?



PREPARING FOR EXTREME WEATHER

How do we ensure that our services are delivered despite the adverse weather we experience?



RISING SEA LEVELS

How do we prepare for the damage that can be caused by rising sea levels?



MANAGING THROUGH DRY SUMMERS

How do we all manage our way through a changing cycle of wetter winters and drier summers?



LOCAL COMMUNITY FOCUS

Can we play a part in specific areas to help meet local challenges? Such as agricultural requirements in North Yorkshire and industrial cooling in the Humber.



SO FAR OUR STAKEHOLDERS AND CUSTOMERS HAVE AGREED WITH OUR PLANS...

More Hall Reservoir

“We need more resilience to flood and drought. We need to deal better with extremes of weather. Yorkshire Water could do more to help businesses and consumers protect against flooding, especially in ensuring that the flood protection advice is correct.”

Rob Light, Northern Chair for Consumer Council for Water



“I would like to see a strong ongoing commitment to reducing pollution, including partnerships with farmers to reduce diffuse pollution and improve river quality.”

Angela Smith MP



“Maintaining affordability is a key challenge, particularly for the poorest, as life is not getting any more affordable for them.”

Tom Riordan, Chief Executive, Leeds City Council



“Delivering quality drinking water and taking waste water away require massive infrastructure, so for me the key challenge is about how to do all of this in a sustainable way.”

Rob Stoneman, Chief Executive, Yorkshire Wildlife Trust

“The next ten years will bring increased demand and more extreme weather which could bring with it further problems, such as interruption in supply, mismatch of peaks and troughs in supply and demand, and modernising the network to cope.”



“I think the main challenge going 10 years down the line is ageing infrastructure and the cost of repairing.”



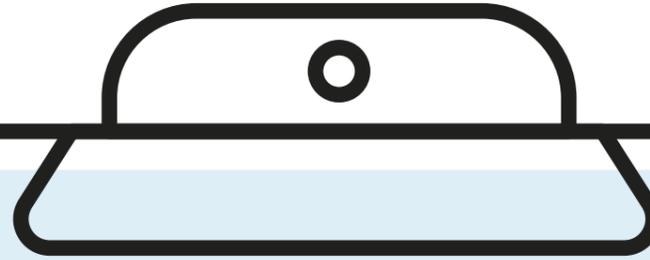
“The immediate things that come to mind are the effects of global warming and issues with increased flooding in the county.”



“I think storing water is a major challenge to try and even out the demand on water throughout the year.”



“I think that the main challenges for Yorkshire Water at the moment are ensuring that they continue to provide fairly priced water and sewage services combined with good customer service, particularly as their customers are in fact a ‘captive audience’ as water charges are not optional.”



CASE STUDY

FOGS TO FUEL INITIATIVE

THE CHALLENGE

Across Yorkshire there are key hotspot areas where our sewers have become blocked mainly by customers pouring the wrong things down toilets and sinks. One such hotspot is the Bradford Moor area in West Yorkshire. In the space of three years we've cleared 85 blockages at this location and spent £2.8 million refurbishing the sewer network in a bid to keep it flowing.

THE INSIGHT

We knew this area needed a different approach to managing the sewers and that the investment alone was not going to solve the problem. Customers were using sinks to dispose of cooking oils as they were not aware of, or did not have access to, alternative disposal routes.

We teamed up with Living Fuels (a company that turns used cooking oil into carbon neutral electricity), Bradford Council and the Karmand Community Centre to set up the country's first domestic waste oil collection service.

Together with our partners, we visit customers in the area, explain to them the problems that are occurring and provide each household with a fat, grease and oil collection tub. The tubs are collected on a regular basis and taken to the Karmand Centre where they sell the oil to Living Fuel who use it to create bio-fuel. The tubs are then cleaned and returned to the customers in the area to start filling up again. The Karmand centre receives the proceeds of the sale.

THE IMPACT

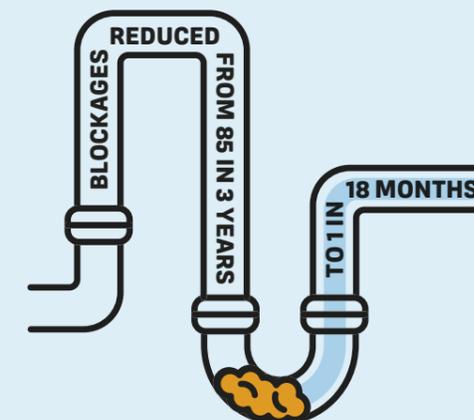
There have been incredible levels of support within the local community for this initiative, a large proportion of which is due to the continuing support of the local community champion, the Karmand Centre. Their network and place within the



community is an essential part of the project and one ingredient that projects like this need to succeed.

The signs that the scheme is having a positive impact are already showing. Blockages have reduced from 85 in 3 years to just one in the first 18 months since the scheme was launched. This is proof that customers really can make a difference if they change their behaviours.

Initially, the trial only included 85 homes. However, since the launch back in August 2016, household numbers signed up has trebled in size to over 250.



The success of the initiative is partly due to the collective effort embraced at a 'local' level.

This scheme shows how customers can participate and benefit from helping solve problems with us. We intend to engage with customers like this going forward. The pilot confirms that there are substantial benefits to be had from this innovative community partnership.

The impact delivers natural capital benefits by reducing sewer blockages, avoiding pollution incidents and sewer flooding.

It delivers financial capital benefits - we don't have to spend money clearing blockages or cleaning sewers, but also the community centre benefits from selling the waste oil.

It delivers social capital benefits by building relationships and working partnerships with the local community.

OUR PLANS FIVE BIG GOALS

OUR BIG GOALS AND OUTCOMES

Our last strategy review in 2013 involved customers telling us their priorities for the next 25 years. This led to key outcomes for Yorkshire Water and to a series of performance commitments against which we measure ourselves.



Five years on, we're talking again to customers to make sure that those are still the right priorities and to find out what has changed. This engagement is just one part of our ongoing customer communications.

What we're hearing from customers is that although the priorities remain the same, they want us to deliver them in different ways. As well as what our customers are telling us, we know that in order to manage the challenge of a growing population and changing weather and to keep bills low we need to find different ways of delivering our services.

That means we will have to change the way we work to meet customers' expectations and the challenges we face. To do this, we have developed five big goals which will help us be sure we can continue to deliver, over the long term, the outcomes everyone wants from us in a way that remains affordable for all.

What we are promising to do in the big goals is deliver great, tailored affordable services now and into the long term. The way we will deliver those services will change, so you will see from the targets we have set ourselves how we intend to do things differently. We will use data, innovation and technology to know our customers better and meet their needs.

We will use new ways as well as tried and tested ones to reduce how much clean water we lose through leakage and increase the capacity of our existing sewer network by reducing the amount of rainwater that goes into it.

All our activities will combine to ensure that our network can service a growing population without harming the environment and keeping bills low.

OUR 5 BIG GOALS:

1. CUSTOMERS: We will develop the deepest possible understanding of our customers' needs and wants and ensure that we develop a service tailored and personalised to meet those needs.

2. WATER SUPPLY: We will always provide you with enough safe drinking water, we will not waste water and always protect the environment.

3. ENVIRONMENT: We will remove surface water from our sewers and recycle all waste water, protecting the environment from sewer flooding and pollution.

4. TRANSPARENCY: We will be a global benchmark for openness and transparency.

5. BILLS: We will use innovation to improve service, eradicate waste and reduce costs so no one need worry about paying our bill. We will not waste money.

GOAL ONE CUSTOMERS



WE WILL DEVELOP THE DEEPEST POSSIBLE UNDERSTANDING OF OUR CUSTOMERS' NEEDS AND WANTS AND ENSURE THAT WE DEVELOP A SERVICE TAILORED AND PERSONALISED TO MEET THOSE NEEDS.

WHY DO WE NEED TO DO THIS?

Excellent service is essential for gaining the trust of our customers. We serve a diverse community in Yorkshire and we need to reflect the diversity of our customers' requirements of us. We know that at least 30% of our customers have individual, specific needs that we must meet.

We know that the vast majority of our customers cannot currently choose another supplier, which means that we have an added responsibility to provide an excellent service. We also know that as a private sector supplier of an essential public service, expectations of us are higher and we are subject to greater levels of scrutiny.

We know how our lifestyles depend on water, at a global and a local level. We now know more about the individual needs of some of our customers. This has helped us understand how we impact on people's lives now and where we need to focus our efforts as we plan the future.

We know that expectations are changing. For example, some customers want more control over water in their home - they may want to know if they can track where their water comes from,

if they can choose the quality of their water or if they can bundle their utility services together or control their water use remotely. Some customers need to contact us directly and, as technology makes it easier for them, they want more control over how and when they contact us and how any issues are resolved. So, to ensure that we understand the expectations of us, we need to continue our conversations over the long term.

The Yorkshire Forum for Water Customers will inform and challenge us as we design our approach to continue the work we have begun in understanding our customers and the impact of our services. This will help us deliver our services in the way our customers want.

We need to respond to what we have learned; how we impact on our customers, how we provide our services and how we need to work with others to help solve some of the challenges we face.

Continually growing our detailed understanding of our customers will help us make sure that we are communicating well, and encouraging people to help us create the right water future for Yorkshire.

WHAT ARE WE GOING TO DO NOW AND INTO THE FUTURE?

- We will use data to develop a granular understanding of our customers and meet the service needs of the communities and customers we serve.
- We will use innovation to proactively identify customers with specific needs and tailor our services to meet them. Wherever possible we will personalise this service.
- People will be able to contact us 24 hours a day in the way that suits them best.
- We will excel in customer service measures both for the water industry and across the UK.

WHAT WILL THE IMPACT BE?

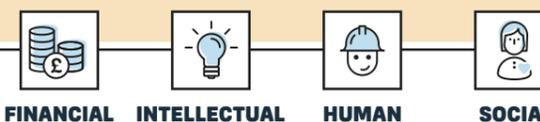
We will be open for business whenever and however customers want to contact us. Customers will always find us easy to deal with and have confidence that we will resolve issues quickly.

HOW WILL WE KNOW WE ARE GETTING IT RIGHT?

The new regulatory measure of customer service is C-Mex, which will help us compare our performance against other water companies. We'll excel in this measure, demonstrating that we lead the industry in service. This will be achieved through continually listening to our customers about the experiences they have with us. We'll ask for feedback and measure satisfaction as services evolve, making sure improvements keep up with expectations.

Customers will compare their service experiences with companies outside the water industry. We too will measure how we perform through the UK Customer Satisfaction Index (UKCSI). We'll consistently be ranked amongst the best companies in the UK.

As we improve there'll be less need for customers to contact us. Not only will the number of complaints reduce but when they occur, we'll make sure they are resolved first time, reducing those that escalate.



CASE STUDY

USING DATA TO HELP SUPPORT OUR CUSTOMERS



SOCIAL



INTELLECTUAL



FINANCIAL

THE CHALLENGE

Paying a water bill for some customers can be challenging due to their personal circumstances. To make sure we help any customers who might find themselves in this situation we are members of two data sharing agreements run by Experian and Call Credit. These provide data that enables us to see if a customer has a potential to struggle with their bill payments, allowing us to make interventions to help them with schemes like social tariffs or specific payment plans.

THE INSIGHT

The data sharing provides us with access to household incomes, County Court Judgements and pay day loans information. We use these to identify which of our customers could fall into financial vulnerability.

Our customers told us that households who are struggling to pay are often overlooked until they fall into debt. Our social tariff is targeted at those on low income with a relatively high water bill, as these households find it harder to keep up with payments.

THE IMPACT

By using data smartly in this way we are able to provide customers with the support they need to manage their bills, taking away any anxiety or worry they may previously have had.

The results show that we are getting this right for the customers.

75% of customers continue to pay once supported.

89% of customers receive a positive credit rating.

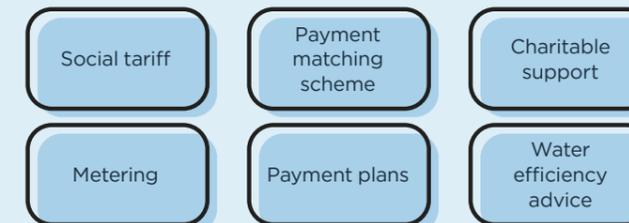
Data comes in:



Helps us to segment our customer types:



We look at suitable options of support:



We promote the right support to our customers:



Great outcome for the customer and us:



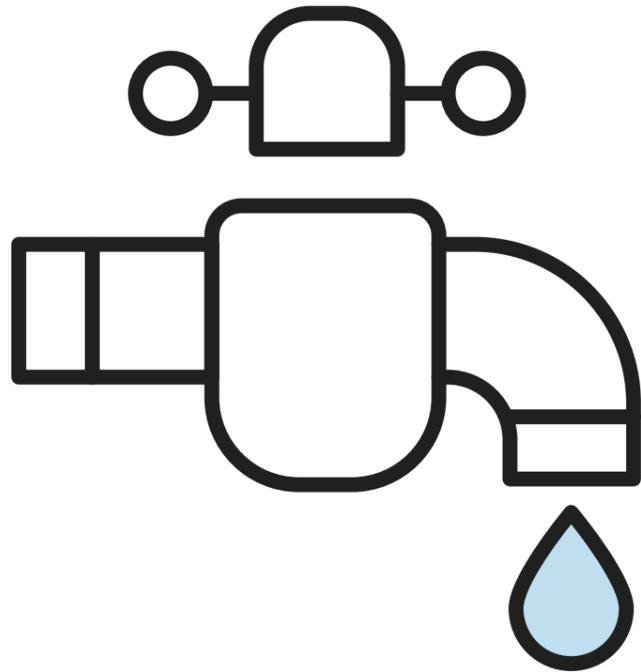
Customer's water bill reduced



Customer can manage other bills and debts



We collect the income and reduce the costs of debt collection which enhances our reputation



GOAL TWO WATER SUPPLY

WE WILL ALWAYS PROVIDE YOU WITH ENOUGH SAFE WATER, WE WILL NOT WASTE WATER AND ALWAYS PROTECT THE ENVIRONMENT.

WHY DO WE NEED TO DO THIS?

Water is essential not just for our immediate use for drinking and washing. It is also essential for producing food, generating energy and creating products like our cars and computers. It's needed for our hospitals, our schools and for the companies that create such a vibrant economy in Yorkshire. Our customers have consistently told us that the thing that is most

important to them is a reliable and sustainable supply of high quality drinking water.

The population is increasing, and the economy in Yorkshire is growing. Climate change brings uncertainty over future supply and consistency of rainfall patterns. We want to always have enough water in Yorkshire.

WHAT ARE WE GOING TO DO NOW AND INTO THE FUTURE?

- We will be self-sufficient in water – but we would facilitate transfers through Yorkshire to add resilience to national water supply strategies.
- We will reduce leakage by 40% by 2025, this will make our own supplies more resilient and give us choices about our future decisions.
- We recognise the impact of interrupting water supplies through our conversations with our customers and we will significantly reduce supply interruptions over the next three years. We are looking to become a leader in this area.

Overall this will mean that our average interruptions will reduce from 9.47 minutes in 2016, to two minutes by 2025.

- We will work with industry to offset 5% of current demand on drinking water with non-potable water, creating enough extra drinking water for 4,000 new houses without abstracting any more water from the environment.
- We will avoid additional investment in water treatment works by managing our land and influencing others to ensure that water captured is the best quality.
- When we have earned the right, we will work with customers and other stakeholders to participate in reducing consumption overall in Yorkshire.

WHAT WILL THE IMPACT BE?

- We will not harm the water environment by abstracting too much water.
- We will reduce wasted water by tackling leakage. This also means we will use less chemicals and energy in water treatment and distribution.
- We will avoid additional investment in water treatment as the population grows which will help keep bills low.
- By managing land for water, we will capture more carbon, enhance biodiversity and the people and visitors of Yorkshire can continue to enjoy our beautiful environment.



FINANCIAL



MANUFACTURED



SOCIAL



INTELLECTUAL



HUMAN



NATURAL

HOW WILL WE KNOW WE ARE GETTING IT RIGHT?

We will be self-sufficient by 2035 by reducing leakage and demand in Yorkshire.

We will have one of the lowest rates of interruptions to supply in the industry by 2022.

We will meet the demands of a growing population without increasing our existing abstractions.

We will have one of the lowest water bills in the UK.

We will have one of the lowest leakage levels in the UK.

CASE STUDY

DELIVERING A SUSTAINABLE WATER SUPPLY



NATURAL



INTELLECTUAL



MANUFACTURED



FINANCIAL

THE CHALLENGE

We've identified that there is a desire from some of our industrial customers to use lower grades of water in some of their processes. It makes no sense to use the highest quality drinking water when lower grades can be utilised safely. This would mean the displaced drinking water can be used to accommodate new customers who need the highest quality, without abstracting more from the environment and building new, expensive assets to deliver it. It also saves money for industrial customers and reduces the carbon and chemicals used to provide water of a unnecessarily high quality.

THE INSIGHT

To inform how we do this in the future we are working with some of our large industrial customers in Leeds to demonstrate how we can safely provide them with sub-potable supplies. We are taking the water we would normally return to the river at the end of our sewage treatment process from our Knostrop Wastewater



Treatment Works (WWTW) and in a two-year trial we will establish what treatment we need to put in place to provide water to meet their needs. At the end of the work we will understand what we need to build and what it will cost to produce the new product and therefore what the saving will be to our customers. We will also know what the carbon benefit is and the broader benefit in terms of providing resilient water supply in a future where population growth will put increased pressure on clean water supplies.

THE IMPACT

The demonstration will deliver over 30,000m³ (equivalent to 12 Olympic sized swimming pools) of water, displacing enough drinking water for about 600 customers just in this one trial. We believe that by proving this is a safe, cost effective option we will create a significant impact on raw water management and deliver more sustainable products for our customers in the future and protect the production of products made in Yorkshire.

GOAL THREE ENVIRONMENT



WE WILL REMOVE SURFACE WATER FROM OUR SEWERS AND RECYCLE ALL WASTE WATER, PROTECTING THE ENVIRONMENT FROM SEWER FLOODING AND POLLUTION.

WHY DO WE THINK WE NEED TO DO THIS?

Weather patterns are expected to change and the population is expected to grow. This will put additional pressure on our sewer systems. If we do not change how we manage our network, the changes in weather and population could lead to increased investment to build greater capacity, or risk of flooding from sewers and increased amounts of sewage entering our rivers from combined sewer overflows. As well as causing harm when waste water escapes, it also means that we miss the opportunity to recycle it. It may sound odd but waste water has a real value.

We treat waste water so that it can be safely returned to the environment. This treatment process produces cleaned water that can be re-used and other by-products, all of which have value. The cleaned water could be used in industrial processes, helping reduce demand on the drinking water network. And when we return clean water to the environment it helps to maintain river levels, especially in the summer months. The by-products are used to create methane gas, which in turn is converted into electricity that helps run our treatment plants.

WHAT ARE WE GOING TO DO NOW AND INTO THE FUTURE?

- We will eradicate pollution and sewer flooding from our assets (sewers, pumping stations and treatment plants etc.) by 2050. By 2020 we will have already taken the first steps towards this by committing to reduce sewage leaks by 40% and reducing sewer flooding in homes by 70%.
- We will have stopped rainwater run-off from 40 hectares worth of impermeable surfaces (road, footpaths etc.) creating additional capacity in our waste water network to support the creation of new homes and businesses by 2025.
- We will markedly reduce the volume of water that spills from our combined sewer overflows by 2050.
- We will have a waste water and drainage management plan in place for every town and city and also rural areas at risk of flooding in Yorkshire by 2050.
- We will help manage surface water run off and also support the government agenda for a Northern Forest by planting one million trees by 2028.

HOW WILL WE KNOW WE ARE GETTING IT RIGHT?

In the long term, we aim to eliminate sewer flooding and pollution from our sewer network.

We believe it will take us until 2050 to eliminate flooding and pollution from our assets. The challenges of eliminating flooding and pollution in the future will require us to address areas such as a growing population, climate

WHAT WILL THE IMPACT BE?

- People will not suffer from sewage flooding their homes.
- The environment will not be harmed by sewage escapes polluting land and rivers.
- We will work with our customers and businesses to keep bills low by using rainwater for some of their needs.
- We will reduce our carbon impact through reduced pumping and we will keep bills low by avoiding building new pipes and treatment works.



NATURAL



SOCIAL



MANUFACTURED



FINANCIAL



INTELLECTUAL



HUMAN

change and changing lifestyles. This will mean we will need to work with our customers and stakeholders to stop the wrong things being put in the sewer network.

To meet our target of eliminating sewer flooding, we will develop a programme of engagement with customers – both domestic and commercial – on the impacts of disposal of inappropriate materials to sewer. However, to effect a change in customer behaviour, such a programme needs to be sustained and long term. This will also be supported through helping customers find alternative disposal routes, for example through ‘bag it and bin it’ or provision of storage for fats and oils. Through building our understanding of our customers and their needs and lifestyles we will be able to target information campaigns and support customers with the most appropriate solutions for maximum benefit.

CASE STUDY

WORKING IN PARTNERSHIP



SOCIAL



NATURAL



INTELLECTUAL



FINANCIAL



MANUFACTURED

THE CHALLENGE

In 2013, Hull City Council launched the City Plan for Hull – a 10-year regeneration strategy which set out to transform the city physically, culturally and reputationally. Since then, Hull has hit the national and international stage as UK City of Culture 2017 and has seen investment of more than £3 billion from the public and private sectors.

