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CAMBRIDGE WATER COMPANY

Water Trading Business Strategy

December 2013

Water Trading

By definition, the term water trading implies the efficient allocation of water resource to meet customer supply needs. The Company takes a refreshing and forward thinking approach to trading, helping to ensure the Midlands and East Anglia has sufficient water supplies.

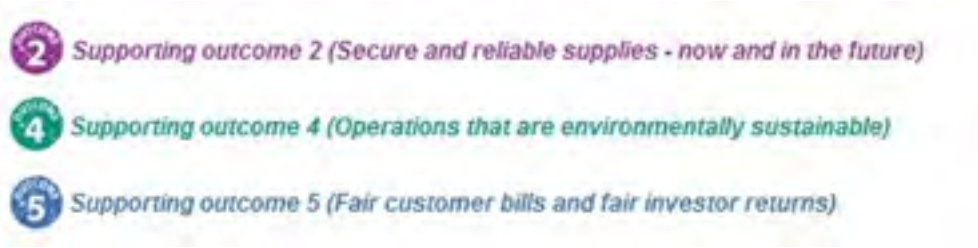
Customer research has evidenced a degree of nervousness towards trading water. In the customer research carried out by MVA Consultancy, there were equal levels of support and opposition to the idea of water trading, with many customers wanting to make sure the Company had sufficient resources of its own before considering trading with others.

While the Company remains committed to meeting current and future demand from its customers, it is also firmly of the belief that trading water with its neighbouring companies – when it is sensible and cost-effective to do so - can create a "win-win" situation, both for its customers and those of the receiving company.

Bulk Supply Agreements

The Company already has number of bulk supply agreements in existence. Overall, it is a net exporter of water to neighbouring water companies and imports only very small quantities to locations at the extremities of its supply network where it would not be cost-effective to provide water from its own sources.

This activity supports the following outcomes:



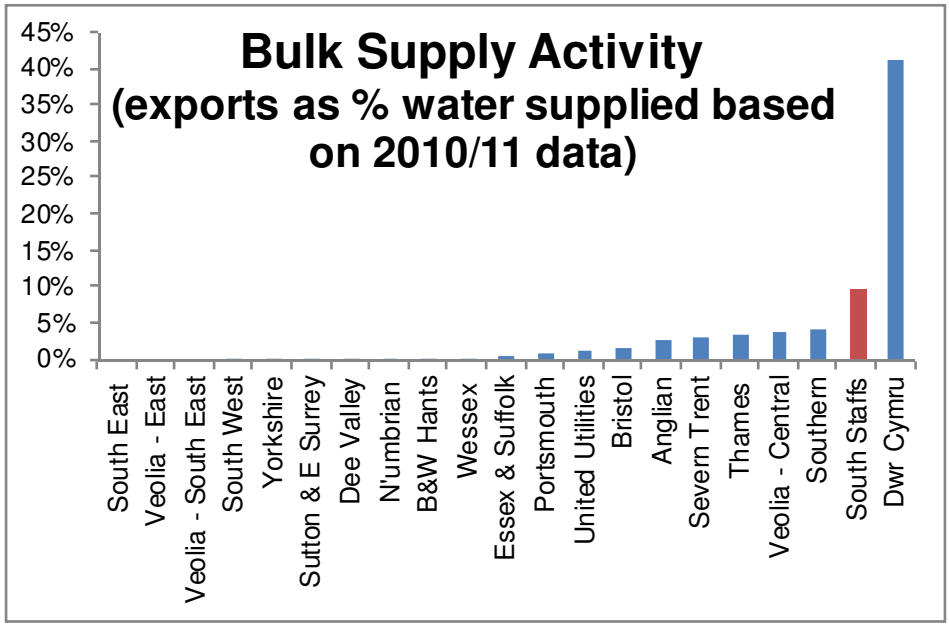
Regularly used imports and exports are listed below based on the data available for 2013/14.