Yet, despite this renaissance, the city’s surrounding geography and the challenges of climate change mean that, outside of London, Hull remains the most at-risk city from flooding in the UK.

THE INSIGHT

Since the floods of 2007, Hull City Council, Yorkshire Water, the Environment Agency and East Riding of Yorkshire Council, working both independently and in partnership, have invested significantly in the catchment. Yorkshire Water alone has invested more than £40m on the pumping stations that help to protect the city, including the construction of the new Bransholme surface water pumping station



which opened in 2016. But, even with this investment, managing water effectively remains a challenge that must be faced to continue to progress towards the vision set out in the City Plan.

In 2016 Yorkshire Water published “Water Culture” a document which set out to catalyse a discussion about an innovative water resilient future for Hull and the East Riding. The document invited “an exploration of how a shared vision might be achieved in partnership and how the water environment can play a key role in the culture and success of the city”.

THE IMPACT

From the discussions prompted by Water Culture, the Living with Water partnership was established which brings together Yorkshire Water, Hull City Council, East Riding of Yorkshire Council and the Environment Agency with a joint vision to make the Hull and Haltemprice area an international exemplar for living in harmony with water.

In September 2017, the partnership brought local stakeholders together with national and international experts for a two-day charrette to explore this vision and set out an ambitious plan for the future. Working together, the partners are now developing innovative solutions to reduce flood risk in the catchment using a jointly owned, integrated flood model.

As these solutions are developed the partnership will be working with local communities through further charrettes to ensure they meet the needs of local people, as well as contributing to the overall vision for the city.

To inform the long-term approach the partnership will be one of only five cities around the globe to develop and pilot a new City Water Resilience Index working with The Rockefeller Foundation.

Find out more at www.livingwithwater.co.uk



GOAL FOUR TRANSPARENCY

WE WILL BE A GLOBAL BENCHMARK FOR OPENNESS AND TRANSPARENCY.

WHY DO WE THINK WE NEED TO DO THIS?

The people of Yorkshire depend on us and most cannot choose another supplier. We provide an essential public service as a private company and therefore our customers expect even more from us. We owe it to our customers to earn their trust and we want them to be confident that we're being straightforward about our performance. They have a legitimate right to know that we are operating to the highest standards of probity and integrity.

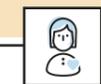


WHAT ARE WE GOING TO DO NOW AND INTO THE FUTURE?

- We will adopt the highest standards of openness and transparency, with a commitment to go well beyond what we are required to do by our regulator.
- We will have a clear and easy-to-understand governance structure that allows customers to hold us to account.
- We will use innovation in communications to ensure that our customers can find out whatever they want about our work.
- We will report our performance honestly, being clear when we have done things well and straightforward when our performance hasn't been what customers expect.
- Our senior managers and directors will always be accessible to customers and will meet with them frequently to get their feedback.

WHAT WILL THE IMPACT BE?

- We have a corporate and financing structure that is easy to understand and that is trusted.
- Customers will have a clear idea of how we are performing and what their bill payment is used for.
- Our data is recognised as trustworthy and accurate.
- People believe that Yorkshire Water is a responsible company.
- We will play our wider role in Yorkshire society and be able to measure the benefits we add.



SOCIAL



FINANCIAL



INTELLECTUAL

HOW WILL WE KNOW WE ARE GETTING IT RIGHT?

We will engage with our customers and stakeholders to understand what they want from us and how well they feel that they understand who we are and what we do. We will also ensure that we regularly ask them if there is more they want to know about our performance or operations.

We aim to be categorised as “self-assured” by Ofwat in January 2019. This means that Ofwat, after reviewing our published information, believe that we are providing high standards in transparency, accuracy and accessibility.

We will benchmark our standards of openness and transparency against top performers in both public and private sectors in the UK and internationally.

YORKSHIRE WATER WILL BE THE FIRST IN THE INDUSTRY TO PUBLISH A COMPREHENSIVE WORKFORCE DIVERSITY REPORT. THIS WILL INCLUDE DATA ON BOTH GENDER AND ETHNIC PAY GAPS AND GOES BEYOND LEGAL REQUIREMENTS. IT WILL ALSO CONTAIN STRETCHING TARGETS FOR IMPROVEMENTS TO WORKFORCE DIVERSITY AND REDUCTIONS IN PAY GAPS WITH A COMMITMENT TO PUBLISH AN ANNUAL REPORT SETTING OUT OUR PERFORMANCE.

GOAL FIVE BILLS



WE WILL USE INNOVATION TO IMPROVE SERVICE, ERADICATE WASTE AND REDUCE COSTS SO NO ONE NEED WORRY ABOUT PAYING OUR BILL. WE WILL NOT WASTE MONEY.

WHY DO WE THINK WE NEED TO DO THIS?

Bills for water services are a part of monthly household costs. We know that many customers in Yorkshire struggle with their bills. Our research tells us that Yorkshire's average income is behind the national average. For example, nearly a third of households in Bradford have an income of less than £15,000, and close to half of households in Hull are in the most deprived 10% of neighbourhoods in England.

We will constantly look for better ways of doing things so that we can continually reduce costs and use less resources, while maintaining highly resilient services and growing the value we give to the society we serve.

Some estimates suggest that a third of our customers may be struggling to pay their water bill. These households spend more than 3% of their disposable income on paying their water bill and this might progressively increase by 2050.

We know water is an essential resource and, together with others, we want to work towards eliminating the concern and anxiety about paying water bills in Yorkshire so that our customers don't have to worry about how to pay for their water needs.

WHAT ARE WE GOING TO DO NOW AND INTO THE FUTURE?

- We will always have one of the lowest water bills in the UK.
- Reducing demand on our systems decreases the need to invest in our infrastructure. Maximising reuse of water and tackling waste not only protects the environment but keeps costs down, making bills affordable for everyone.
- We will have a recognised social tariff tailored to suit customer needs.
- We know there may be times when customers struggle to pay their bills. Making use of the information available to us through data sharing and partnerships, helps to target support when it's most needed. We offer flexible payment options, the choice to switch to a meter, water saving advice, WaterSure or WaterSupport tariffs to prevent customers falling into financial difficulties. The same information helps us validate eligibility for support in real-time, removing barriers for applications.
- We intend to build on our excellent track record for preventing customers from falling into debt. We will keep our bills low by understanding customers' needs, tailoring our services to reduce the risk of debt and being easy to deal with. We will identify and collect income from those households who don't want to pay and target help for those who need it, to avoid costs from unpaid bills.

WHAT WILL THE IMPACT BE?

- We will use innovation in everything we do to drive down bills.
- We will work with others to find the best cost solutions that help create additional capacity in our network for a growing population.
- We will work with others to deliver services in the best and most efficient way.



SOCIAL



FINANCIAL



INTELLECTUAL

HOW WILL WE KNOW WE ARE GETTING IT RIGHT?

We'll track our performance by asking customers what they think of our services and their views on value for money.

We'll ask customers if they're aware of the support available to them and make sure they're on the best payment scheme and tariff to suit their needs.

We'll ask how accessible our services are and how easy our bills are to understand.

The number of customers on support schemes will increase to meet the needs of those most at risk.

The number of customers in debt with us will be lower.

We'll monitor our costs and debt record to ensure we compare with the best performers outside of the industry.



HOW THINGS WILL BE BETTER

We believe that our goals are the right way to cope with the challenges that we face, population growth and climate change. We also believe that they are the right way to continue to improve our service to customers and ensure our impact on Yorkshire's people, economy and environment is a positive one.

The goals are challenging and we need to make sure that we are confident that we can deliver them. In this section, we will show you the steps we are taking to make sure that we are best placed to deliver successfully.

OUR COMPANY STRUCTURE

Our Board takes its responsibilities very seriously and works with the company, challenging, supporting and scrutinising, to make sure we deliver on our promises. Our corporate structure and governance is simple and available for anyone to review. Through a series of committees, the people on our Board have access to the right information to make sure the company is on the right track.

As well as the standard board committees which include investment, audit, remuneration, health safety and environment, we also have committees for innovation, IT and data, and social value.

These will evolve and ensure that we remain on track to deliver our vision.

To make sure our company is strong (resilient), we need to look after all of the 'Capitals', not just financial and manufactured which is traditionally corporate focus.

We believe they are all important for company strength and especially important for a company that delivers essential services.

Our Board committees are set up to monitor our company strength across all of these vital areas of the company.

HOW WE CONTROL THE RISKS WE FACE

Like any company, we must be aware of the risks to us delivering for our customers. As a water company those risks are even more significant because failing to deliver high quality drinking water, or allowing sewage to escape into the environment, has a huge impact on our customers. We have also created five big goals with ambitious plans to improve our service and impact. To make sure we can deliver these goals and manage the risks that we face, we need to know what they are and be able to monitor and control them. To do this we identify risks and decide how to manage them all the time. Our risk management processes are overseen by a risk committee made up of senior colleagues and Board members.

HOW WE MAKE SURE WE KNOW WE ARE GETTING IT RIGHT

Reporting performance is another important part of what we do. We serve 5.4 million people and it is vital that we can show them accurately, and in a way that is easy to understand, how we are doing. This applies to all areas of our performance; how we are spending customer's money, how well we are supplying high quality water, how we are collecting and treating waste and how we are impacting overall on our customers and the environment.

We must be sure that all our data is right. To do this we have comprehensive assurance processes that check all the information that we publish. Our Board is accountable for all our reporting and the people on the Board make sure information is right through an audit committee that reviews all our published information. You can find out more about our assurance by visiting yorkshirewater.com/reports

This company structure ensures that we know the challenges we face and what we need to do, we can see and take account of risks that could impact on the services we provide, and report well about how we are doing against the ambitious targets that we have set ourselves.

BOARD CONTROL AND MONITORING

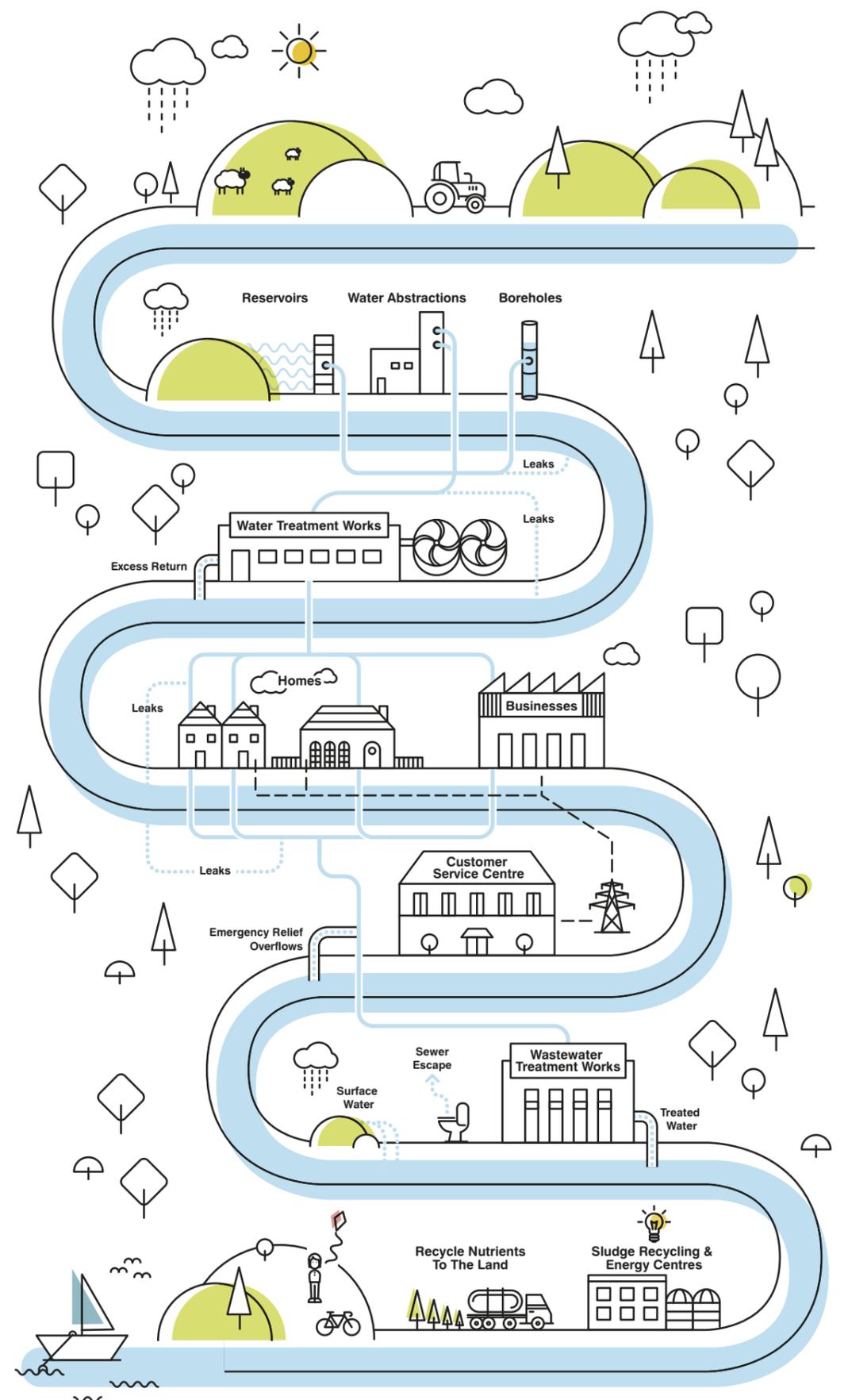
CAPITAL	COMMITTEE	WHAT DO THEY MEASURE
 HUMAN	Remuneration; Health, safety and environment	Diversity, pay gap, well being, Safety and health and environmental pollution
 INTELLECTUAL	Data, IT and innovation and change	Use of innovation and best practice
 NATURAL	Board investment	Our sustainable use of environmental resources: water, biodiversity, carbon
 SOCIAL	Social value	The broad value we deliver, the trust in our company and strength of our partnerships
 FINANCIAL	Audit	Our financial resilience
 MANUFACTURED	Board investment	Our investment and maintenance programme and its impact on carbon



HOW WE WILL MAKE SURE WE CAN DELIVER THIS?

 <p>Our water resources will meet the needs of a growing population whilst keeping bills low</p>	 <p>We will not waste water through leakage – we will be creating water for thousands of new homes, whilst keeping bills low</p>	 <p>We will enhance and protect the environment through creating rain gardens and tree planting – for everyone to enjoy</p>	 <p>Our tailored services will meet the needs of our varied communities</p>
 <p>There will be a lot less rainwater in our sewers, creating capacity for houses to be built, keeping the water bill low</p>	 <p>Our rivers will be even healthier because by 2050 at the latest, we will have eradicated pollutions from our assets</p>	 <p>We will be investing £millions in Yorkshire – helping to support our economy</p>	 <p>We will always be open and you can contact us in the way that suits you best</p>

- ● — We're one of Yorkshire's biggest land owners
- ● — We collect water from three main sources
- ● — We manage 671 water and wastewater treatment works
- ● — We supply water to homes and businesses across the county
- ● — Our customer service team support our 5 million customers
- ● — We collect 1 billion litres of waste water every day
- ● — We safely return water back into the environment



TELL US WHAT YOU THINK

HOW TO GET INVOLVED

This document will tell you everything we've learned from talking to customers, the Yorkshire Forum for Water Customers and from other stakeholders. It sets out how we'll be facing future challenges in a way that is resilient, sustainable and affordable for all.

We want to check if you think we have got this right.

HERE ARE SOME QUESTIONS WE'D LIKE YOU TO ANSWER.

1. Have we got our understanding of our customers' wants and needs right and are there other issues that we should be considering?
2. Are the assumptions we're making about the economy and environment of Yorkshire correct and are there any further factors that we should consider?
3. Are there any other ways in which we should be looking at our impact on society?
4. Do you agree with the reasons why we think we need to change the way we work?
5. Do you think that our five big goals are the right ones - are there any other big issues we've missed?

**TO TELL US WHAT YOU THINK YOU CAN ANSWER
THESE QUESTIONS ON OUR SURVEY PAGE
[YORKSHIREWATER.COM/BIGGOALS](https://yorkshirewater.com/biggoals)**

**Part of Appendix 8K:
v. PR19 Outcomes Debrief 11.04.18
– Extract
Author: DJS Research**



YorkshireWater

PR19 Outcomes

Debrief prepared for:
**Donna Hildreth & Paul
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April 2018

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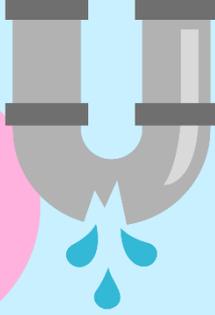
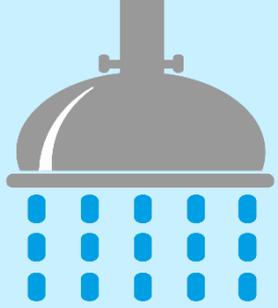
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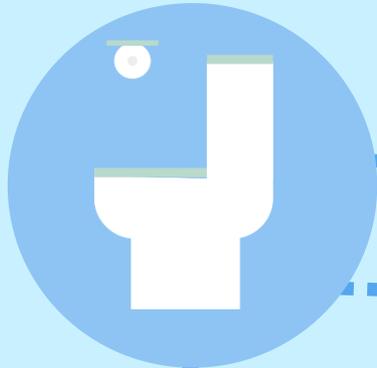


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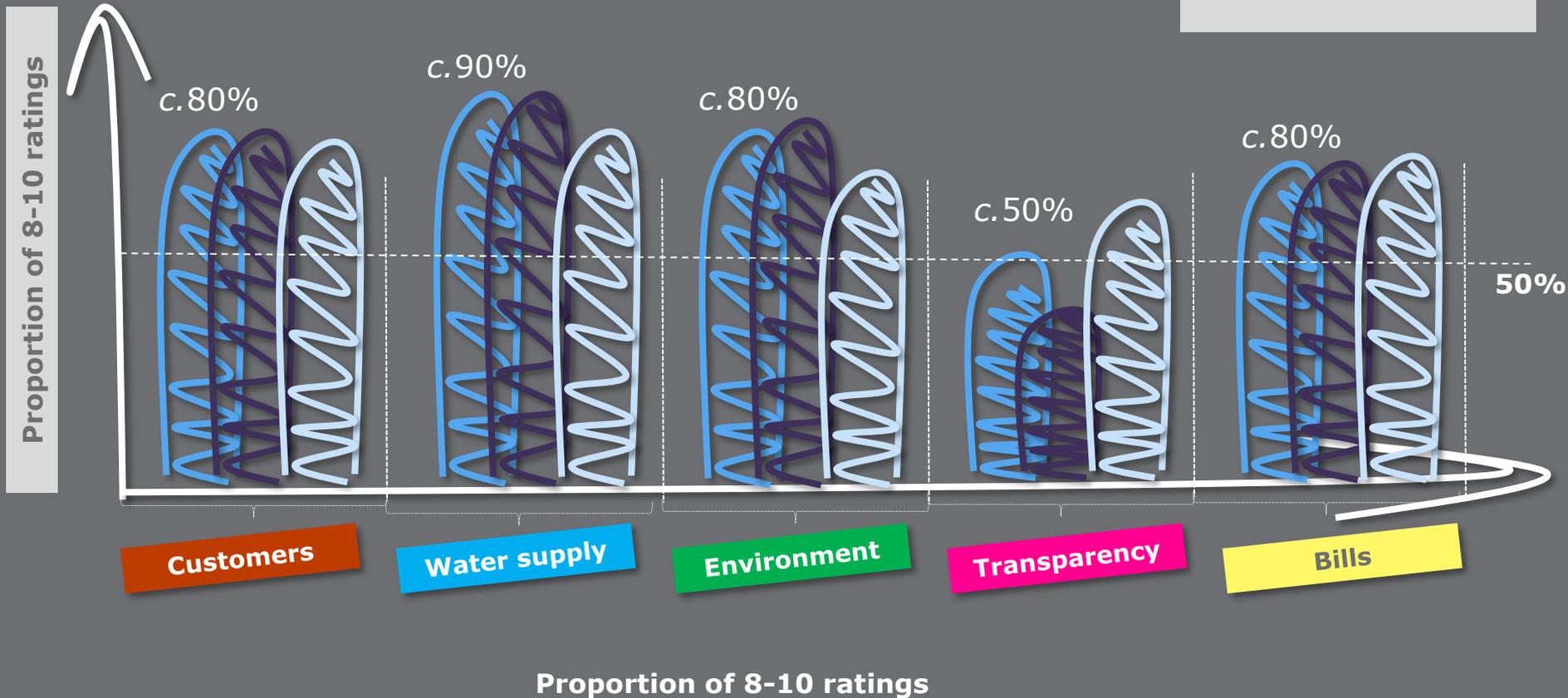
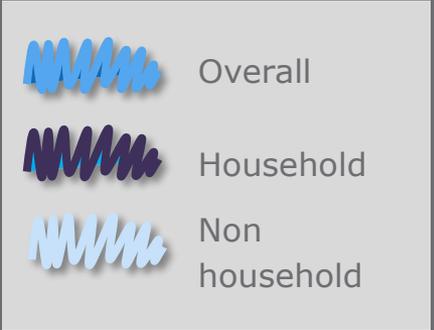
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Headlines



Support for the five Big Goals

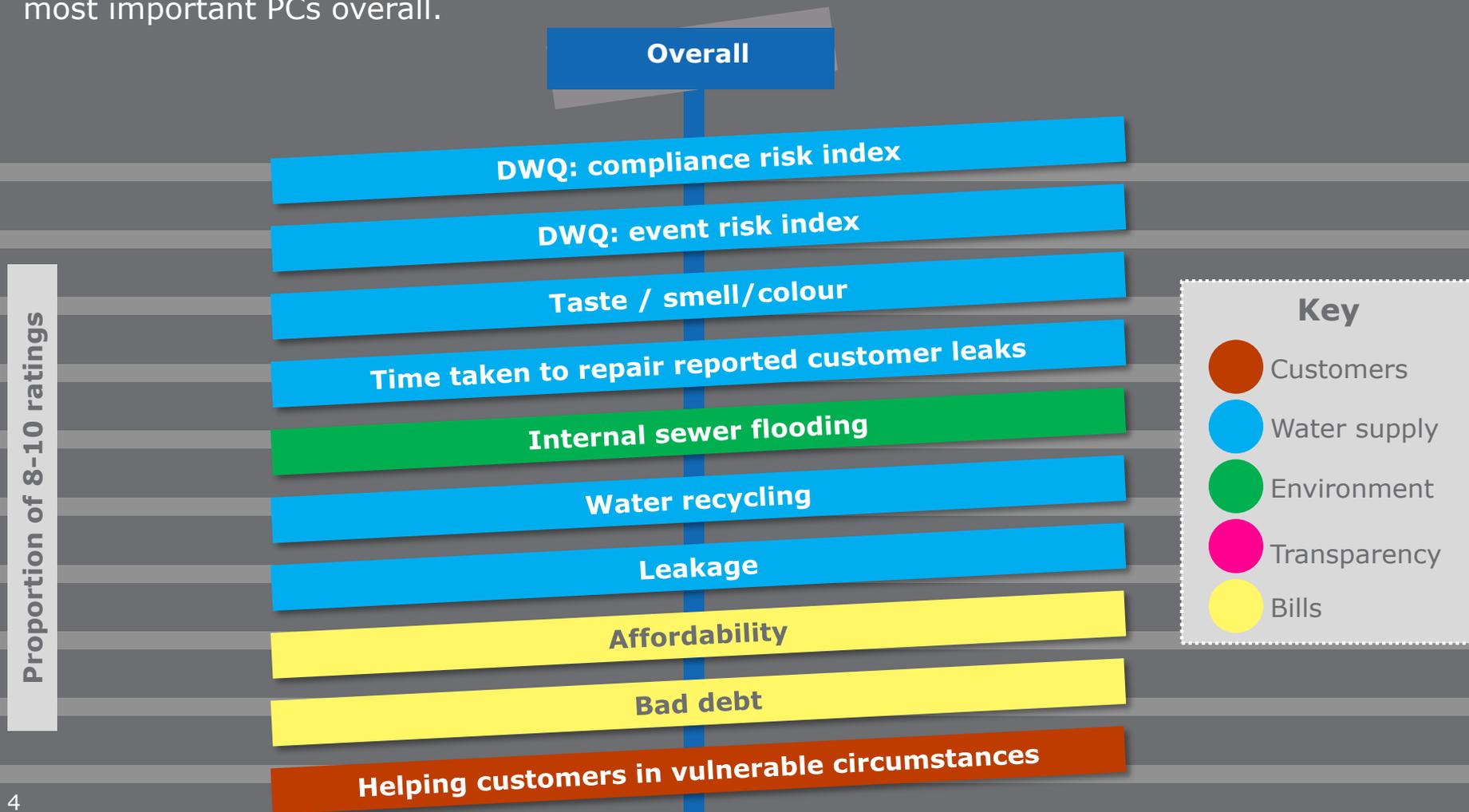
Water supply & Environment are the strongest goals in terms of levels of support, while Transparency is least well supported, overall.





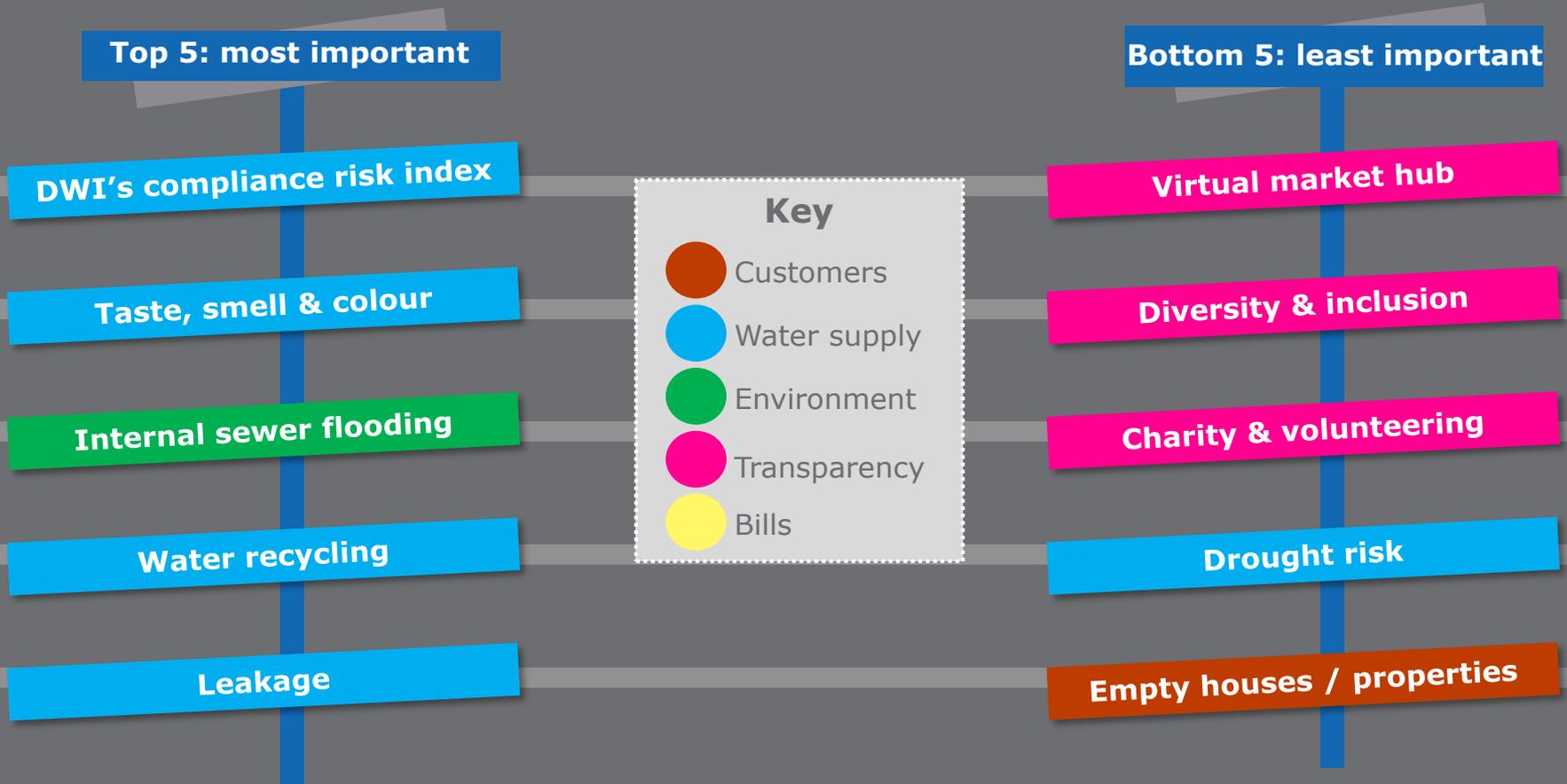
Top 10 Performance Commitments: importance

Tying into support for the Big Goals, commitments related to **Water supply** are amongst the most important PCs overall.



Top & bottom 5 PCs when forced to choose

When respondents are forced to choose a top 5 and a bottom 5 for importance, a similar picture emerges – with Water supply PCs covering most of the 'most important' slots, and Transparency commitments covering most of the 'least important'.



5

'Big goals': in detail

In depth look at each of the big goals and the associated PCs



3.

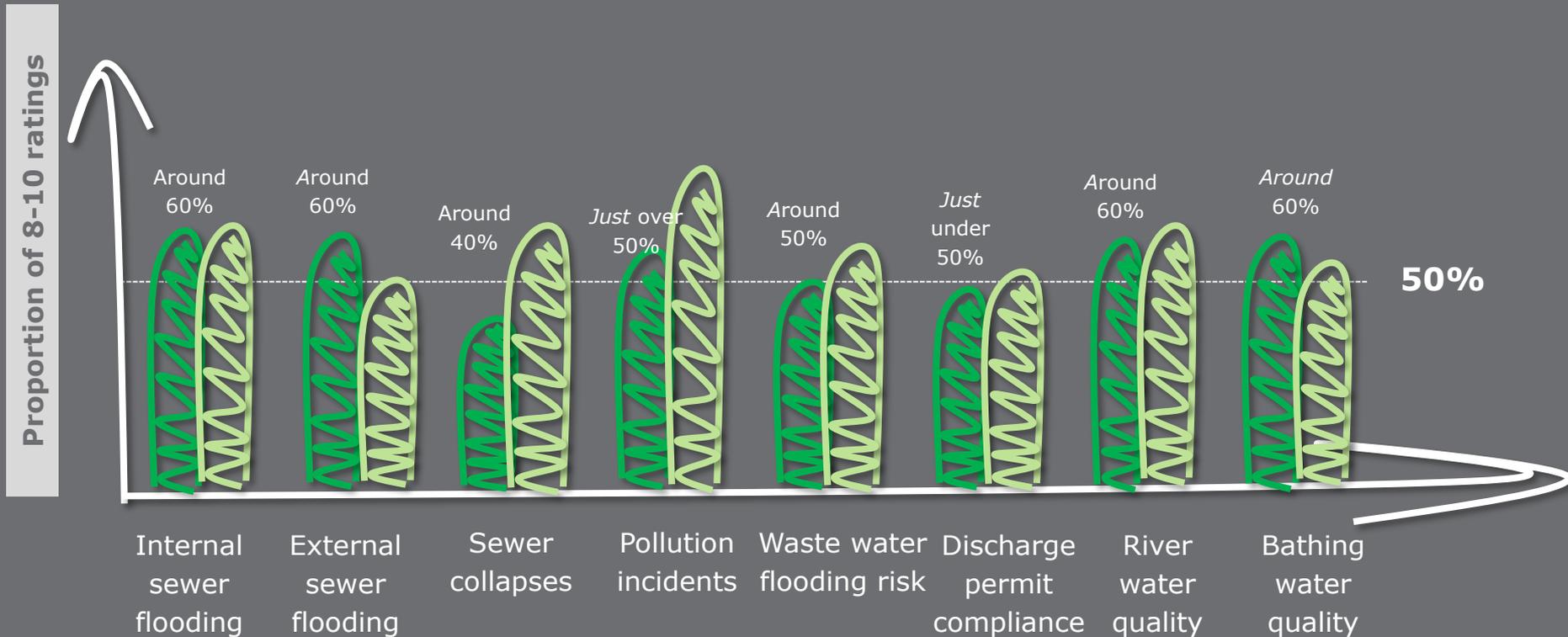
Environment:

We will recycle all waste water, protecting you & the environment from sewer flooding & pollution.



Environment PCs – importance

Internal & external sewer flooding as well as water quality in the environment are some of the most important areas to customers generally although businesses are more likely than household customers to see the importance in pollution incidents





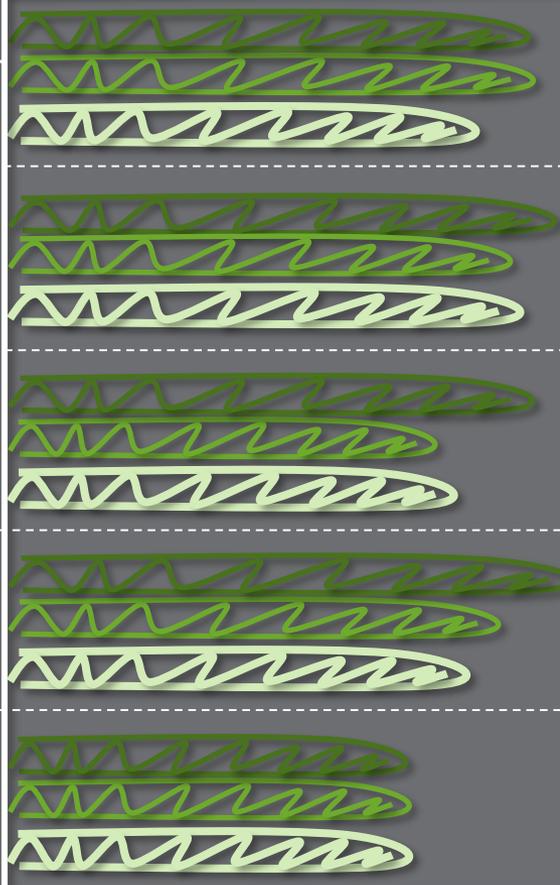
Future targets & improvements

Where current targets are in place, customers would like to see an immediate emphasis on improving the number of pollution incidents. Otherwise all PCs are seen as fairly equal and deserving of similar levels of improvement / investment.

(No change) (Improve slightly) (Improve a lot)



- Internal sewer flooding
- External sewer flooding
- Sewer collapses
- Pollution incidents
- Discharge permit compliance



YW's ranking (in the bottom half) is not seen as good enough for some – so they would opt for significant, continuous improvement



"174 pollution incidents, per year – they transport how much water? That's pretty good isn't it?" Hull, HH, ABC1

The level of importance that a customer places on environmental factors generally seems to dictate the extent to which they want to see improvements in pollution incidents

"174 pollution incidents, per year? It shouldn't be in more than double figures. Do we get told about these? It needs to change, quickly" Hull, HH, ABC1

Review of Targets

General thoughts on Environment targets in light of comparative rankings

Internal sewer flooding

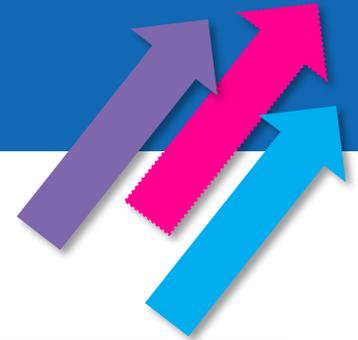
Customers really dislike the idea of internal sewer flooding and the figure of 580 seems quite high to them given the severity of the event, they feel it is particularly high given the context that YW ranks 2nd to last comparatively to other companies in this area

External sewer flooding & Pollution incidents

Customers are a little more pleased to see that YW is performing closer to the mid point (6th/10) amongst other suppliers for external sewer flooding but the general consensus is that YW should be aiming to be at least in the top half of companies and ideally in the top third

Sewer flooding risk

YW ranks last comparatively to other companies in terms of waste water sewer flooding risk and although customers appreciate that the region is naturally quite susceptible to flooding they feel that this is still not acceptable and an area that YW might want to focus on stretching themselves when forming a target for 2020



If you have any questions or would like to hear more, contact...

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For more information, visit our UK
or International websites:

<http://etudesmarketingangleterre.fr/>

<http://ricercadimercatoinghilterra.it/>



**Part of Appendix 8k:
vi. Cost Adjustment Claim Research
- Redacted Report
Author: Qa Research**



Cost Adjustment Claims Research Report

For **Yorkshire Water**

27 April 2018



RESEARCH

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Project number:	SKILL02-8098
Title:	Cost Adjustment Claims
Location:	S:\ProjectFiles\Y\Yorkshire_Water\SKILL02-8098_Cost_Adjustment_Claims_2018\Reports\YW_Cost_Adjustment_Claims_Research_2018_Full_Report_V1f.doc
Date:	April 27 2018
Report status:	Draft
Approved by:	Nick Lynch
Authors:	Richard Bryan & Michael Fountain
Comments:	richard.bryan@garesearch.co.uk

This research has been carried out in compliance with the International standard ISO 20252, (the International Standard for Market and Social research), The Market Research Society's Code of Conduct and UK Data Protection law

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I. Introduction

This report reveals the key findings of a study undertaken with Yorkshire Water's domestic customers conducted by Qa Research.

The study focused on the level of priority that customer's gave towards 7 Cost Adjustment Claims (CACs) that Yorkshire Water is considering re-submitting to the water industry regulator, Ofwat.

The outcomes of the research will enable Yorkshire Water to consider a final set of CACs that will then be re-submitted to Ofwat as part of its final draft of its 5 year Business Plan 2020-2025.

The research was conducted using a combination of quantitative and qualitative research methods with customers throughout the region.

The quantitative research provided a statistical assessment of the levels of priority that customers gave to each claim and ranked them in order of importance.

The qualitative research provided insight in to customers' attitudes to each of the 7 claims and the reasons why they did or did not support each claim.

2. Aims and objectives

The overall aim of the research was to:

'Identify the level of support customers have for cost adjustment claims proposed by Yorkshire Water and the timeframe they would prefer to pay for these and the bill as a whole.'

We believe that the specific research objectives were to:

- Gauge customers understanding of cost adjustment claims and the extent to which they support the rationale for YW's making these claims
- Reveal customers level of support for each of the claims being put forward, specifically
 - Reasoning for supporting/not supporting a claim and drivers behind this
 - Which of the claims customers prioritise over others and why
 - How opinions towards each claim may change once impact on bills are known
- Investigate factors that may make customers any more likely to support claims
- Assess when customers would like to pay for cost adjustment claims
- Explore the timeframe in which customers would like to pay: at the time of receiving service improvements, spread over a period of time or costs put back in to the future.

3. Methodology

A mixed method of quantitative and qualitative research was applied to the project. In this section we detail the approach used within each of these methodologies.

3.1 Quantitative research

An online survey was carried out with a sample of 1,000 Yorkshire Water customers via a commercial access panel. All respondents were bill payers (either jointly or solely) and to ensure the sample was representative, quotas were set of age, gender, region and presence of water meter in the home. Interviews were completed between Friday 6 April and Monday 16 April 2018.

The survey mainly consisted of two MaxDiff trade-off models which were used to determine the level of support for each of the 7 Cost Adjustment Claims. The first version of the model (Model A) included a description of the reasons for each claim, the benefit it would bring and the overall level of investment required. This model was then repeated, but the second time round each Claim included details of the associated cost increase to an average household bill.

Findings from both models were then analysed to determine the level of support respondents had for each Cost Adjustment Claim (both before and after the bill impact was included) and this analysis is outlined below.

3.2 Qualitative research

The qualitative research included two core methodological approaches, focus groups with domestic customers and in-depth interviews specifically with vulnerable domestic customers.

Focus groups

We conducted a total of 7 focus groups with domestic customers across the region. The segments recruited and locations covered were as follows:

Figure 1. Summary of focus group sample

Group	Region	Type	Location	Lifestage	SEG
1	North	Rural	Ripon	Family	ABC I
2	North	Rural	Ripon	Older	ABC I
3	East	City	Hull	Future Bill Payers	ABC I
4	East	City	Hull	Older	C2DE
5	West	Town	Bradford	Pre Family	C2DE
6	West	Town	Bradford	Family	C2DE
7	South	Town	Barnsley	Pre Family	C2DE

Respondents were recruited free find by specialist recruiters in each locality.

Group participants each received £50 cash incentive for taking part. Sessions were audio recorded with permission from respondents and lasted 2 hours each.

The moderator used a discussion guide that had been developed in conjunction with Yorkshire Water. To enable participants to understand each Cost Adjustment Claim the moderator provided a series of showcards with each claim fully described allowing respondents to debate their views towards them.

The showcards also included a range of bill phasing scenarios to enable customers to decide which of them they preferred.

In-depth interviews

Qa conducted 12 in-depth face-to-face interviews in the homes of vulnerable customers.

Customers were recruited to interview according to vulnerability criteria provided by Yorkshire Water. The table below reveals how each of the 12 interviews were split according to location and vulnerability category:

Figure 2. Summary of depth interview sample

Interview	Region	Location	Type
1	North	York	75+
2	North	York	Disability/health
3	North	York	Income/benefit/bill issues
4	East	Hull	75+
5	East	Hull	Disability/health
6	East	Hull	Income/benefit/bill issues
7	West	Leeds	75+
8	West	Leeds	Disability/health
9	West	Leeds	Income/benefit/bill issues
10	South	Sheffield	75+
11	South	Sheffield	Disability/health
12	South	Sheffield	Income/benefit/bill issues

Respondents were recruited free find by specialist recruiters in each locality. Interview participants each received £50 cash incentive for taking part.

Sessions were audio recorded with permission from respondents and each lasted approximately 1 hour.

The interviewer used an interview script that was adapted from the focus group discussion guide and developed in conjunction with Yorkshire Water. Participants were also shown the same set of showcards that were used within the focus groups to enable them to understand each CAC and bill phasing scenarios.

4. Key findings

4.1 Quantitative research findings

4.1.1 Model A (Excluding Bill Impact) – Total Sample

The first MaxDiff model respondents were asked to complete included details of the overall investment that Yorkshire Water would need to make for each Cost Adjustment Claim, but it did not include details of the impact on customer bills.