Bulk imports		
Location	**Volume**	
Earith Bridge	0.003Ml/d AWS to CW	Existing
Odsey	0.04 Ml/d Affinity to CW	Existing
Greatgates	0.02Ml/d STW to SSW	Existing
The Lenmores	0.02Ml/d STW to SSW	Existing
Chelmarsh	0.004Ml/d STW to SSW	Existing
Leigh	0.001Ml/d STW to SSW	Existing

Bulk exports		
Location	**Volume**	
Wolverhampton	Up to 40Ml/d SSW to STW	Existing
Gayfiled	0.5 Ml/d SSW to STW	Existing
Brindley Bank	0.46Ml/d SSW to STW	Existing
Polesworth	0.18Ml/d SSW to STW	Existing
Romsley Boys	0.08Ml/d SSW to STW	Existing
Middlemore	0.03Ml/d SSW to STW	Existing
Rumbow	0.02Ml/d SSW to STW	Existing
Chapman's Hill	0.006Ml/d SSW to STW	Existing
Hilton	0.001Ml/d SSW to STW	Existing
Hadstock	0.37Ml/d CW to Affinity	Existing
Barnham Cross	0.25Ml/d CW to AWS	AMP6

A number of emergency connections between companies for use in periods of drought or high demands are also maintained.

The graph below is based on data from 2010/11 (the last year for which industry data is available) and demonstrates the Company's strong position regarding the sharing of resources.



Future Planning

Looking to the future, the Company's draft Water Resources Management Plans (dWRMPs) show a surplus in the supply demand balance in both regions throughout AMP6 and over the planning horizon.

The Company has been exploring the potential to make use of these surpluses via further water trading agreements with its neighbouring water companies, who are trying to meet a supply deficit in the most economic manner.

During the pre-consultation stage of the dWRMPs, the Company wrote to its neighbouring water companies to inform them it had a supply demand surplus in both regions which would be available for water trading arrangements.

Into AMP7

The Company has since had a series of meetings with Severn Trent Water to discuss opportunities for the provision of surplus water from the South Staffs region, and understands Severn Trent has a requirement for additional resources from AMP7.

These discussions are on-going and will continue beyond the publication of the WRMP in early 2014 and submission of this business plan. However, the Company is hopeful that water trading arrangements will be agreed for upwards of 10Ml/d to begin during AMP7.

The Company is also discussing with Severn Trent the potential to provide up to 30Ml/d during wet winters to enable it to undertake planned maintenance work on the Elan Valley Aqueduct.

An agreement has already been signed for a new emergency supply to Severn Trent's Perry Barr Reservoir, which in addition to providing resilience for Severn Trent also has the potential to improve resilience in the South Staffs region.

Trading Theory for Practice

In the Cambridge region, there are a number of bulk exports with neighbouring companies already in existence which enable a small number of customers to be supplied in the most resource and cost-effective manner.

Discussions regarding more substantial bulk transfers, or trades, resulted in a number of potential schemes being looked at in detail as part of the 'Trading Theory for Practice' report, published in 2010, which evaluated opportunities for water sharing between companies in East Anglia.

Building upon this work, and as part of the preparation for the dWRMP, the Company entered into early discussions with neighbouring companies in April 2013.

As part of this process, the Company explored some of the trade options, in order to determine their impact on the supply demand balance over the long-term. However, following consultation on the dWRMP, the Environment Agency has expressed some concerns around possible increases in abstractions at sources which may have an environmental impact under the Water Framework Directive, and recommended further investigations would be required before trades of certain volumes could be progressed.

The Company remains committed to the best use of resources regionally over the longer-term. An initial small trade of 0.25Ml/d for the AMP6 period has been agreed whilst a full assessment of the potential environmental impact of volumes up to a peak of 8Ml/d is completed. The outcome of the assessment will determine whether this initial trade volume

can be increased in subsequent AMP periods. The Company is hopeful that the environmental concerns can be addressed and trading at up to 8Ml/d can be agreed.

Water Resources East Anglia

The Company is also as a key stakeholder in the Water Resources East Anglia (WREA) project which involves developing holistic approaches to future water resources planning in the face of population growth, environmental concerns and the impact of climate change.

One of the project's key objectives is to manage uncertainty and ensure regionally effective decision making for future resources options.

Summary

While in both regions there is significant potential to trade, it is important that all parties evaluate and assess the cost of integration. The need to take a holistic view will be paramount.

Simply assessing trading opportunities based on individual sites could limit the ability to provide water trading solutions for the good of the wider community. The environmental impact will also play an important part in any decision making.

Adopting a wider perspective presents the Company with greater scope to trade with other licence owners such as farmers and other agricultural land owners.

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Protection of the Environment Business Strategy

December 2013

Introduction

Protecting the environment and ensuring a sustainable and consistent supply of quality water is a key priority for the Company.

It has a long and well-established commitment to maintaining and improving the natural environment, and continues to put environmental management and investing in innovative delivery methods to ensure future sustainability at the heart of its business.

As a company whose operations impact on the environment, South Staffs Water takes its responsibilities towards the natural environment seriously. The Company's aim is to operate in a way which minimises impact on the environment and improves it where possible, protecting it for future generations.