Essentially, customers were being asked to make choices about which of the investments they supported based on the benefit that investment would bring and the overall cost to Yorkshire Water, but without any indication of the level of additional contribution the average household customer would need to make to support the investment.

Respondents were shown the 7 Cost Adjustment Claims in groups of 3 and from each group they were asked to simply choose the one they *supported most* and the one they *supported least*. For this model, they were asked to give their views on 7 different groups of 3. By controlling exactly which Claims are included in each group of 3 and which respondents see which group, we can build up a picture of how much support there is for each one.

From responses, levels of support are calculated and to make interpretation easier a % Share of Support figure is calculated as a proportion of 100%. The % Share of Support score also tells us how much more/less support one of the Cost Adjustments Claims has than the others.

The table below outlines the findings from *Model A (Excluding bill impact)* amongst all respondents¹;

Figure 3. Model A (Excluding bill impact) Share of Support

Model A (Excluding bill impact)		
	% Share of Support	Rank
Maintaining Drinking Water Quality	29.4%	1
Reducing Water Lost Through Leaks	23.7%	2
Improving River Water Quality	16.3%	3
Reducing Flood Risk in Hull	10.5%	4
Infrastructure for New Towns	7.8%	5
Reducing Cellar Sewer Flooding	7.6%	6
New Customer Management System	4.6%	7
Base: All respondents - clean (938)		

¹ The data is actually based on a 'clean' sample of respondents, rather than all 1,000 respondents who completed the survey. This is because when we model the data, we get a model fit score that tells us how well the model can predict each respondent's answers. A low fit score suggests that a respondent didn't give meaningful answers/responded randomly. These respondents have been removed from the MaxDiff analysis and interpretation has been carried out on the 'clean' sample only.

The previous table indicates that between them, 2 Claims have more than 50% of the % Share of Support and these are;

- **Maintaining Drinking Water Quality** – 29.4% Share of Support
- **Reducing Water Lost Through Leaks** – 23.7% Share of Support.

In simple terms, these are the most well supported Cost Adjustment Claims.

Additionally, the data also tell us that with a % Share of Support of 29.4%, there is almost twice as much support for Maintaining Drinking Water Quality than there is for the third most well supported Claim, which is **Improving River Water Quality** (with a 16.1% Share of Support) and three times as much support as the fourth most well support one, which is **Reducing Flood Risk in Hull** (with a 10.5% Share of Support).

At the other end of the scale, the least well supported is the **New Customer Management System**, with only a 4.6% Share of Support, and comparatively low levels were also recorded for **Infrastructure for New Towns** (7.8%) and **Reducing Cellar Sewer Flooding** (7.6%).

Another way to analyse the data is to examine the proportion of respondents that have each Claim in their *Top 2* or *Bottom 2*, based on their MaxDiff scores. These metrics are interesting because they show us how polarising an investment is, whereas the % Share of Support score does not. A summary of this data is below;

Figure 4. Model A (Excluding bill impact) – Top 2/Bottom 2 CACs

Model A (Excluding bill impact)		
	% of Respondents including in their Top 2	% of Respondents including in their Bottom 2
Maintaining Drinking Water Quality	79.3%	1.7%
Reducing Water Lost Through Leaks	52.7%	8.3%
Improving River Water Quality	26.2%	17.9%
Reducing Flood Risk in Hull	16.3%	31.0%
Infrastructure for New Towns	10.3%	38.7%
Reducing Cellar Sewer Flooding	8.3%	37.5%
New Customer Management System	6.8%	64.8%
Base: All respondents - clean (938)		

Supporting the % Share of Support scores, we can see that more than half the sample made choices that put **Maintaining Drinking Water Quality** and **Reducing Water Lost Through Leaks** in their Top 2.

In particular, support for Maintaining Drinking Water Quality is very strong, as this was in the Top 2 for 79.3% of all respondents and in the Bottom 2 for only 1.7%.

Similarly, the findings reinforce levels of support for Reducing Water Lost Through Leaks (52.7% had this in their Top 2 and 8.3% in their Bottom 2).

Consequently, these findings reinforce that customers are most likely to support the Cost Adjustment Claim for Maintaining Drinking Water Quality and Reducing Water Lost Through Leaks.

The data also highlight that **Improving River Water Quality** (which had the third highest % Share of Support at 16.1%) is quite polarising, with differences of opinion evident amongst respondents. Specifically, 26.2% had this Claim in their Top 2, but 17.9% had it in their Bottom 2. As a result, the case for this Claim is less clear cut, as contrasting views clearly exist amongst household customers.

The other 4 Cost Adjustment Claims all had a % Share of Support of c.10% or less and this is reinforced by the findings in the table above, with respondents more likely to have each one in the Bottom 2 than there Top 2.

In particular, a **New Customer Management System** was in the Bottom 2 for the majority of respondents (64.8%), further confirming that there is limited support for this when compared with the 6 other Cost Adjustment Claims.

4.1.2 Model A (Excluding Bill Impact) – Key Sub-Groups

This section explores Model A amongst key-groups.

The % Share of Support amongst different age groups is detailed below;

Figure 5. Model A (Excluding bill impact) Share of Support – by age

	Model A (Excluding bill impact)			
	Total Sample	Aged 18-44	Aged 45-64	Aged 65+
	% share of support			
Maintaining Drinking Water Quality	29.4%	28.3%	29.5%	30.6%
Reducing Water Lost Through Leaks	23.7%	21.8%	24.2%	25.3%
Improving River Water Quality	16.3%	17.2%	16.9%	14.6%
Reducing Flood Risk in Hull	10.5%	10.7%	10.3%	10.6%
Infrastructure for New Towns	7.8%	8.8%	7.3%	7.4%
Reducing Cellar Sewer Flooding	7.6%	8.2%	6.9%	7.9%
New Customer Management System	4.6%	5.1%	5.0%	3.5%
Base: All respondents - clean	938	305	351	273

As shown above, there was little variation between age groups regarding the Cost Adjustment Claims that recorded the highest levels of support.

Specifically, between them **Maintaining Drinking Water Quality** and **Reducing Water Lost Through Leaks** had more than 50% of the Share of Support amongst each group, while **Improving River Water Quality** had the third highest level of support and **Reducing Flood Risk in Hull** the fourth highest.

That said, older respondents were slightly more likely to support Reducing Water Lost Through Leaks (with a 21.8% Share of Support amongst 16-44 year olds and a 25.3% Share Amongst those aged 65+), while Improving River Water Quality was supported slightly more by those aged 16-44.

One other area to highlight here is at the bottom of the ranking. Although, a **New Customer Management System** is the least supported Cost Adjustment Claim amongst each age group, support was higher amongst those aged 16-44 (5.1%) or 45-64 (5.0%) than those aged 65+ (3.5%).

The table below outlines the % Share of Support amongst respondents living in the 4 Yorkshire Water regions;

Figure 6. Model A (Excluding bill impact) Share of Support – by Region

	Total Sample	Model A (Excluding bill impact)			
		North	East	South	West
% share of support					
Maintaining Drinking Water Quality	29.4%	30.2%	27.3%	30.1%	29.3%
Reducing Water Lost Through Leaks	23.7%	24.4%	22.8%	23.8%	23.7%
Improving River Water Quality	16.3%	17.8%	14.3%	15.8%	16.6%
Reducing Flood Risk in Hull	10.5%	8.7%	18.0%	9.3%	9.9%
Infrastructure for New Towns	7.8%	8.3%	6.4%	8.8%	7.4%
Reducing Cellar Sewer Flooding	7.6%	7.2%	6.0%	7.0%	8.6%
New Customer Management System	4.6%	3.5%	5.4%	5.2%	4.4%
Base: All respondents - clean	938	152	111	252	414

With one exception, respondents in each Region answered in a very similar way, resulting in similar ranking of the 7 Cost Adjustment Claims and a broadly similar % Share of Support for each.

The one exception was amongst respondents in the East, who had Improving **Reducing Flood Risk in Hull** ranked third with a % Share of Support of 18%.

In fact, compared with respondents in the other regions, those in the East were almost twice as likely to support this claim. Given that the East region comprises respondents living in the local authority areas of Hull and East Yorkshire it's perhaps not surprising that they place more emphasis on the situation in Hull.

In line with this, 38.7% of respondents in the East Region had Reducing Flood Risk in Hull as one of their Top 2 most supported claims – in the other 3 regions around a third of respondents had it as one of their Bottom 2.

4.1.3 Model B (Including Bill Impact) – Total Sample

To evaluate the impact of the likely increase in bills associated with each Cost Adjustment Claim, a second model was undertaken (Model B). It mirrored Model A in every way except that a short description was included which outlined the increase to the average household bill. By replicating the original exercise but introducing bill impact, the effect of bill increases on support for each Claim can be determined.

The table below shows the % Share of Support for each Cost Adjustment Claim for Model A (the same figures as shown in Section 5.1.1); alongside these, are the equivalent figures for Model B along with an indication of which direction the % Share of Support has gone as a result of the introduction of the bill impact;

Figure 7. Model B (Including bill impact) – comparison with Model A

	Model A (Excluding bill impact)		Model B (Including bill impact)		% Share of Support - direction of travel
	% Share of Support	Rank	% Share of Support	Rank	
Maintaining Drinking Water Quality	29.4%	1	29.9%	1	↑
Reducing Water Lost Through Leaks	23.7%	2	17.9%	2	↓
Improving River Water Quality	16.3%	3	<i>Removed from Report</i>		
Reducing Flood Risk in Hull	10.5%	4	13.6%	3	↑
Infrastructure for New Towns	7.8%	5	9.9%	4	↑
Reducing Cellar Sewer Flooding	7.6%	6	6.1%	6	↓
New Customer Management System	4.6%	7	6.4%	5	↑

Base: All respondents - clean (938)

As a reminder; the following bill impacts were included in Model B;

- £1.20 a year (10p a month) - Maintaining Drinking Water Quality
- £24.40 a year (£2.03 a month) - Reducing Water Lost Through Leaks
- 40p a year (3p a month) - Reducing Flood Risk in Hull
- 80p a year (7p a month) - Infrastructure for New Towns
- £12.20 a year (£1.02 a month) - Reducing Cellar Sewer Flooding
- £1.20 a year 10p a month - New Customer management System.

What's most obvious from a comparison of Model A and Model B is that introducing the bill impact has a minimum impact of the % Share of Support overall. The top 4 ranked Cost Adjustment Claims in Model A remain the top 4 in Model B, with only the two least supported swapping round.

However, some small differences are apparent. It's notable that support for **Maintaining Drinking Water Quality** actually increases slightly (from 29.4% to 29.9% Share of Support), perhaps reflecting the fact that the impact on bills for this Claim is comparatively low.

Support also increases for **Reducing Flood Risk in Hull** (from 10.5% to 13.6%); this is the Claim with the lowest bill impact and it's evident that it becomes easier for customers to support this Claim once the financial implications of doing so are made clear.

Additionally, 2 of the other 4 Claims that recorded the lowest % Share of Support in Model A also recorded slight increases in the % Share of Support in Model B and in both instances these were ones with a comparatively low likely increase in the average household bill;

- **Infrastructure for New Towns** - (from 7.8% to 9.9%)
- **New Customer Management System** - (from 4.6% to 6.4%).

In contrast, once bill impact was introduced support declined for the 3 Claims that had the highest associated bill impact. In particular, while **Reducing Water Lost Through Leaks** remained the second most well support claim, it's % Share of Support declined from 23.7% to 17.9%, indicating that £24.40 a year (£2.03 a month) to 'Reduce Water Lost Through Leaks by a further 40%' makes this claim more difficult to support for some customers.

Similarly, support declined slightly for **Reducing Cellar Sewer Flooding** (from 7.6% to 6.1%).

Repeating the analysis undertaken for Model A, the table below shows the proportion of respondents who had each Cost Adjustment Claim in their Top 2 or Bottom 2 for Model B and compares this to Model A;

Figure 8. Model B (Including bill impact) – Top 2/Bottom 2 CACs

	% of Respondents including in their Top 2		% of Respondents including in their Bottom 2	
	Model A	Model B	Model A	Model B
Maintaining Drinking Water Quality	79.3%	79.6%	1.7%	1.2%
Reducing Water Lost Through Leaks	52.7%	37.3%	8.3%	22.2%
Reducing Flood Risk in Hull	16.3%	25.5%	31.0%	24.2%
Infrastructure for New Towns	10.3%	17.2%	38.7%	34.3%
Reducing Cellar Sewer Flooding	8.3%	6.3%	37.5%	46.9%
New Customer Management System	6.8%	8.3%	64.8%	57.5%

Base: All respondents - clean (938)

This analysis is informative, as it tells us a little more about the impact of additional bill costs on each Claim. It tells us that introducing the bill impact for **Maintaining Drinking Water Quality** makes no difference to the degree of support – 79.6% have this in the Top 2 for Model B.

It also demonstrates that the introduction of the bill impact to the second most well supported Claim (**Reducing Water Lost Through Leaks**) has a polarising effect. Specifically, in Model A (which excluded the bill impact) 52.7% had this in their Top 2 and 8.3% in their Bottom 2, but introducing the bill impact at Model B results in 37.3% having this in their Top 2 and 22.2% having it in their Bottom 2.

Essentially, respondents become less supportive of this claim once bill impact is introduced because some consider the increase per year to be unacceptable (which at £24.40 a year is the highest amount for any Claim).

In contrast, the introduction of bill impact for **Reducing Flood Risk in Hull** has a positive impact on support, which is likely to reflect the fact that the increase to the average annual household bill is lower for this Claim than any other. Specifically, in Model A 16.3% had this in their Top 2, but this proportion increased to 25.5% in Model B.

The data also highlight that when it's explained to respondents that **Reducing Cellar Sewer Flooding** would mean an increase to the average household bill of £12.20 per household per year (or £1.02 per month) this serves to reduce levels of support overall because more respondents have this Claim in their Bottom 2 (46.9% in Model B compared with 37.5% in Model A).

For the other Claims, this data confirms that the introduction of bill impact makes only a small difference to the choices that respondents made in the MaxDiff model.

4.1.4 Model B (Including Bill Impact) – Key Sub-Groups

This section highlights the result of introducing bill impact into the model (Model B) on responses amongst key sub-groups. The table below shows a comparison of the % Share of Support amongst different age groups from Model A and Model B;

Figure 9. Model B (Including bill impact) Share of Support – by age

	Total Sample		Aged 18-44		Aged 45-64		Aged 65+	
	Model A	Model B	Model A	Model B	Model A	Model B	Model A	Model B
	% Share of Support							
Maintaining Drinking Water Quality	29.4%	29.9%	28.3%	29.1%	29.5%	30.1%	30.6%	30.8%
Reducing Water Lost Through Leaks	23.7%	17.9%	21.8%	15.2%	24.2%	17.7%	25.3%	21.3%
Reducing Flood Risk in Hull	10.5%	13.6%	10.7%	14.4%	10.3%	13.7%	10.6%	12.7%
Infrastructure for New Towns	7.8%	9.9%	8.8%	10.9%	7.3%	10.0%	7.4%	8.7%
Reducing Cellar Sewer Flooding	7.6%	6.1%	8.2%	6.4%	6.9%	5.5%	7.9%	6.3%
New Customer Management System	4.6%	6.4%	5.1%	7.2%	5.0%	7.0%	3.5%	4.8%
Base: All respondents - clean	938		305		351		273	

Introducing bill impact into the MaxDiff model has the similar impact amongst each age group as it does amongst the total sample.

Essentially, the % Share of Support increases slightly for **Maintining Drinking Water Quality**, while support also increases for **Reducing Flood Risk in Hull**, **Infrastructure for New Towns** and a **New Customer Management System**. However, it declines for **Reducing Water Lost Through Leaks**.

The table below compares the % Share of Support for Model A and Model B amongst respondents living in each Region;

Figure 10. Model B (Including bill impact) Share of Support – by Region

	Total Sample		North		East		South		West	
	Model A	Model B	Model A	Model B	Model A	Model B	Model A	Model B	Model A	Model B
	% Share of Support									
Maintaining Drinking Water Quality	29.4%	29.9%	30.2%	30.9%	27.3%	29.0%	30.1%	30.6%	29.3%	29.5%
Reducing Water Lost Through Leaks	23.7%	17.9%	24.4%	19.9%	22.8%	16.4%	23.8%	17.4%	23.7%	17.9%
Reducing Flood Risk in Hull	10.5%	13.6%	8.7%	11.3%	18.0%	19.7%	9.3%	12.9%	9.9%	13.3%
Infrastructure for New Towns	7.8%	9.9%	8.3%	9.6%	6.4%	9.3%	8.8%	10.5%	7.4%	9.8%
Reducing Cellar Sewer Flooding	7.6%	6.1%	7.2%	6.0%	6.0%	4.4%	7.0%	5.4%	8.6%	6.9%
New Customer Management System	4.6%	6.4%	3.5%	5.2%	5.4%	7.2%	5.2%	7.3%	4.4%	6.2%
Base: All respondents - clean	938		152		111		252		414	

Again, the impact of introducing the increase to an average household bill has similar results amongst respondents living in each Region as it does amongst the sample as a whole.

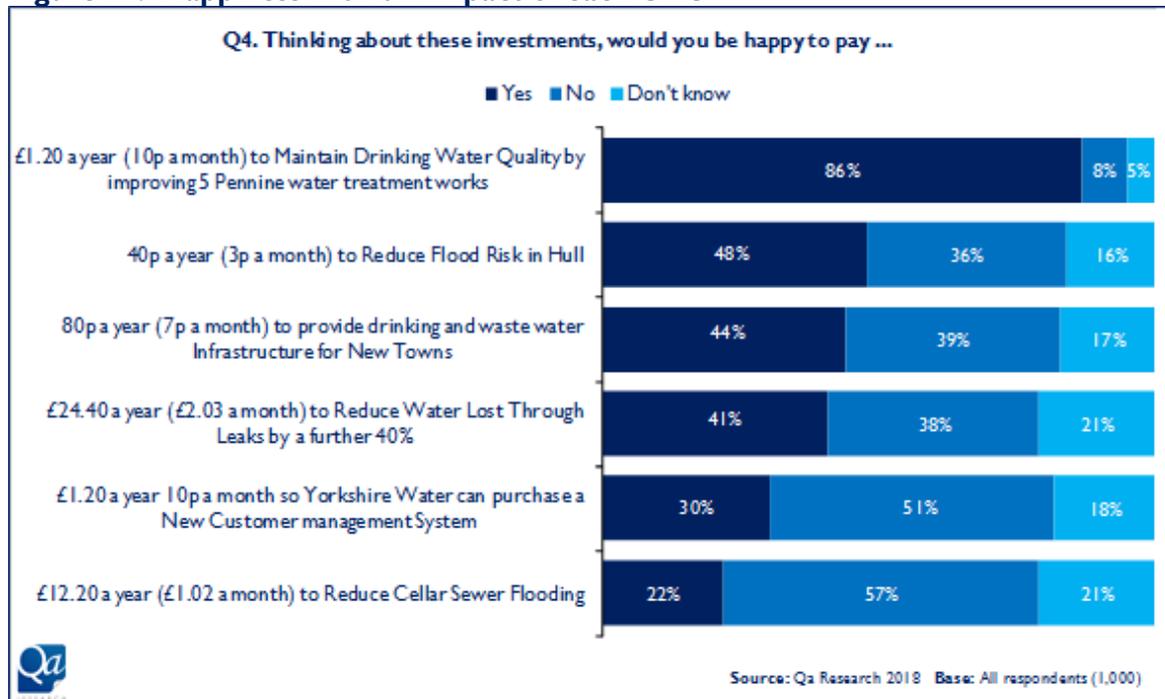
Notably, amongst those living in the East, clarifying the bill impact entrenches support for **Reducing Flood Risk in Hull** still further with the % Share of Support increasing from 18.0% for Model A to 19.7% for Model B.

As a result, amongst respondents in the East, this Cost Adjustment Claim is the second most well supported once bill impact is included in the description, although this situation is also driven by a decline in support for **Reducing Water Lost Through Leaks**.

4.1.5 Happiness with the Bill Impact of Each Cost Adjustment Claim

At the end of the survey a question was included which simply asked respondents whether they would be happy to pay the additional amount on their bill that would be required for each Cost Adjustment Claim and responses were as follows;

Figure 11. Happiness with bill impact of each CAC



This is a very simple question and doesn't ask respondents to make trade-offs or decide between one claim or another (they can say 'yes' or 'no' to them all should they wish to).

It's very clear from this data that respondents are happy to pay the £1.20 extra per year required to **Maintain Drinking Water Quality** and this aligns with the findings of both MaxDiff models.

The situation is less clear cut for the other Claims, but respondents were more likely to say 'yes' than 'no' for the two that would require an increase to the average annual household bill of less than £1 (namely **Reducing Flood Risk in Hull** and **Infrastructure for New Towns**).

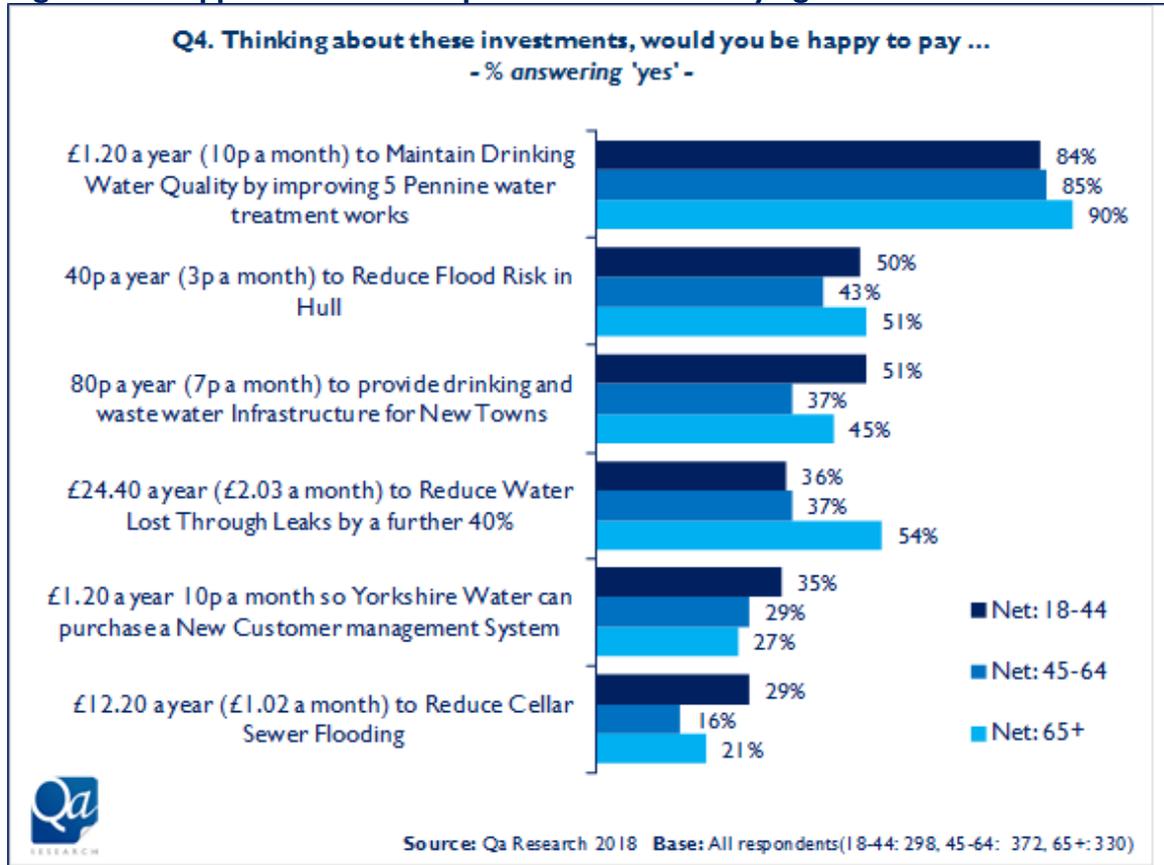
The amount required for **Reducing Water Lost Through Leaks** (£24.40 a year) were polarising with broadly equal proportions saying 'yes' and 'no' (41% vs. 38%).

However, the majority of respondents said 'no' when asked about the amounts required for **Reducing Cellar Sewer Flooding** (57%) and a **New Customer Management System** (51%). These are neither the most expensive or least expensive Claims for customers, so other considerations clearly influenced responses here apart from the bill impact.

4.1.6 Happiness with the Bill Impact of Each Cost Adjustment Claim – by age

The chart below summarises response by age;

Figure 12. Happiness with bill impact of each CAC – by age



Responses to this question amongst different age groups are broadly similar, but significant differences were noted.

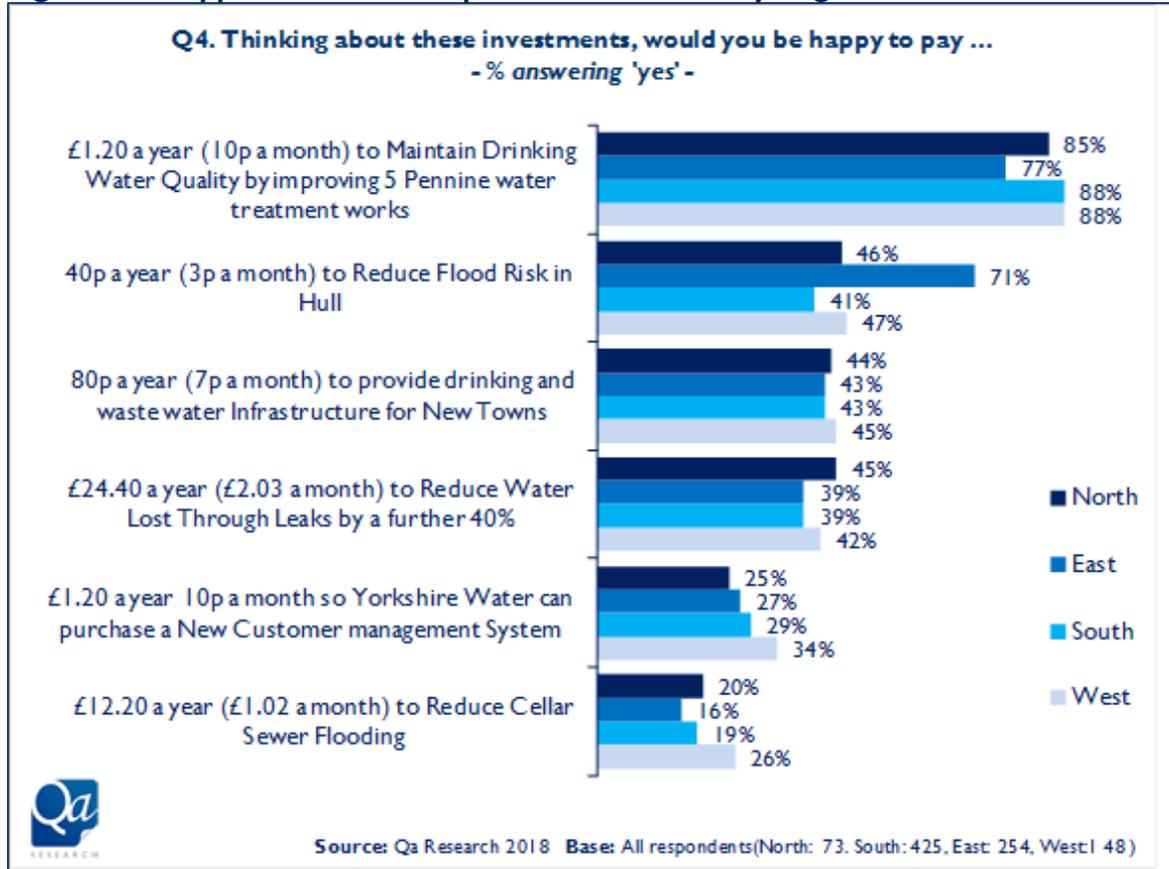
Specifically, £12.20 a year (£1.02 a month) to **Reduce Cellar Sewer Flooding** was a cost that younger respondents were significantly more likely to indicate that they would be happy to pay than older ones (18-44: 29%, 45-64: 16%, 65+: 21%). That said, the majority of all age groups said they would *not* be happy to pay this amount.

Also, when considering 80p a year (7p a month) to provide drinking and waste water **Infrastructure for New Towns**, it was respondents in middle aged groups who were the least happy to pay this amount and the least likely to respond 'yes' (18-44: 51%, 45-64: 37%, 65+: 45%) - in fact respondents aged 45-64 were more likely to say 'no' (46%) than 'yes' (37%) to this question.

The other notable and significant differences is that older respondents were the only age group where the majority said they would be happy to pay £24.40 a year (£2.03 a month) to **Reduce Water Lost Through Leaks** by a further 40% (18-44: 36%, 45-64: 37%, 65+: 51%).

The chart below shows respondents amongst respondents in the 4 Regions;

Figure 13. Happiness with bill impact of each CAC – by Region



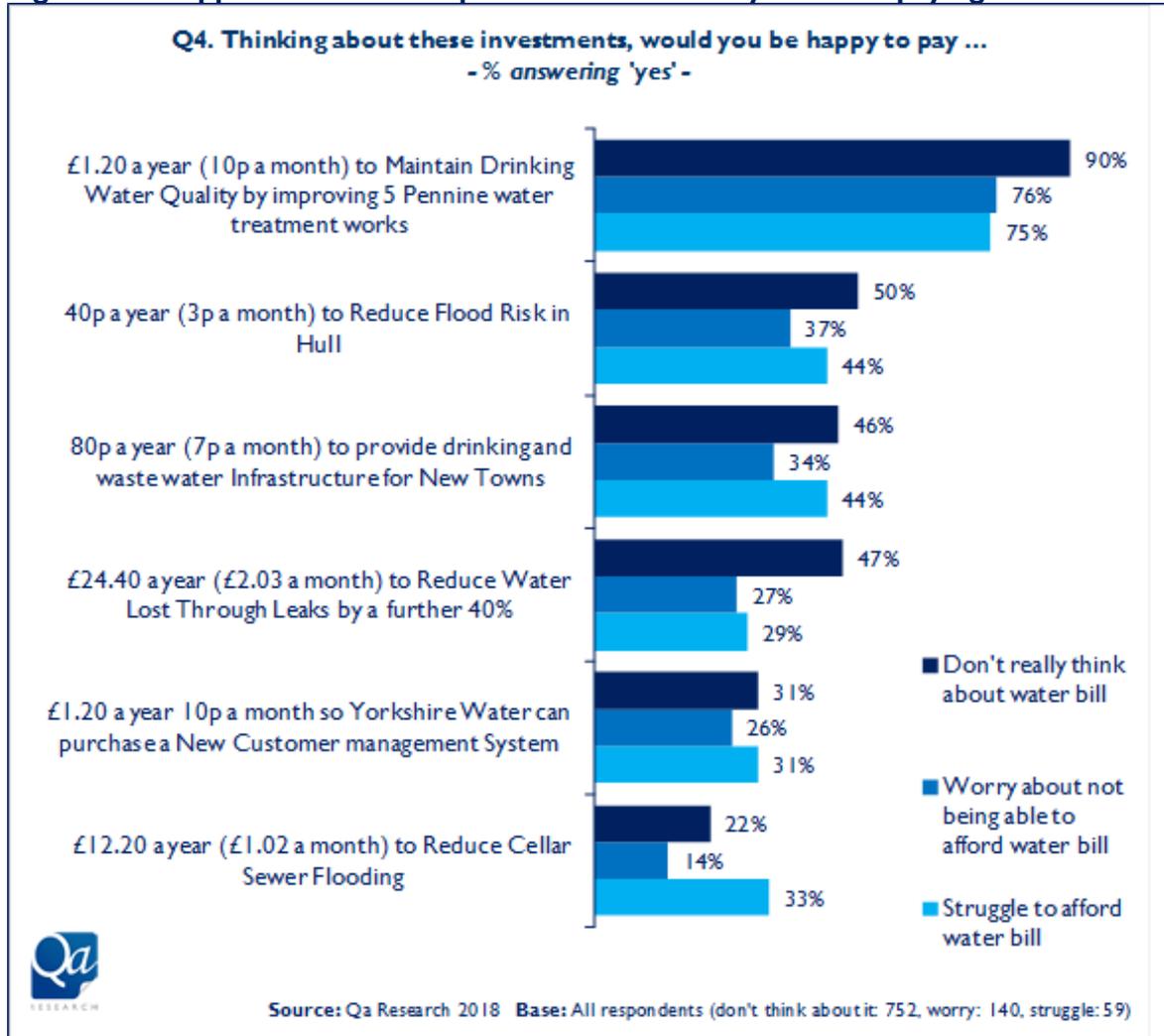
There is generally a consistent pattern of responses amongst respondents in each Region, but some exceptions were noted.

Clearly, respondents in the East Region were significantly more likely than those in the other regions to answer 'yes' to 40p a year (3p a month) to **Reduce Flood Risk in Hull** (North: 46%, East: 71%, South: 41%, West: 47%). This aligns with the increased % Share of Support noted amongst these respondents in the MaxDiff models.

Additionally, respondents in the West Region were significantly more likely to be happy with £12.20 a year (£1.02 a month) to **Reduce Cellar Sewer Flooding** (North: 20%, East: 26%, South: 19%, West: 16%) – although it should be stressed that the majority of respondents in each Region did say 'no' to paying this amount.

Finally, a question was included in the survey which asked respondents to indicate how they viewed the cost of their water bill by choosing from 1 of 4 statements. The chart below shows responses to this question based on this question. It should be noted that a fourth option was included at this question which allowed respondents to say if they actually receive help with paying their water bill, but only a handful of respondents said this and their response are not shown on the chart below.

Figure 14. Happiness with bill impact of each CAC – by views on paying water bill



It is perhaps surprising that not a lot of difference was recorded between these 3 categories of respondents. We might have expected that those who *worry* about paying their bill or admit that they *struggle* to do so would be more reluctant to accept these additional charges than those that said they *don't really think about my water bill it's just something I have to pay* but this isn't evident. One key difference is that respondents who don't worry were significantly more likely to say 'yes' to the additional amounts for **Maintain Drinking Water Quality** and **Reduce Water Lost Through Leaks** than those who either worry or struggle.

4.2 Qualitative research findings

4.2.1 Perceptions of and attitudes towards Yorkshire Water

Few participants across the groups and depth interviews had any reason to be in contact with the water company so their perceptions tended to be based on the supply and quality of the water that came out of their tap, which for the vast majority was positive.

“As long as I can have a hot shower in the morning.” – Hull, FBP, ABCI

“I like Yorkshire Water but I don’t have a lot to do with them...it would be nice to know a bit more about what they do.” – Ripon, Older, ABCI

“We have lived up here well over 50 years... I can honestly say, no, we haven’t had a problem [with Yorkshire Water].” – Vulnerable customer

“I have never had any problems with them [YW]” - Bradford, Pre family, C2DE

“Unless you have got a problem and that is very very rare” - Barnsley, Pre family, C2DE

The small number that had experienced any incidents or problems with their water felt YW had been quick to respond and so reinforced their high level of satisfaction towards the overall service they received.

When asked what they thought of when asked to think about ‘Yorkshire Water’ a number of people cited the YW vans. Some had seen the vans because of a need to fix a problem at their property or within their local community. Others had seen or them in the news during reports of flooding incidents.

“A pipe had been knocked out by BT...I then got a £600 bill for the month! Then I got a call for Yorkshire Water saying I didn’t have to pay it...I felt absolutely brilliant.” – Ripon, Older, ABCI

“I had to call out Yorkshire Water...my garden got flooded with sewerage...they came out in forty minutes...fantastic response, so quick.” – Ripon, Family, ABCI

But overall most had rarely given much thought as to how happy they were towards YW and some admitted they took water for granted as it was always there when they needed it and was of a good quality. Many also agreed that the water quality in the region was of a high standard, particularly those that had lived elsewhere in the UK or overseas.

“You don’t really hear about water companies.” – Ripon, Family, ABCI

“I just turn the tap on and don’t think about it.” – Hull, FBP, ABCI

“I think we have nice water in Yorkshire, it’s quite soft, it tastes nice.” – Vulnerable customer

A small number of customers across the qualitative research were aware that they had no choice who to use for their water service so to some extent felt this also dictated by they had no reason

to contact YW. However, a large number appeared to have rarely thought about whether they could use another provided and certainly hadn't ever looked in to switching.

“[A low profile because] They [YW] are not fighting against anybody else. Gas and electricity companies are all scrapping against each other trying to get your custom but Yorkshire Water don't. It is a closed shop. You have no choice” - Bradford, Family, C2DE

A consistent unprompted discussion that occurred across the focus groups was the varied prices customers' were paying for their water bills. Some were paying far more than others and most wondered why this was the case.

Some were on meters and living alone and reported paying a low bill, others were paying far more on a fixed bill but with only two in the household so wondered why they were not on a meter. Others reported moving in to a house that already had a meter and ended up paying more than they were in a house with a fixed bill. So this created real confusion amongst group participants with most asking why things were so different within each household.

*“I'm paying seventy three pounds a month...they haven't called me...and I'm not on a meter, why?
- Ripon, Older, ABC1*

Whilst there was some confusion about metering and bill impact, the majority of customers in the qualitative research appeared to think their water bill was reasonably priced and was one of the lowest of their household bills.

However, for a small number of those on very low incomes within the vulnerable customer interviews and focus groups the water bill was more noticeable and less affordable. These individuals also reported mixed experiences regarding the support they had received from YW to address bill affordability.

Some cited YW staff being extremely helpful when contacting the call centre to see what support might be available. One example was somebody that had been advised to go on to the WaterSure tariff and had then had their overall debt wiped clear after a few months of contributing to reduce it. However, another individual had the opposite experience and felt the call centre provided limited options and was quite formulaic and lacking a human touch. These two experiences suggest some level of inconsistency with how those in water debt are handled.

“I think they [YW] are brilliant. I have had a good experience with them ... they have been really helpful. I am on that WaterSure tariff ... I was getting sky high bills” - Bradford, Family, C2DE

“I always find Yorkshire Water really quite difficult to deal with. You can't just ring them up and ask them. I always find the customer services talk down to you so I don't like dealing with them. Telephone conversations... I just find their attitude is quite arrogant.” – Vulnerable customer

4.2.2 View towards the wider services provided by Yorkshire Water

When asked about the broader services they felt YW offered most struggled to suggest anything beyond providing water to drink, taking waste away and fixing leaks. When probed as to what else they felt YW offered most struggled to say much more.

Some appeared surprised when they heard a small number of customers mention 'sewerage' and 'leak fixing' as YW services as they had only ever associated YW with supplying water. When probed about this it was clear some were unsure as to whether it may have been other organisations that were responsible for taking away waste, such as their local authority.

"I don't think they do anything else, just water (supply)...and maybe sewers and pipes?" – Ripon, Older, ABCI

When looking through a list of the range of services (see Appendix 6.2.1) that YW offer some were a little surprised by 'ensuring there is always enough water supply'. This was because they had never thought about the prospect that at some point there may not be enough water available. It echoed the feeling of a number of customers earlier in the discussion when they admitted taking water provision for granted as they hadn't experienced a time when there was no supply and assumed it would always be there.

"I suppose I knew in the back of my head, that they did all that but I'd never really thought about it in any depth." – Vulnerable customer

"That's quite scary, 'ensuring there's enough water'." – Ripon, Family, ABCI

A large number of customers were also surprised by 'protecting and improving the water environment (rivers and sea)'. This was because most hadn't realised that YW's role included environmental protection. For example, those in the Future Bill Payers (FBP) group in Hull thought that services relating to the environment per se were undertaken by other bodies such as the local authority. Others wondered whether this service was undertaken more by the likes of the Environment Agency or was something the Government should be responsible for.

"I thought (environmental aspects) might be a different company or Council." – Hull, FBP, ABCI

Those living in more rural locations such as Ripon were pleased to see YW had a focus on rivers. This was because rivers appeared to be much more of a feature of the lives of customers living in a location like this when compared to those living in more urban locations.

"Keeping the rivers safe has a knock on effect to the environment." – Ripon, Older, ABCI

"Rivers...money well spent, I'm a fisherman." – Ripon, Older, ABCI

"I thought Yorkshire Water was just delivering household water... but I hadn't realised they dealt with the rivers and sea." – Vulnerable customer

When discussing the 'water environment' role in more depth most were particularly surprised by the notion of YW playing a role in protecting the sea as struggled to work out why or how the

organisation did this. Some wondered why YW role was stretched so far as to include improving sea water and felt it should be something the Government should be funding.

“I’d have thought the sea...the Government would have paid for this not Yorkshire Water.” – Ripon, Family, ABCI

When considering the service ‘protecting you and the environment from sewer flooding’ some were a little surprised that YW was responsible for this and felt they may have contacted another organisation such as the local authority if they had any problems relating to this.

“I just didn’t think that somebody had to protect us from the environment, from flooding excess, and I didn’t know it was Yorkshire Water’s job to do that. So I am a little surprised.” – Vulnerable customer

Others recalled YW leaflets being posted through their doors promoting drainage insurance. While a small number of people revealed they had taken up the offer the majority admitted throwing it in to the bin each time it came through.

“They [YW] are always trying to flog the insurance” - Bradford, Family, C2DE

“If the drains were all blocked, I’d probably ring the council first.” – Vulnerable customer

“Moved house and had to contact them [YW] to set up a new account ... took emergency cover for £1 per month for drains and stuff ... straight forward” - Bradford, Pre family, C2DE

With a large number of customers in the qualitative research admitting they had only previously thought about YW as their provider of water, knowing more about the wider role of the organisation made them feel like they were getting more value for money than they had thought.

“It makes you feel good they are doing all these things.” – Ripon, Family, ABCI

4.2.3 Introducing the business planning cycle and Cost Adjustment Claims

Customers were then informed about YW’s 5 business planning cycle, the need to meet the regulatory obligations of Ofwat and the role that ‘special factor’ cost adjustment claims play as part of this process.

The vast majority of customers were not aware that water companies had to produce a 5 year business plan as part of their requirements to the regulator but most agreed that this appeared to be a sensible and common sense approach to making investment plans and setting bills.

A large number of people were not fully aware that water companies were regulated although some felt they had heard of Ofwat as it reminded them of other similar sounding regulators such as Ofcom and Ofgem, which tended to be in the news more often.