Customer Research

Customer research shows the environment appears to be a dividing issue for customers, with preferences split between keeping customer bills down and minimising consequences on the environment.

In the South Staffs region both household and non-household customers place a high value on reducing the risk of pollution incidents while in the Cambridge region there is a greater desire to avoid general environmental impacts.

Willingness to pay research showed that non-household customers place more value on investing in improvements to reduce the chance of incidents occurring (up to 5.6% on the current bill) while household customers are more willing to spend money on avoiding deterioration to the existing levels of service.

In the online panel research the vast majority of customers (83%) agreed or strongly agreed with the idea that the Company should invest in work with farmers, if such work might reduce the need to treat drinking water.

A slightly lower proportion, but nevertheless a clear majority, (79%) also agreed such work should be carried out because of the benefits to the local environment and wildlife.

The majority of customers (61%) agreed a small increase in bills to pay for work with farmers would be acceptable, if this results in less need to treat drinking water, cost reductions and benefits to the environment and wildlife.

The proportion of customers who would support a bill increase purely on the basis of benefits to the environment and wildlife and without any cost savings for customers, was 38%.

The Company has listened to the environmental challenges posed from both the CCG and its customers and has plans in place to meet these demands.

Proposed Activities

The Company's proposed environmental activities for AMP6 include:

- Reducing the amount of water taken from the environment through leakage management (see Leakage management business strategy), metering strategies (see Metering business strategy) and working with customers to help them be more water efficient (see Water efficiency business strategy)
- Managing water resources holistically - using different sources to protect water levels in other areas - particularly during dry periods
- Addressing the direct impact of abstractions and operations on the environment as part of the National Environment Programme (NEP)
- Managing and reducing energy use through investing in pumping efficiency and renewable energy technologies (see Network management business strategy)
- Developing a biodiversity strategy to improve the management of land owned by the Company and to raise awareness of biodiversity in the wider community (see Biodiversity section below)
- Investigating and implementing catchment management schemes where these have been assessed as potentially beneficial (see Catchment management section below)

Throughout the development of the environmental proposals, the Company has worked closely with the Environment Agency (and Natural England on biodiversity) to ensure expectations are aligned and uncertainty is minimised.

In assessing the need for investment, it has also looked at the multiple benefits of the proposed works.

For example, the planned re-drilling of boreholes at Slitting Mill in AMP5 (as part of the borehole maintenance strategy) presents the Company with an opportunity to trial the relocation of some abstraction from Moors Gorse. In turn, this will alleviate impacts on the Rising Brook as part of the solution for the AMP6 NEP scheme in the South Staffs region and has meant costs associated with the Rising Brook NEP scheme have been kept lower than would otherwise have been necessary.

This approach is designed to optimise aquifer use, minimise costs and maximise environmental benefit.

Future borehole maintenance proposals will consider wider opportunities for abstraction relocation wherever possible. Capital maintenance schemes often include improvements on an opportunistic basis.

Biodiversity

The Company is keen to work in partnership with key stakeholders to maximise opportunities for delivering biodiversity in both regions.

It has developed a new biodiversity strategy with the aim of:

- Identifying opportunities for enhancing biodiversity through its operational activities
- Identifying opportunities to work in partnership with key stakeholders to share best practise, reduce costs and maximise benefits
- Ensuring opportunities for biodiversity benefit the local communities
- Identifying and raising awareness of biodiversity opportunities that will enhance local communities
- Embedding a culture of environmental awareness among the Company's employees

Case Study

An example of where biodiversity has been enhanced through the Company's sensitive management of its existing operations is the Blithfield Estate, which includes Blithfield Reservoir.

A large area of the 2,350 acre estate is designated as a Site of Special Scientific Interest (SSSI) making it a haven for wildlife and wading birds in particular. In order to successfully preserve this status, the Company has to balance its operational needs with those of the environment. Some areas of the site are also open to members of the public making it an ideal location to raise awareness of biodiversity with the local community.

The Company also has a nature reserve at its Chelmarsh Reservoir which provides a valuable habitat for wading birds and will be exploring opportunities to manage and improve this locally important site during AMP6.

Birmingham and Black Country Nature Improvement Area (BBCNIA) Partnership

South Staffs Water has joined the Birmingham and Black Country Nature Improvement Area (BBCNIA) partnership. NIAs form part of the Government's Biodiversity 2020 Strategy and are funded by Defra.

The Company owns land within the area that has been identified for the BBCNIA and is in discussions with the Staffordshire Wildlife Trust to identify potential opportunities for increasing biodiversity.