When discussing their views towards the fact that water companies were regulated, most felt reassured as they thought customers would be more likely to get a fairer deal and that prices would be less likely to get out of control especially as they had no choice who to use for their water service.

“It makes sense, they’re setting out a business plan for where they’re spending the money for the next five years, and obviously that’s regulated by the watchdog.” – Vulnerable customer

“(Regulation) It’s reassuring.” – Ripon, Family, ABC I

When discussing views towards the notion of ‘special factors’ most felt they understood that unexpected things can happen that are out of the control of an organisation. But a number of customers across the qualitative research were keen to know what the claims were before they passed any judgment as to whether they supported the notion and also to see what the impact might be on them.

“Well I knew about Ofwat and they’re the regulators... I don’t quite know how these special circumstances suddenly come to life and what they mean.” – Vulnerable customer

4.2.4 Cost Adjustment Claims with no bill impact shown

Customers were presented with each of the 7 Cost Adjustment Claims (see Appendix 6.2.2) and provided their views towards each. Once they had been through each Claim customers were then asked to prioritise them by placing them in order of most to least important.

This section reveals customers views towards each of the 7 Cost Adjustment Claims. In the analysis we refer to the main positive and negative aspects, reasons for supporting or not supporting a claim and any areas of confusion or questions that customers posed to YW.

Within the analysis of each Claim we also indicate broadly where it featured during the prioritisation exercise. For the purpose of the qualitative analysis we use the terms ‘top’, ‘middle’ and ‘bottom’ to help you gauge a sense of where each featured during the prioritisation discussions.

Maintaining Drinking Water Quality (DWQ)

Prioritisation level: top

This Claim featured as the highest in the prioritisation exercise for the vast majority of customers in the focus groups and depth interviews.

Main positives

- Drinking water was seen as essential to life and something that nobody could do without
- It was vital that drinking water was safe and didn’t affect anyone’s health negatively
- Most supported the need not to have to take more water from rivers, although a number of people didn’t realise that YW had to source water in this way as they thought reservoirs were used for water supply

- Some cited having lived in other areas where the water was not as good in terms of taste and quality as it was in Yorkshire so further investment in DWQ appeared to explain why this may be the case
- Some also felt that in other parts of the world drinking water was of scarce resource and lacking in quality so supported the need to ensure customers in Yorkshire and across the UK were always provided with enough quality water

“Very important, you don’t want to drink manky water so you?” – Hull, FBP, ABC I

“Vital...in places like South Africa they don’t have this luxury.” – Ripon, Older, ABC I

“You can’t beat Yorkshire water. I’ve lived in other areas of the country, so I know.” – Vulnerable customer

“Nice clean water. Very tasty” - Bradford, Family, C2DE

“I wouldn’t mind paying more on my bills if the quality of the water was higher ... usually I only drink bottle water because I don’t like tap water” - Bradford, Pre family, C2DE

“Health, for a start. It’s vitally important for that one reason alone.” – Vulnerable customer

“It needs to be a claim if it’s going to get really bad.” – Ripon, Family, ABC I

Main negatives

- The investment figure of £93m looked very large to a number of customers. This was because most hadn’t really seen figures of this scale and struggled to appreciate what would be the right level of investment for an initiative they had no real knowledge of
- A number of customers thought YW should have already been preparing or working on this particular initiative so couldn’t understand how it had become a ‘special factor’ that wouldn’t have already been factored in to investment plans
- A small number of customers on very low incomes felt YW should be covering much of this cost with its own profits rather than expecting customers to foot the bill
- A small number of customers were concerned as to why YW and its customers should be paying for the work to be done as they felt that there could be other stakeholder groups that may have contributed to the problem such farmers and councils

“It doesn’t start deteriorating suddenly so why didn’t they factor it in?” – Ripon, Family, ABC I

“So how much water are they taking from rivers?” – Ripon, Older, ABC I

“I would have thought would have been one of their priorities of Yorkshire Water... I don’t believe that suddenly because of all that [rain water running off the peatlands], they now need to spend 93 million pounds to improve it when they should have been doing that all along.” – Vulnerable customer

“Have you known anybody getting ill in England just through water?” - Barnsley, Pre family, C2DE

“For £93 million I would go round every single house in Britain and I would sort the water out” - Barnsley, Pre family, C2DE

“93 million in funding, is that all gonna come from the customers? Nowadays, it’s all about making a profit. Maybe they could lose a bit of the profit and put it back in.” – Vulnerable customer

“It is to do with farmers further up the hills ... actually cut away trees and everything else and that is part of the reason so I would be a bit miffed at paying for that” - Bradford, Family, C2DE

Questions posed

- Customers were interested to know more specifics about what was actually causing the discolouration – for example, why are the peatlands deteriorating in quality?
- Some asked how bad the water quality was really going to be? If it was discoloured did that mean you couldn’t drink it? Could you still bath or shower in it? Some suggested they would consider bathing in yellow water but wouldn’t drink it. Did YW therefore need to spend as much on the improvement to make it crystal clear?

“Whose responsibility is it to maintain the peatlands? It’s almost as if the cost for their responsibility is being passed onto people because of their water.” – Vulnerable customer

Reducing Water Lost Through Leaks

Prioritisation level: top

This Claim was mostly ordered in position 2 or 3 during the prioritisation exercise for the majority of customers in the focus groups and depth interviews. However, for the Bradford, Family, C2DE group this claim appeared near to the bottom of the prioritised list.

Main positives

- Customers were interested but particularly surprised to learn about the volume of water that YW supplied (1.2 billion litres). Then when considering that even at Ofwat’s target, 23% of this amount of water would still be lost to leakage, customers were therefore keen to see improvements as they were shocked by the level of waste
- The majority of customers were in agreement that wasting water was not a good thing and that we should not be complacent about leakage. Some referred back to their comparisons of *developing nations* overseas where sourcing water was particularly difficult and it was therefore wrong that we should waste any and take it for granted that we have an (perceived) ample supply
- A small number of customers felt that reducing the amount of water wasted through leaks would help the environment as we would be taking less water from source (reservoirs, rivers)
- A large number of customers had either experienced or seen the implications of leaky pipes themselves or knew others that had. For example, seeing YW vans undertaking emergency

road works were often associated with a burst pipe or some kind of leakage going on underground

- Those in the Future Bill Payer group in Hull felt they could see a return on investment. By spending an additional £325m to fix more leaks they hoped that in the long run money would be saved as less water would be lost
- A minority were also proud to see the potential for Yorkshire Water to be one of the best in the country for leaks.

“Twenty three percent every day, that is huge.” – Ripon, Family, ABCI

“We’ve had a lot of leaks...it’s the age of the pipes.” – Hull, Older, C2DE

“I am all for not wasting water” - Bradford, Pre family, C2DE

“I have heard about phosphorous over the last couple of months and apparently it can be quite damaging can’t it” - Barnsley, Pre family, C2DE

“I’m not sure they’re doing enough about that... I have seen a lot of occasions where a lot of leaks have just been leaking and leaking and leaking for ages... I’m not saying it’s a big issue, but it is an issue.” – Vulnerable customer

“It could work out more beneficial...over the years your bill could come down as there would be less leakage from your pipes.” – Hull, FBP, ABCI

“It [reducing leaks] should really save us money in the future ... but it [bill] won’t go down” - Bradford, Pre family, C2DE

“If they are losing less water then you would like to think that in the long term that their charges are going to come down.” – Vulnerable customer

Main negatives

- Some felt that YW should continually invest in leak prevention as a core part of their responsibility so wondered why customers should have to pay extra for something YW should be doing anyway
- Those who hadn’t seen or experienced a leak were less concerned than those that had
- How was this investment a special factor? Some felt that as fixing leaks would be a core responsibility of the water company how did YW not already know this was needed?
- The £325m investment seemed like such a lot of money so a number of customers were concerned about the potential hit to their bills if they supported this
- As YW was already hitting Ofwat’s target some wondered why there was really a need to go any further? Some suggested whether YW could consider reducing the ‘additional 40%’ ambition to a lower level as this might then have less impact on customer bills but still improve on the current leakage position

- With some perceiving the UK to have so much free water available falling from the sky customers wondered whether we should worry too much about leakage and therefore didn't see the point in spending more than was needed to fix additional leaks
- The notion of being 'one of the best in the country' seemed irrelevant to a number of customers as it didn't make any difference to them and was seen as more of a badge of honour for the water company itself
- Some wondered whether YW and customers should be the only ones paying to fix more leaks as felt the problem of broken / burst pipes may also be caused by other stakeholders. One example was the Highways Agency, blamed for under investment in roads causing an eventual negative knock on affect to the pipe system

"The thing is we have plenty of rain here, it might be a naïve attitude, but water running off is not particularly costing them anything is it? They get all their product for free, it doesn't worry me." – Vulnerable customer

"If you're already hitting a target ... why?" - Bradford, Family, C2DE

"It does seem extortionate (£325m)." – Ripon, Family, ABC I

"That seems to me that they want to glorify themselves to be one of the leading water companies ...you can't just take - that is all it seems to be to me: take, take, take, you pay, you pay. What are we getting back from it?" - Bradford, Family, C2DE

"Surely this is something that's built in? ...Why are they maintained enough to lose so much water? Why aren't they putting more money in themselves to reduce these leakages? Again, it's all coming onto the customer." – Vulnerable customer

"Take it out of profits" - Bradford, Family, C2DE

"It (causing leakage) could sometimes be down to bad road maintenance." Hull, Older, C2DE

"Best in the country for leakage – does it really matter?" – Ripon, Family, ABC I

"Quite frankly unless you've got a leak you don't give a toss!" – Ripon, Older, ABC I

Questions posed

- With so much water being wasted a small number of people wondered where it all went. They wondered what was the implication was of so much water being wasted, who was it affecting?

Infrastructure for New Towns

Prioritisation level: top to middle

This Claim was mostly ordered in the higher to middle position of 2 or 3 and was only positioned towards the bottom by those in the Hull, Older, C2DE focus group.

Main positives

- Providing water for new towns was essential as those living there could not live without water
- Many customers, particularly FBPs, pre-family and family customers saw this investment as important in order to provide for the housing needs of future generations
- Some of those in the older customer groups, whilst they were more fearful of the growth in population figures and the notion of more new housing projects, felt that such developments were inevitable so supported the need for water infrastructure to be provided
- A number of customers felt the £57m investment cost seemed lower in comparison to some of the other claims such as river water and leakage especially as they could clearly see how many people (1 million) would actually benefit from the development and how many towns would be supported (3 new towns)
- Receiving bills from an additional 1 million people would help to cover the £57m cost so some customers felt there would be a guaranteed return on investment

“It seems like a lot bigger job than making 3km of river water better.” – Hull, FBP, ABCI

“Fifty seven million doesn’t sound a lot compared to the others.” – Ripon, Family, ABCI

“It’s for the long term...it would help future children.” – Hull, FBP, ABCI

“Don’t know about important, it’s more a necessity.” – Ripon, Family, ABCI

“I am surprised you have asked us about that one: it has got to be done ain’t it. You have no choice” - Bradford, Pre family, C2DE

“It (population) can’t help but expand...so it’s quite important really.” – Ripon, Older, ABCI

“There is going to be more house and more paying the bill anyway so it should even itself out” - Bradford, Pre family, C2DE

Main negatives

- The majority of older customers in the Hull and Ripon focus groups were initially against supporting investment to support new towns. This appeared mainly due to their frustration with regards to the rapid population growth and aversion to the development of new towns in general

- Those in the Ripon older customer group felt that the population growth was partly due to the lack of immigration controls so showed a sense of anger when seeing the estimated levels of increase in people likely to be living in the region in 2045. They hoped that the need for, and associated costs of, such developments would be reduced if tighter immigration controls could help to restrict the growth in population
- Some of those on very low incomes from the vulnerable customer interviews wondered where the forecasted figure of 1 million more people had come from. They were concerned it may have been made up to create fear so that customers would feel obliged to contribute
- A number of older customers were also initially less supportive of this development as they didn't think they would be alive to see them happen. So if it didn't affect them personally they were a lot less likely to support it. However, on reflection when prioritising all of the claims, those in the Ripon older customer group moved it nearer to the top of the list as felt that the population growth was going to happen anyway and therefore people needed houses and water to drink
- A number of customers in the family and older customer focus groups as well as low income vulnerable customers wondered why YW and its customers would be the only ones paying the bill for the water infrastructure to support the new developments. This would, they thought, surely also be covered by contributions from builders, property developers and local authorities as they were the ones responsible for the decision making and implementation of the developments.
- Others also felt the Government and UK tax payer should also be contributing to the bill as this was an issue that affected society at large

"Some of the costs would be saved if we didn't have to take all these immigrants in." – Ripon, Older, ABCI

"I would expect the developers to contribute" - Bradford, Pre family, C2DE

"Go to the builders on that one, let them pay for it." Hull, Older, C2DE

"I think it should be the developers themselves. They make enough money out of building houses anyway" - Bradford, Family, C2DE

"I'm not going to get any benefit from them new towns; I'm probably not going to be here anyway in 2045" – Vulnerable customer

"People are dying off, people are emigrating, I do wonder whether these figures are scaremongering to get people to do what is wanted of them." – Vulnerable customer

"The people in these towns should be the ones paying for it not us... I don't see why it should all be down to Yorkshire Water to provide; surely it should be down to Government costs." – Vulnerable customer

Questions posed

- Customers were interested to know where the new towns might be located?

Improving River Water Quality

Prioritisation level: middle

This Claim was mostly ordered in the middle position 3 or 4 and was only placed in the bottom tier (position 6) by those in the Hull, FBP, ABC I focus group.

Main positives

- Enabling wildlife to flourish was seen as important to customers. A number of them felt torn between the notion of birds, fish, plants and the wider environment potentially being allowed to squander at the behest of other factors that seemed only to be of the benefit of humans (new towns, DWQ)
- Customers in the Ripon focus groups appeared to have a stronger connection with rivers compared to those in other locations covered in the research, so were keen to ensure they were kept clean and maintained as if not then they felt it may affect the general quality of life for them and their fellow residents
- A number of customers across the groups and depth interviews seemed to connect healthy rivers with a healthy society. They expected that if river water was of poor quality there would be some sort of knock on affect to human health
- It was also perceived by a small number of participants that human health could also be affected if rivers were being used as a source for drinking water – some were concerned that if river water quality was poor then it might be unsafe and therefore unusable for drinking water provision
- A small number of people perceived phosphorous to be a dangerous chemical so appreciated the need to remove it from rivers
- A small number of those in the 75+ vulnerable customer depth interviews felt investing in river water quality would help return rivers to their former glory. There was a perception that river water was generally not as good as it used to be many years ago so they were supportive of schemes to improve them

“We live by them so we want them to be as clean as possible.” – Ripon, Family, ABC I

“Newts, tadpoles...you don't see them anymore.” – Ripon, Older, ABC I

“I agree with that entirely, it's for me a big issue and it should be looked at, principally for the wildlife. If we start losing the wildlife then we start losing life... Did the Environment Agency instruct Yorkshire Water?” – Vulnerable customer

“I have heard about phosphorous over the last couple of months and apparently it can be quite damaging can't it?” - Barnsley, Pre family, C2DE

“I'd rather spend money on that, we are losing the environment too quickly anyway we are losing rainforest and hedgerows.” – Vulnerable customer

Main negatives

- Some of those in Hull felt rivers near them were already too far gone to be improved so didn't think any level of investment would help
- Those in the Sheffield in-depth interviews felt that rivers near their city had already been significantly improved since times when heavy industry had polluted them. They therefore felt that investments may be best spent on other factors that were more likely to affect people
- The volume of river water being considered for improvement at 3km seemed very little to the majority of customers. When reading that Yorkshire has over 6,000km of rivers improving only a fraction of this at 3km seemed very strange with most wondering why it was such a small amount
- Then when considering the amount of investment required and the volume of river water that would be improved, a large number of customers felt this did not offer value for money. This was especially the case for those in the Hull, FBP, ABCI focus group who felt the maths didn't add up when compared to the amounts being considered for DWQ (£93m) and New Towns (£57m) which were also seen as more important in principle
- There was also concern about who was responsible for causing river pollution. YW was seen to be having to fix problems caused by other stakeholders such as farmers and heavy industry. Therefore a number of customers felt those who cause the problem should be contributing to the paying for it to be fixed
- Others also thought that improving rivers was more the responsibility of the Environment Agency so wondered why YW was having to invest in this
- With YW already 'one of the best in the UK' many wondered why it needed to spend so much money to be any better

"I don't think we'll ever improve the quality as we've got the Humber and it's going to be like that forever, forever and forever." – Vulnerable customer

"They need to work with other people that affect the water source as well, chemicals, building and farming...it needs to be a team effort" – Vulnerable customer

"I thought the rivers had improved significantly in the last few years, anyway?" – Vulnerable customer

"Three kilometres out of six thousand is not a lot." Hull, FBP, ABCI

"They have already 6000km classed as good so it is only a small element." – Vulnerable customer

"I thought the rivers had improved significantly in the last few years, anyway?" – Vulnerable customer

"A lot of it comes from treatment from farms." Hull, Older, C2DE

"They are already meeting the standard, is it really worth the money?" Ripon, Family, ABCI

Questions

- The majority of customers wondered what phosphorous really was and how dangerous it was. To what extent was it a public health risk?
- Some wondered which river or river would be improved?

“What stretch of water are we talking about?” - Barnsley, Pre family, C2DE

Reducing Flood Risk in Hull

Prioritisation level: middle

This Claim was mostly ordered in the middle position 3, 4 or 5.

Main positives

- Many agreed that nobody should have to experience internal flooding and especially if that meant sewerage entering people’s homes. So any investment looking to reduce this prospect was worth considering
- Most of those in the Hull groups recalled serious flooding incidents in the city around 10 years previously so were more alert to this Claim than customers in other locations
- Some saw this as an investment that should protect households in the long term so could be a worthwhile consideration
- A number of customers were buoyed by the fact that YW would be partnering with other organisations to address the issue as they felt the problem was unlikely to have been the fault of YW in the first place
- Some were encouraged to see some of the ideas put forward for preventing future flooding. Permeable paving (for the minority who knew what this was) for example was seen as an excellent way to drain water back in to the land rather than hold it up on the surface and therefore contribute to flooding
- Those on low incomes in the focus groups and vulnerable customer interviews felt this investment would really help those who couldn’t afford flood insurance or to fix problems associated with flooding

“It’s more personal to us (in Hull)...it affected so many last time...to prevent it happening again...it’s a long term investment.” - Hull, FBP, ABCI

“They’ve got to be a priority as we’re lucky not to have that.” – Ripon, Older, ABCI

“If I lived somewhere like that, I’d want to know that I was safe.” – Vulnerable customer
“An aging infrastructure ... we need to upgrade” - Bradford, Pre family, C2DE

“I have a friend who lives in that area whose house floods regularly... You just can’t begin to imagine how somebody copes with their house being flooded.” – Vulnerable customer

“It’s got to be a priority, that’s 5,000 families, where their homes will be ruined, especially if it is social housing with vulnerable people, those who can’t afford to replace what is lost has more impact than just the water damage...if it happened to me I wouldn’t be able to afford to replace anything.” – Vulnerable customer

Main negatives

- The majority of customers taking part in the qualitative research hadn’t and didn’t expect to ever get flooded. Many were therefore initially likely to say *‘this doesn’t affect me’* so were quick to suggest it was a lower level of priority
- This also extended to a number of customers in Hull, whilst they knew about the floods a decade ago, most had been unaffected so didn’t see this as a very high priority
- One of the main issues cited by the Hull, Older, ABCI group was that they associated the *flooding in Hull problem* with other organisations such as building firms for developing properties on flood plains, the Council’s town planners for allowing the developments to go ahead in the first place, solicitors for backing the developers – a number of them therefore felt that YW and customers should not have to cover the cost of this and that those who made the problem in the first place should fund the scheme
- Others outside of Hull also felt that flooding was an issue affecting so many places that the Government should be providing much more funding to fix the problem rather than YW solely covering the bill
- Customers in locations outside of Hull also wondered why other towns and cities (such as York) that had experienced and were still vulnerable to flooding were not being considered for the same kind of investment
- Many agreed that the volume of properties that might be helped by the investment (400 and 550 out of 5,000) didn’t seem high enough with many asking *‘why so few?’*

“What about all the other areas that flood all the time?” – Vulnerable customer

“400 out of 5000 is not very many, is it? It’s a very small proportion of the houses which flood up there.” – Vulnerable customer

“In Hull? Well how can I comment on that?” – Vulnerable customer

“For £30m you could buy Hull!” - Barnsley, Pre family, C2DE

“Why should it just be down to Yorkshire Water...the Government should be ploughing money in.” – Ripon, Older, ABCI

“What about the town planners (who said) ‘oh it won’t flood for years?’” – Hull, Older, C2DE

“I say go back to the builders who did it.” – Hull, Older, C2DE

“Not a good Claim, 400 properties compared to how many are in the Yorkshire Water area.” – Ripon, Family, ABCI

“It’s unfair that everybody has to pay for it.” – Ripon, Family, ABCI

“It is like asking me to pay for somebody in Wigan” – Bradford, Family, C2DE

“If you want to live in area that might get flooded, more fool you” – Barnsley, Pre family, C2DE

Questions posed

- How will YW decide which houses receive the support?

Reducing Cellar Sewer Flooding

Prioritisation level: middle to bottom

This Claim was mostly ordered in the lower middle positions 4 to 6.

Main positives

- Cellar sewer flooding had similar reactions to the Hull flooding claim as many felt this should not happen to anyone as they expected the level of distress to be extreme and the health risk to those living in such properties to be severe
- Many also agreed that cellar sewer flooding would not only be a risk to the individuals within the property but also might have a wider negative effect on the surrounding environment and therefore to society i.e. germs in to the environment creating viruses and disease
- Those in the Hull, FBP, ABCI group felt that preventing cellar flooding would help to ensure that pubs and local shops would be more protected as these facilities provided services to a large number of people within communities
- Reducing sewer flooding in properties by 70% was seen as a high volume of households that would be receiving help. This seemed like better value for money when compared to other claims such as river water quality which could cost more than £700m but only improve 3km of river

“Contamination, disease, ergh!” – Ripon, Family, ABCI

*“I wouldn’t want my cellar to be full of sh**t” - Bradford, Pre family, C2DE*

“It is a serious problem. If you had backing up into your cellar you would be like, please help me” - Bradford, Family, C2DE

“It would help the community.” – Hull, FBP, ABCI

“It would help out pubs and local shops if they’re storing food (in cellars).” – Hull, FBP, ABCI

“Because of the health risk, I’d [rank] that pretty high, especially if you get some of the more contagious nasty diseases.” – Vulnerable customer

“I agree with it....when you say sewers...dirty water.” – Hull, Older, C22DE

Negatives

- As with the Hull Flooding claim, very few people had cellars or knew anyone else that had a cellar. They therefore struggled to support something that they thought wouldn’t affect them or anyone they knew
- The cost of £163m seemed like a lot of money to fix a problem that most people didn’t really know about or expect to happen to them
- A large number of customers also didn’t think there could be that many cellars in Yorkshire so didn’t expect the investment would help too many households, even though they thought the 70% reduction proposition was high
- One key issue was the fact that all YW customers would have to contribute to the investment as a large number of customers felt it was the property owner’s / occupant’s responsibility to pay for insurance as they chose to live in a house with a cellar in the first place

“I am not going to pay for someone else’s problem” - Bradford, Pre family, C2DE

“They need to move into house without a cellar” - Bradford, Family, C2DE

“I think there are more important things to do than to reduce cellar flooding...because I don’t really know anyone that has one.” – Ripon, Older, ABCI

“Insurance companies could benefit as they won’t have to pay out.” – Vulnerable customer

“My bill is high enough but this will affect other people and their families.” – Vulnerable customer

“Although I would feel sorry for those people, I wouldn’t think it would be my responsibility to pay for it.” – Vulnerable customer

“Is it worth 163 million?” – Vulnerable customer

“That [£163m] is taking the schmichael” - Barnsley, Pre family, C2DE

“It sound to me like it’s something that’s just come to life because of Ofwat’s requirements.” – Vulnerable customer

“If you have got a property suffering from flooding you get your own drain-off fitted yourself in that property” - Barnsley, Pre family, C2DE

New Customer Management System

Prioritisation level: bottom

This Claim was ordered at the bottom (number 7) of the prioritisation list for vast majority of customers in the qualitative research.

Main positives

- Dealing with call centres, within the water industry and in other sectors, was something that a small number of customers didn't enjoy. They cited the frustration of automated responses, pressing a number of different options to then hopefully getting through to the right person
- Therefore the idea that a new customer management system might reduce the need to contact YW by phone was welcomed by a small number of customers
- A number of customers liked the idea of receiving more text based communication particularly to raise awareness of incidents such as burst pipes, flooding and any other water related problems
- A small number of customers that were in or had experienced water debt liked the idea of receiving a text to remind them of an overdue payment. This was particularly for those who tended to pay their bill weekly and were not on direct debit
- A number of customers, particularly those in the Ripon, Older. ABCI focus group also felt the idea of receiving more email based communication would be helpful as a medium they tended to use more regularly than other channels

"I think it's a good thing actually, if they hadn't have got in touch with me I'd have paid six hundred pound (unnecessarily)." – Ripon, Older, ABCI

"If I got a text message to remind me to pay my weekly instalment, then it would help definitely. It would probably remind me and I would pay what I could afford to pay" – Vulnerable customer

"The Council (Harrogate) email you about stuff and they're amazing." – Ripon, Older, ABCI

Main negatives

- Whilst the notion of receiving communication in more personalised ways was welcomed, the majority of customers felt this claim was a little unnecessary compared to the others being considered, particularly as most rarely felt they had any need to be in contact with YW
- Most felt the communication they received from YW was already very good so didn't see a need to pay to make it any better
- A number of customers agreed that an investment such as this should be covered by YW themselves as it was seen as standard for any organisation to pay for any updates to their own internal systems
- A large number of customers, whilst agreeing that call centres were generally frustrating, still liked to talk to a human being, particularly if they have a problem that needs sorting out

- Some of the older customers engaged in the focus groups and 75+ segment of the vulnerable customer depth interviews felt they and others like them were not so confident dealing with digital formats such as email, text or social media so preferred the option to be able to call
- Whilst many accepted that society was moving more towards an automated world a number of customers admitted they felt less comfortable with a shift towards customer services (water and other sectors) becoming entirely digitised. This was because digital channels could lack the human touch, often be anonymous so potentially less trustworthy, reduce the option to interact and address the nuances of a customer's circumstances
- Those in the pre-family C2DE focus groups in Barnsley and Bradford also showed a level of fear towards automation as potentially replacing jobs for them, people in their community and across the region. Others across the focus groups and vulnerable customer depth interviews were concerned as to whether this investment might also see jobs being cut at YW as the call centre would become less required
- The level of investment at £53m seemed extremely high for such a system to be implemented. Some wondered whether YW could try to get a better deal

"The amount of times Yorkshire Water has ever contacted me, it wouldn't worry me whether I'd prefer a text or an email...it's once every two years so it wouldn't be a bugbear." – Vulnerable customer

"How often do we contact them? Very rarely! It is not like it is somewhere you have to call every day." – Bradford, Pre family, C2DE

"I don't see why I should pay for them to get their system in place, shouldn't that come out of the profits they are already making? – Vulnerable customer

"I think they (YW) should pay ... it is their customer service. Why should we pay for that?" – Bradford, Family, C2DE

"The principle beneficiary of that is Yorkshire Water." – Vulnerable customer

"Instead of spending £53m I would rather they invest in people. Proper English people, get more jobs back for Britains ... you will be able to speak to someone on the phone rather than this 'please press one' and then sat on hold for god knows how long ... I would rather speak to somebody" – Barnsley, Pre family, C2DE

"That's a lot of money for a new computer system if that's what it is, surely it can't cost that much?" – Vulnerable customer

"It's automation I have an issue with; well how much of the calling does the company have to do at the moment? Now I think with a lot of the big companies the loss of the personal touch is a mistake... Especially in the older end like myself and my wife, we like to talk to someone." – Vulnerable customer

"Automation... what does that mean? Are more people going to lose their jobs?" – Vulnerable customer

"It's our age group, we're old school." – Hull, Older, C2DE

"Let the people [in contact centre] keep their jobs" – Bradford, Pre family, C2DE

4.2.5 Cost Adjustment Claims with bill impact shown

Once customers had reviewed the Cost Adjustment Claims they were then shown each of them again but this time with the impact on their bill revealed (see Appendix 6.2.3)

Reactions to claims with the bill impact known

When gauging reactions to the bill impact most were surprised by how low the impact on bills would be on each Claim.

As the size of each of the investments required by YW to deliver each of the Cost Adjustment Claims were perceived to be so high most were expecting to see the impact on their bills to be significant.

This led a large number of those within the focus groups to suggest they may be happy to cover most, and in some cases all of the Claims, as they quickly worked out that the overall impact would be approximately £5 per month.

“You lose that (amount of money) down your carpet” - Bradford, Pre family, C2DE

“Just do it all.” – Hull, FBP, ABC I

“If we had all of them it’s only sixty pounds per year.” – Ripon, Older, ABC I

“It doesn’t sound like a lot when you break it down like that.” – Ripon, Family, ABC I

The most surprising bill impact was that of the Drinking Water Quality claim. This was seen as the most important claim for the vast majority but yet was one of the lowest in terms of bill impact (10p per month).

“It [drinking water] has got to be number one” - Bradford, Family, C2DE

A number of customers who were also initially reluctant to have to pay for claims for services that would never affect them became slightly more altruistic and were much more likely to support them. The main example was the Reducing Flood Risk in Hull whereby a large number of customers who did not live in Hull were initially much less supportive before they knew of the bill impact.

“Let Hull get rid of the poo.” - Bradford, Pre family, C2DE

“Give them [Hull] a chance” - Bradford, Family, C2DE

However, for a number of those on low incomes, particularly some of the vulnerable customers and C2DE focus group participants, Reducing Cellar Sewer Flooding was a cost they felt should be covered by the insurance of those with cellars rather than all YW customers.

“If you want to live in area that might get flooded, more fool you” - Barnsley, Pre family, C2DE

When looking at all of the costs those on very low incomes, in some of the groups and particularly the vulnerable customer depth interviews, even though they agreed the amount of bill increase on each claim was lower than expected they made it clear that any increase on the bill at all would be noticeable and add to the pressure of covering household bills in general.

“It might be only 3p but 3p adds up with everything else” - Bradford, Family, C2DE

“I’m on a low income, and that sort of level of increase would really create problems for me.” – Vulnerable customer

A number of customers wondered what would happen after the work had been complete? How long would the impact on the bill last? Over what timeframe would the work be implemented? Some also wondered whether they may be asked to pay more again later.

“How long is the extra? Once they have done the work and they have paid for it. Then what do they do then? Do we pay the same?” - Bradford, Pre family, C2DE

A number of those on lower incomes also wondered how much of the investments would be covered by YW’s own profit? Some felt that YW should be covering all of the investment cost and that customers should not have to contribute any more than they were already paying.

“Why should Yorkshire Water pass the cost onto me?” – Vulnerable customer

“If I’m putting 10p in, then I think Yorkshire Water should do as well. How’s this going to impact on the profits? Are they going to reduce profits by that much?” – Vulnerable customer

Re-ordering claims once the bill impact was known

Customers were asked to consider whether they wanted to change the position of any of the claims that they had previously prioritised now that they knew the impact on their bill of each claim.

For the vast majority of customers the Drinking Water Quality claim remained at the top of the list as it was still seen as the most important. And once they also realised the bill impact would be lower than some of the other claims (10p per month) it made the case for it to remain at the top even stronger.

The Customer Management System also remained at the bottom of the list for the majority. Whilst the bill impact was seen as low it was still seen as less important than the other claims and something that YW should be considering paying for themselves.

Fixing Leaks also remained towards the top end of the prioritisation list for most of the focus group respondents in the ABC1 segments but also remained nearer to the bottom for some of the lower income participants in the Bradford C2DE pre-family and family groups as well as some of the vulnerable customers interviewed. For the higher income respondents the notion of fixing leaks was still important. For the lower income groups the price for his claim was the highest of all (£2.03 per month) so had much less appeal.

“Take it (leaks claim) out of profits” - Bradford, Family, C2DE

The main aspect of movement in prioritisation amongst the other claims related to Reducing Flood Risk in Hull and Reducing Cellar Sewer Flooding.

Reducing Flood Risk in Hull moved slightly higher up the list as it was lowest of all the claims at 3p per month and was seen as a reasonable price to pay to help those in need.

“It’s only three pence per month to help four hundred families.” – Ripon, Family, ABCI

Reducing Cellar Sewer Flooding moved lower down the prioritised list as a number of customers felt the price was so much higher than other claims at £1.02 per month compared to DWQ at 10p per month.

“When you buy a house you should be made aware of that and bought it with that risk” - Bradford, Pre family, C2DE

“I am not going to pay for someone else’s problem” - Bradford, Pre family, C2DE

A small number of customers swapped the position of River Water Quality (to a lower position) and New Towns (to a higher position). This was particularly from those in the Ripon, Family, ABCI group who were initially much more supportive of the RWQ claim due to living in a rural setting alongside rivers. However, the cost of improving RWQ was much higher than Infrastructure for New Towns (7p per month) so they felt it seemed fair to swap the position of these two claims.

“Due to the cost of such a small amount of river.” – Ripon, Family, ABCI

“Some of the [total] amounts are ridiculous: an extra four hundred and seven hundred million quid to clean three kilometre of river” - Bradford, Family, C2DE

5. Conclusions

Generally, the qualitative exploration of customers views indicated that they supported the idea that Yorkshire Water would have to consider investing in 'special factors', as businesses and individuals alike often had to deal with unexpected events that were out of their control. But when reviewing the Claims some did wonder why many of them were seen as *special factors* and why Yorkshire Water hadn't known about them and already planned investment to cover them.

The qualitative also explored how customers assess the Claims and this provides context for the way the MaxDiff exercises were viewed and undertaken by online survey respondents. Throughout their assessment of the Claims, customers often initially struggled with the notion of supporting and paying for something that they felt would not affect them or anyone they knew. 'I am unlikely to be flooded', 'I don't have a cellar', 'I haven't seen any leaks' were typical initial reactions. But when seeing the impact on their bills (which most agreed were very low in comparison to the high levels of investment) customers did become slightly more altruistic and supportive of Claims that would not affect them (i.e. Bradford customers supporting Reducing Flood Risk in Hull).

For most of the Claims, customers often wondered why only Yorkshire Water and its customers would be covering the full cost of each investment. They expected certain stakeholders that may have been responsible for causing some of the problems in the first place to contribute such as farmers, developers, the Government and councils.

Customers also often struggled to comprehend the size, scale and variation of the investment levels required for each Claim. Why did the Drinking Water Quality one cost so much less than the River Water Quality one? And why was there such a variation within the River Water Quality investment estimation? Why did it cost so much less to provide water infrastructure for three new towns compared to reducing flooding in cellars? None of these points were clarified in the online survey, so these considerations are likely to have influenced how respondents selected Claims to support.

The online survey data and MaxDiff modelling provides an assessment of levels of support for each Claim when respondents are asked to choose between them and clearly indicates how well supported one Claim is compared to another, allowing us to determine customer preferences. It doesn't provide detail on the degree of support per se, as respondents *had to* make a choice between Claims.

Indeed, other data from the survey suggests that many customers aren't really that comfortable with paying the additional amounts to support the Claims, with the exception of **Maintaining Drinking Water Quality**. Probably because of this the data highlight that, consistently, there is strongest support for Maintaining Drinking Water Quality both before and after the bill impact has been revealed to respondents. Indeed, if anything the bill impact strengthens support for this Claim which probably reflects that this is one of the cheaper Claims to fund and the qualitative highlighted that this Claim consistently remains top of the list as it is seen as essential to life.

The modelling also identifies strong support for **Reducing Water Lost Through Leaks** although support is weakened once customers are made aware that it would cost £24.40 a year on the average household bill to fund this claim. Including bill impact means that support for Reducing Water Lost Through Leaks declines to be only marginally higher than for Improving River Water Quality (which is the Claim that consistently generates the third highest level of support). In the qualitative customers explained how leakage remained near to the top of the order as most didn't like the idea that water was being wasted and the investment would hopefully be returned over time once pipes had been fixed.

There was also consistent support for **Improving River Water Quality** and this was not altered by the introduction of the bill impact (it's third in the ranking in both models). Exploring this in the qualitative, highlights that improving river water quality is seen as important for the environment and a healthy society, although questions were raised about the fact that the return on investment seemed at odds with all of the other claims. Why was so little river (3km) being improved at such a high cost?

Support is consistently lower for the other three Cost Adjustment Claims, and while some increases were noted once the bill impact was introduced these did not have a dramatic impact and didn't move these Claims up the ranking in a significant way.

Reducing Flood Risk in Hull was the one Claim that recorded a notable increase in support once the bill impact was introduced (reflecting the fact this is was the lowest increase to a bill of any of the Claims).

A similar increase was recorded for **Infrastructure for New Towns**, which carries with it the second lowest increase to an average household customer's bill. More specifically, New Towns are seen as important for future generations and whilst older customers didn't like the notion of 1 million more people living in Yorkshire they accepted it as inevitable so felt providing water infrastructure was a necessity and supported it.

One Claim were the qualitative identified that customers' altruism would not stretch, was in terms of support for **Reducing Cellar Sewer Flooding** as it was seen as unfair that all Yorkshire Water customers should contribute and it was felt that this should be the responsibility of people living in those houses via their own insurance. This Claim recorded comparatively low levels of support and this only reduced further was it was made clear to respondents that it carried with it an annual increase of £12.20.

Along with Reducing Cellar Sewer Flooding, the least supported Claim was a **New Customer Management System**, although more support was forthcoming when the bill impact was included, probably reflecting that this is one of the cheaper ones for customers to fund. The qualitative identified that the CMS was consistently considered to be the least important as it is seen as an *internal* investment that Yorkshire Water should be covering itself.

Whilst most felt the impact on the bill would be minimal for the level of investment being made by Yorkshire Water for each Claim, those on very low incomes (whilst also agreeing that the increases were low in relative terms) felt they would still feel the pain of any increase in their bill as they were already struggling to stay on top of water bills.

6. Appendices

6.1 Appendix I – Online Survey

Before we begin, I'd like to reassure you that this interview will be carried out according to the Market Research Society's Code of Conduct and all your answers and information you provide will be treated as anonymous and confidential in accordance with the Data Protection Act 1998.

SCREENERS

S1. Which water company does your household pay its water bill to?

NOTE: If you pay two companies, please tell us which one you pay for your drinking water.

TICK ONE ONLY

SINGLECODE

Anglian Water – *Thank and close*

Northumbrian Water – *Thank and close*

United Utilities – *Thank and close*

Yorkshire Water

Severn Trent – *Thank and close*

Another water company – *Thank and close*

Don't know – *Thank and close*

S2. Are you personally responsible for paying the water bill for your household?

SINGLECODE

Yes – solely responsible

Yes – jointly responsible

Yes – included in your rent – *Thank and close*

No – *Thank and close*

S3. Do you, or any of the people you live with, work for Yorkshire Water?

SINGLECODE

Yes – *Thank and close*

No

Don't know

S4. Do you, or any of the people you live with, work in any of the following professions? TICK

ALL THAT APPLY

MULTICODE

Market Research – *Thank and close*

Marketing/advertising – *Thank and close*

Journalism – *Thank and close*

Public relations – *Thank and close*

None of the above

Don't know

S5. Please tell us how old you are?

WRITE IN

CHECK QUOTAS

S6. Are you male or female?

SINGLECODE

Male

Female

CHECK QUOTAS



S7. Does your home have a water meter?

SINGLECODE

Yes

No

Don't know – Thank and close

CHECK QUOTAS

S8. Please tell us your postcode. (We will only use your postcode for analysis purposes to understand how customers in different areas answer and it will not be used to identify you).

WRITE IN

MATCH POSTCODE TO LA AND THEREFORE REGION FOR QUOTAS

Section 1: The Business Plan

Please read this background;

Every 5 years, water companies have to draw-up a Business Plan which explains how they will deliver their service over the next 5 years (2020-2025).

The Business Plan contains details of investments that the company will make in things like the quality of drinking water, sewers and waste water treatment, protecting the environment and building new infrastructure (e.g. storm water tanks).

The Business Plan also explains how customers' bills might change over the next 5 years. The plan and the price that customers pay for their bill has to be agreed with the water industry regulator Ofwat and the water company has to operate as laid out in the plan.

However, sometimes things happen that are out of Yorkshire Water's control which mean that the company needs to spend more on investments than it had planned and this also usually means they need to charge customers more to cover this extra investment.

Where a company identifies an additional investment not covered by its Business Plan this is called a 'special factor'.

Special factors mostly relate to changes affecting water companies following new or updated legislation from bodies such as the Environment Agency or the Drinking Water Inspectorate. A water company has to get agreement from customers and Ofwat to change their Business Plan due to special factors.

Yorkshire water has identified 7 special factors that it would like Ofwat to consider.

We would like to know your views on the special factors that Yorkshire Water has identified to understand which you think are the more important.

Firstly, please read each description in turn.

RANDOMISE ORDER OF SHOWING Q1a-Q1g

Q1a. Please read this and tick to confirm that you have.

Maintaining Drinking Water Quality - There is more colour in the water Yorkshire Water collects in its reservoirs and rivers now than ever before. It's caused by rain water running off the peatlands, which are deteriorating in quality.

Highly coloured water is more difficult and costly to treat and increases the risk of failing water quality standards. Action is needed now to prevent water quality failures in the near future.

Yorkshire Water will need to invest in new treatment processes at 5 of its Pennine water treatment works to tackle highly discoloured water to ensure a secure supply of water from these sites in future.

An additional £93 million in funding would be needed to improve water treatment at these 5 sites.

Benefits of making this investment:

- Yorkshire Water's high standard for delivery of high quality drinking water will be maintained
- Reduced need to pump water from rivers.

SINGLECODE

[I have read this description.](#)

Q1b. Please read this and tick to confirm that you have.

Reducing Cellar Sewer Flooding – This happens when sewers over flow and flood cellars. Ofwat wants all water companies to improve and to have a similar number of cellar sewer flooding incidents, but the Yorkshire region has more properties with cellars than the rest of the UK, making it a more costlier problem to fix.

To meet Ofwat's requirements, Yorkshire Water would have to reduce sewer flooding in properties with cellars by 70%, this would cost an additional £163m.

Benefits of this investment:

- Sewer flooding in cellars will be reduced by 70%, benefitting customers
- Less emotional and financial stress for customers experiencing cellar flooding.

SINGLECODE

[I have read this description.](#)

Q1c. Please read this and tick to confirm that you have.

Reducing Flood Risk in Hull - Hull and its immediate surroundings are at risk from river and tidal flooding and it also has a more complex system of watercourses and sewers than elsewhere in the region.

In this area, there are roughly 5,000 properties that are at risk of internal sewer flooding once in a 5-year period (in other words, they have a 20% chance of being flooded each year). Yorkshire Water would like to reduce the risk of 400 of these properties flooding to a once in 75 year period

To help achieve this, it wants to use less traditional ways of reducing the amount of rainwater it must deal with (e.g. permeable paving, green roofs etc.). It also plans to work in partnership with other organisations who manage flood risk to combine expertise.

The cost of providing this increased level of protection is an additional £30 million.

Benefits of this investment:

- Reduced chance of sewer flooding for approximately 400 properties during severe rain that might occur once every 5 years and 550 properties during severe rain that might only occur once every 30 years
- Contribute to the health and wellbeing of the community using sustainable methods of managing flood risk.

SINGLECODE

I have read this description.

QId. Please read this and tick to confirm that you have.

Reducing Water Lost Through Leaks - Yorkshire Water finds and fixes leaks on 44,000 miles of pipework – this includes nearly 21 million joints or potential points of weeps and seeps. Yorkshire Water has a target set by Ofwat to lose no more than 24% of the daily 1.2 billion litres of water it supplies through leaks and it's hitting this target. Yorkshire Water wants to reduce this by a further 40%.

Currently, Yorkshire Water spends £30 million finding and fixing leaks to meet the Ofwat target of 24% leakage.

To reduce leakage by another 40% and maintain this, it will need to spend another £325million

Benefits of this investment:

- **It would make Yorkshire Water's one of the best water companies in the country for leakage control.**
- **Yorkshire Water will take less from the environment, prevent wastage and ensure a continuous water supply**

SINGLECODE

I have read this description.

QIe. Please read this and tick to confirm that you have.

Improving River Water Quality - Yorkshire Water follows rules and guidelines provided by its regulators, such as the Environment Agency (EA). The EA has stated that water companies must be better at removing Phosphorus from waste water at their sewage treatment works. Whilst Yorkshire Water meets current standards, the new standard poses a significant costs to the company.

Further removal of Phosphorous to the levels outlined by the EA would cost an additional £xm. This would improve 3km of river water to Moderate status from Poor. We are one of the best in the UK for Phosphorous removal as 60% of our 6000km of rivers in Yorkshire, are classified as at good status.

Benefits of this investment:

- **Improved river water quality would mean improved biodiversity of rivers and the surrounding lands, plants and animals impacted by river water quality**

SINGLECODE

I have read this description.

QIf. Please read this and tick to confirm that you have.

Infrastructure for New Towns - The population is growing, by 2045 we are expecting to have 1 million more people living in Yorkshire.

There are 3 new town developments planned over the next 20 years that will require new infrastructure to provide drinking water and waste water services. Whilst new water and waste water connections are part of Yorkshire Water's service, building the infrastructure for entire new towns is completely different and very expensive.

Therefore, Yorkshire Water would require £57million of additional investment to cope with the building of these new towns.

Benefits of this investment:

- Provide a continuous high-quality water supply to new customers and to prevent water shortages for all
- Ensure they have enough capacity in the waste system to remove and treat additional waste water.

SINGLECODE

[I have read this description.](#)

Q1g. Please read this and tick to confirm that you have.

New Customer Management System - Yorkshire Water manages customer service using its Customer Management System, but this is old and in need of replacement and isn't quite as clever as the company would like.

Currently, customers are happy with the service Yorkshire Water provides. However, a new Customer Management System will help it offer personalisation through a deeper understanding of customers' needs (e.g. it could identify customers who'd prefer a text to an email to let them know about works in their area, or automatically notify a customer of higher than normal water use in their home, potentially identifying leaks).

Purchasing a new smarter Customer Management System would cost £53million.

Benefits of this investment:

- A personal service, so customers receive information when they want it, in the way they want it
- Costs will be reduced in the long run as automation will handle much of the calling the company has to do at the moment.

SINGLECODE

[I have read this description.](#)

Q2. The following 7 screens show descriptions of the special factors in groups of 3.

From each group, please select the one you support most and the one you support least.

If you want to read the full description again, click on the relevant one at the bottom of the screen.

Please don't worry if you see the same description more than once.

FIRST MAXDIFF: BASED ON 7 FACTORS, EACH RESPONDENT WOULD SEE 7 SETS OF 3 ATTRIBUTES - THE 7 COST ADJUSTMENTS ARE;

- *Maintaining Drinking Water Quality*
- *Reducing Cellar Sewer Flooding*
- *Reducing Flood Risk in Hull*
- *Reducing Water Lost Through Leaks*
- *Improving River Water Quality*
- *Infrastructure for New Towns*
- *New Customer Management System*

EXERCISE 1 - THE FOLLOWING TABLE SHOWS HOW EACH FACTOR SHOULD BE PRESENTED ON SCREEN

Special Factor	Maintaining Drinking Water Quality	Reducing Cellar Sewer Flooding	Reducing Flood Risk in Hull	Reducing Water Lost Through Leaks	Improving River Water Quality	Infrastructure for New Towns	New Customer Management System
Benefit	Improved water treatment at 5 sites	Cellar flooding reduced by 70%	Increased flood protection in Hull	Leakage reduced by 40%	Improved water in 3km of rivers	Infrastructure to cope with building 3 new town	New, smarter system purchased
Required total investment	£93 million	£163 million	£30 million	£325 million	£xm	£57million	£52million
Support most							
Support least							

ON EACH SCREEN, INCLUDE A LINK TO THE FULL TEXT SHOWN IN Q1 AS A DROP-DOWN SO RESPONDENTS CAN RE-READ IT IF THEY WISH TO.

Q3. We're now going to ask you to do the same exercise again, but this time in each description we've included how much it could potentially cost an average household customer if this investment was made.

From each group, please select the one you support most and the one you support least.

Of course this time you need to think about how much customers will be asked to pay when deciding which one to choose

SECOND PAIRWISE: BASED ON 7 FACTORS WITH BILL COST, EACH RESPONDENT WOULD SEE 11 SETS OF 2 ATTRIBUTES

- *Maintaining Drinking Water Quality*
- *Reducing Cellar Sewer Flooding*
- *Reducing Flood Risk in Hull*
- *Reducing Water Lost Through Leaks*
- *Improving River Water Quality*
- *Infrastructure for New Towns*
- *New Customer Management System*

EXERCISE 2 - THE FOLLOWING TABLE SHOWS HOW EACH FACTOR SHOULD BE PRESENTED ON SCREEN

Special Factor	Maintaining Drinking Water Quality	Reducing Cellar Sewer Flooding	Reducing Flood Risk in Hull	Reducing Water Lost Through Leaks	Improving River Water Quality	Infrastructure for New Towns	New Customer Management System
Benefit	Improved water treatment at 5 sites	Cellar flooding reduced by 70%	Increased flood protection in Hull	Leakage reduced by 40%	Improved water in 3km of rivers	Infrastructure to cope with building 3 new town	New, smarter system purchased
Required total investment	£93 million	£163 million	£30 million	£325 million	£xm	£57million	£52million

Change to an average household bill per year	0.3% increase, which is £1.20 per year (or 10p per month)	3.2% increase, which is £12.20 per year (or £1.02 per month)	0.1% increase, which is 40p per year (or 3p per month)	6.3% increase, which is £24.40 per year (or £2.03 per month)	£x per month	0.2% increase, which is 80p per year (or 7p per month)	0.3% increase, which is £1.20 per year (or 10p per month)
Support most							
Support least							

ON EACH SCREEN, INCLUDE A LINK TO THE FULL TEXT SHOWN IN Q1 AS A DROP-DOWN SO RESPONDENTS CAN RE-READ IT IF THEY WISH TO.

ADD THE FOLLOWING BILL IMPACT TO THE RELEVANT COST ADJUSTMENT CLAIM.

Maintaining Drinking Water Quality:

- *This investment would mean an increase to the average household bill of 0.3% per year, which means it would cost £1.20 per household per year or 10p per month.*

Reducing Cellar Sewer Flooding

- *This investment would mean an increase to the average household bill of 3.2% per year, which means it would cost £12.20 per household per year or £1.02 per month.*

Reducing Flood Risk in Hull

- *This investment would mean an increase to the average household bill of 0.1% per year, which means it would cost 40p per household per year or 3p per month.*

Reducing Water Lost Through Leaks

- *This investment would mean an increase to the average household bill of 6.3% per year, which means it would cost £24.40 per household per year or £2.03 per month.*

Improving River Water Quality

- *This investment would mean an increase to the average household bill of x% per year, which means it would cost £x per household per year or xp per month.*

Infrastructure for New Towns

- *This investment would mean an increase to the average household bill of 0.2% per year, which means it would cost 80p per household per year or 7p per month.*

New Customer Management System

- *This investment would mean an increase to the average household bill of 0.3% per year, which means it would cost £1.20 per household per year or 10p per month.*

Q4. Thinking about these investments, would you be happy to pay....

SINGLECODE

Yes

No

Don't know

LOOP – RANDOMISE ORDER

- £1.20 a year (10p a month) to Maintain Drinking Water Quality by improving 5 Pennine water treatment works?
- £12.20 a year (£1.02 a month) to Reduce Cellar Sewer Flooding
- 40p a year (3p a month) to Reduce Flood Risk in Hull?
- £24.40 a year (£2.03 a month) to Reduce Water Lost Through Leaks by a further 40%?
- £x a year (xp a month) to Improve River Water Quality in 3km of river?
- 80p a year (7p a month) to provide drinking and waste water Infrastructure for New Towns?
- £1.20 a year 10p a month so Yorkshire Water can purchase a New Customer management System?

Section 2: About You

Finally, we'd like to find out a little more about you to help us understand the views of different types of customers.

D1. Including yourself, how many people aged 16 years old or older live in your household?

ENTER NUMBER

Prefer not to say

D2. How many people aged under 16 live in your household?

ENTER NUMBER

Prefer not to say

D3. Are you currently working?

SINGLECODE

Yes

No

Don't know

Refused

ASK D4 IF 'No' AT D3, OTHERS GOTO D5.

D4. Which of the following best describes your status? TICK ONE ONLY

SINGLECODE

Retired

At home raising family/housewife/house husband

Registered unemployed

Student in full time education

Other

Refused

Don't know

ASK ALL

D5. Please tick any of the following circumstances that you feel apply to your household, including yourself.

MULTICODE

Someone in my household has a long-term physical health condition

Someone in my household has a long-term mental health condition

In my household, English is not our first language



None of the above
Prefer not to say
Don't know

D6. Which of the following do you agree with most? TICK ONE ONLY
SINGLECODE

I don't really think about my water bill it's just something I have to pay
I worry about not being able to afford my water bill
I struggle to afford my water bill
I receive help to pay my water bill
Prefer not to say
Don't know

D7. Does your household currently receive any of the following benefits?

MULTICODE

Housing benefit
Jobseekers allowance
Working family tax credits
Child tax credits
Incapacity benefit
Pension Credit
Universal Credit
Disability Living Allowance
None
Prefer not to say
Don't know

THANK AND CLOSE

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8098_Cost_Adjustment_Claims_2018\Survey\YW_Cost_Adjustment_Research_Online_Survey_2018_V8f.
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6.2 Appendix 2 – Qualitative Materials

6.2.1 Services provided by Yorkshire Water (SHOWCARD)

- Providing clean and safe water to drink
- Ensuring there is always enough water supply
- Safe removal of waste water and sewerage
- Protecting you and the environment from sewer flooding
- Protecting and improving the water environment (rivers, sea)
- Customer services (call centre, engineers responding to incidents etc)

6.2.2 Cost Adjustment Claims with no bill impact (SHOWCARD)

Claim I

Maintaining Drinking Water Quality

There is more colour in the water Yorkshire Water collects in its reservoirs and rivers now than ever before. It's caused by rain water running off the peatlands, which are deteriorating in quality.

Highly coloured water is more difficult and costly to treat and increases the risk of failing water quality standards. Action is needed now to prevent water quality failures in the near future.

Yorkshire Water will need to invest in new treatment processes at 5 of its Pennine water treatment works to tackle highly discoloured water to ensure a secure supply of water from these sites in future.

An additional £93 million in funding would be needed to improve water treatment at these 5 sites.

Benefits of making this investment:

- Yorkshire Water's high standard for delivery of high quality drinking water will be maintained
- Reduced need to pump water from rivers.

Claim2

Reducing Cellar Sewer Flooding

This happens when sewers over flow and flood cellars. Ofwat wants all water companies to improve and to have a similar number of cellar sewer flooding incidents, but the Yorkshire region has more properties with cellars than the rest of the UK, making it a more costlier problem to fix.

To meet Ofwats requirements, Yorkshire Water would have to reduce sewer flooding in properties with cellars by 70%, this would cost an additional £163m.

Benefits of this investment:

- Sewer flooding in cellars will be reduced by 70%, benefitting customers
- Less emotional and financial stress for customers experiencing cellar flooding.

Claim3

Reducing Flood Risk in Hull

Hull and its immediate surroundings are at risk from river and tidal flooding and it also has a more complex system of watercourses and sewers than elsewhere in the region.

In this area, there are roughly 5,000 properties that are at risk of internal sewer flooding once in a 5-year period (in other words, they have a 20% chance of being flooded each year). Yorkshire Water would like to reduce the risk of 400 of these properties flooding to a once in 75 year period

To help achieve this, it wants to use less traditional ways of reducing the amount of rainwater it must deal with (e.g. permeable paving, green roofs etc.). It also plans to work in partnership with other organisations who manage flood risk to combine expertise.

The cost of providing this increased level of protection is an additional £30 million.

Benefits of this investment:

- Reduced chance of sewer flooding for approximately 400 properties during severe rain that might occur once every 5 years and 550 properties during severe rain that might only occur once every 30 years
- Contribute to the health and wellbeing of the community using sustainable methods of managing flood risk.

Claim4

Reducing Water Lost Through Leaks

Yorkshire Water has a target set by Ofwat to lose no more than 23% of the daily 1.2 billion litres of water it supplies through leaks and it's hitting this target. Yorkshire Water wants to reduce this by a further 40%.

Currently, Yorkshire Water spends £30 million finding and fixing leaks to meet the Ofwat target of 23% leakage.

To reduce leakage by another 40% and maintain this, it will need to spend another £325million

Benefits of this investment:

- It would make Yorkshire Water's one of the best water companies in the country for leakage control.
- Yorkshire Water will take less from the environment, prevent wastage and ensure a continuous water supply

Claim 5

Improving River Water Quality

Removed from Report

Claim 6

Infrastructure for New Towns

The population is growing, by 2045 we are expecting to have 1 million more people living in Yorkshire.

There are 3 new town developments planned over the next 20 years that will require new infrastructure to provide drinking water and waste water services. Whilst new water and waste water connections are part of Yorkshire Water's service, building the infrastructure for entire new towns is completely different and very expensive.

Therefore, Yorkshire Water would require £57million of additional investment to cope with the building of these new towns.

Benefits of this investment:

- Provide a continuous high-quality water supply to new customers and to prevent water shortages for all
- Ensure they have enough capacity in the waste system to remove and treat additional waste water.

Claim 7

New Customer Management System

Yorkshire Water manages customer service using its Customer Management System, but this is old and in need of replacement and isn't quite as clever as the company would like.

Currently, customers are happy with the service Yorkshire Water provides. However, a new Customer Management System will help it offer personalisation through a deeper understanding of customers' needs (e.g. it could identify customers who'd prefer a text to an email to let them know about works in their area, or automatically notify a customer of higher than normal water use in their home, potentially identifying leaks).

Purchasing a new smarter Customer Management System would cost £53million.

Benefits of this investment:

- A personal service, so customers receive information when they want it, in the way they want it
- Costs will be reduced in the long run as automation will handle much of the calling the company has to do at the moment.

6.2.3 Cost Adjustment Claims with bill impact revealed (SHOWCARD)

Claim 1 with bill impact

Maintaining Drinking Water Quality

There is more colour in the water Yorkshire Water collects in its reservoirs and rivers now than ever before. It's caused by rain water running off the peatlands, which are deteriorating in quality.

Highly coloured water is more difficult and costly to treat and increases the risk of failing water quality standards. Action is needed now to prevent water quality failures in the near future.

Yorkshire Water will need to invest in new treatment processes at 5 of its Pennine water treatment works to tackle highly discoloured water to ensure a secure supply of water from these sites in future.

An additional £93 million in funding would be needed to improve water treatment at these 5 sites.

Benefits of making this investment:

- Yorkshire Water's high standard for delivery of high quality drinking water will be maintained
- Reduced need to pump water from rivers.

This investment would mean an increase to the average household bill of 0.3% per year, which means it would cost £1.20 per household per year or 10p per month.

Claim 2 with bill impact

Reducing Cellar Sewer Flooding

This happens when sewers over flow and flood cellars. Ofwat wants all water companies to improve and to have a similar number of cellar sewer flooding incidents, but the Yorkshire region has more properties with cellars than the rest of the UK, making it a more costlier problem to fix.

To meet Ofwat's requirements, Yorkshire Water would have to reduce sewer flooding in properties with cellars by 70%, this would cost an additional £163m.

Benefits of this investment:

- Sewer flooding in cellars will be reduced by 70%, benefitting customers
- Less emotional and financial stress for customers experiencing cellar flooding.

This investment would mean an increase to the average household bill of 3.2% per year, which means it would cost £12.20 per household per year or £1.02 per month.

Claim 3 with bill impact

Reducing Flood Risk in Hull

Hull and its immediate surroundings are at risk from river and tidal flooding and it also has a more complex system of watercourses and sewers than elsewhere in the region.

In this area, there are roughly 5,000 properties that are at risk of internal sewer flooding once in a 5-year period (in other words, they have a 20% chance of being flooded each year). Yorkshire Water would like to reduce the risk of 400 of these properties flooding to a once in 75-year period

To help achieve this, it wants to use less traditional ways of reducing the amount of rainwater it must deal with (e.g. permeable paving, green roofs etc.). It also plans to work in partnership with other organisations who manage flood risk to combine expertise.

The cost of providing this increased level of protection is an additional £30 million.

Benefits of this investment:

- Reduced chance of sewer flooding for approximately 400 properties during severe rain that might occur once every 5 years and 550 properties during severe rain that might only occur once every 30 years
- Contribute to the health and wellbeing of the community using sustainable methods of managing flood risk.

This investment would mean an increase to the average household bill of 0.1% per year, which means it would cost 40p per household per year or 3p per month.

Claim 4 with bill impact

Reducing Water Lost Through Leaks

Yorkshire Water has a target set by Ofwat to lose no more than 23% of the daily 1.2 billion litres of water it supplies through leaks and it's hitting this target. Yorkshire Water wants to reduce this by a further 40%.

Currently, Yorkshire Water spends £30 million finding and fixing leaks to meet the Ofwat target of 23% leakage.

To reduce leakage by another 40% and maintain this, it will need to spend another £325million

Benefits of this investment:

- It would make Yorkshire Water's one of the best water companies in the country for leakage control.
- Yorkshire Water will take less from the environment, prevent wastage and ensure a continuous water supply

This investment would mean an increase to the average household bill of 6.3% per year, which means it would cost £24.40 per household per year or £2.03 per month.

Claim 5

Improving River Water Quality

Removed from Report

Claim 6 with bill impact

Infrastructure for New Towns

The population is growing, by 2045 we are expecting to have 1 million more people living in Yorkshire.

There are 3 new town developments planned over the next 20 years that will require new infrastructure to provide drinking water and waste water services. Whilst new water and waste water connections are part of Yorkshire Water's service, building the infrastructure for entire new towns is completely different and very expensive.

Therefore, Yorkshire Water would require £57million of additional investment to cope with the building of these new towns.

Benefits of this investment:

- Provide a continuous high-quality water supply to new customers and to prevent water shortages for all
- Ensure they have enough capacity in the waste system to remove and treat additional waste water.

This investment would mean an increase to the average household bill of 0.2% per year, which means it would cost 80p per household per year or 7p per month.

Claim 7 with bill impact

New Customer Management System

Yorkshire Water manages customer service using its Customer Management System, but this is old and in need of replacement and isn't quite as clever as the company would like.

Currently, customers are happy with the service Yorkshire Water provides. However, a new Customer Management System will help it offer personalisation through a deeper understanding of customers' needs (e.g. it could identify customers who'd prefer a text to an email to let them know about works in their area, or automatically notify a customer of higher than normal water use in their home, potentially identifying leaks).

Purchasing a new smarter Customer Management System would cost £52million.

Benefits of this investment:

- A personal service, so customers receive information when they want it, in the way they want it
- Costs will be reduced in the long run as automation will handle much of the calling the company has to do at the moment.

This investment would mean an increase to the average household bill of 0.3% per year, which means it would cost £1.20 per household per year or 10p per month.