Outside of the BBCNIA, and in both regions, further opportunities to protect and enhance biodiversity, both at Company land holdings and in the community, are being sought.

Catchment Management

Supporting outcome 1 (Excellent water quality - now and in the future)

Supporting outcome 2 (Secure and reliable supplies - now and in the future)

Supporting outcome 4 (Operations that are environmentally sustainable)

The Company is proposing to engage in catchment management activities during AMP6.

Catchment management solutions provide a sustainable alternative to end of pipe solutions. As well as allowing the use of chemicals and energy for treatment to be reduced over time, many additional benefits, such as restoration schemes and benefits to wildlife and habitats can also be identified.

While it may be many years before any change to groundwater water quality is observed, the likelihood of catchment management solutions delivering benefits in the longer-term is high, as there is a direct link between the application of agricultural chemicals and run-off into the watercourses.

Catchment scale management of the water environment is also a focus in the Defra Statement of Obligations.

During AMP6 the Company will be implementing two surface water schemes in the South Staffs region which will focus on reducing metaldehyde (slug pellets) and other pesticides.

The successful implementation of these projects will involve working closely with farmers and engaging with the public in these catchments.

Further investigations to determine the potential viability of reducing nitrates in two groundwater catchments will also be completed.

In the Cambridge region, the Company will continue to develop schemes in two groundwater catchments and conclude the appraisal of potential schemes in a number of other catchments.

During AMP6 activity in groundwater catchments will focus on determining the potential for significant water quality improvements with a view that nitrate treatment plants, which are being constructed in AMP5 and AMP6 with an asset life of 25 years, will not need to be replaced at the end of that period.

These catchment management implementation schemes and investigations are included in the Water Quality NEP for both regions and appropriate funding has been included in the business plan submission.

Opportunities for environmental improvements associated with the improved water quality will be optimised as part of proposed catchment management projects so that multiple outcomes can be achieved.

Changing Behaviour

The Company recognises that for any environmental initiative to deliver a successful outcome there needs to be an inherent change in behaviour from everyone who has an impact on the water supply.

The Company employs a communications team to deliver messages and outcomes from environmental focused initiatives, which in turn helps to share best practise and generate innovations among customers, stakeholders and employees.

It is also working closely with farmers and agricultural landowners by encouraging them to make small changes to the way they manage their land.

While the use of slug pellets and pesticides within the farming process is necessary, it has a negative impact on water quality and is difficult to treat.

Leaving larger boundary areas around ploughed land will reduce the amount of metaldehyde that drains into the water supply. In the longer term this will help improve water quality and reduce the need for additional water treatment processes.

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CAMBRIDGE WATER COMPANY

Customer Engagement

December 2013

Background

South Staffs Water is committed to putting customers at the heart of its business and in 2012/13 set about undertaking its largest ever customer engagement exercise.

The Company regularly carries out surveys among its customers and has achieved a repeatedly high SIM score, but this was the first time it had undertaken such large quantity of independent research. In total it engaged with almost 4500 customers, including 800 non-household customers, which is equivalent to seven in every thousand of its customer base.

The results from this research have been fundamental in shaping every element of this business plan, from identifying what the outcomes and measures should be, to helping decide where future investment should be made. The findings will also be instrumental in shaping future business strategies, for example those based around leakage or metering, as well as influencing how and what information is communicated to customers.

The Company's ambition is to continue to deliver the highest possible levels of customer service. It will achieve this by putting customers at the very heart of its business and using their comments and feedback to ensure it not only meets, but exceeds its objectives wherever possible while keeping bills low.

Perhaps of most importance is the legacy this research will have for the business. South Staffs Water is committed to continuing to engage with all its customers and build on its existing relationships with stakeholders to ensure it not only listens to what they want but is flexible enough to adapt its policies and processes to accommodate requests wherever possible.

Ofwat's Guiding Principles

In carrying out the research the Company took on board the guiding principles set out in Ofwat's customer engagement policy:

- Customers should be central to the price setting process, with companies being responsible for engaging with them to ensure that customers view their bills as fair and legitimate.
- Evidence of customer engagement, particularly on acceptability, will be a major factor in Ofwat's decisions over whether or not to accept companies' business plans.
- Ofwat also suggests that customers' opinions may help to inform and influence some areas of the business plan.
- Engagement should show: greater customer focus; incentives for companies to innovate and more water resource efficiency.

Ofwat wished to see a three-tier approach to engagement:

- Direct engagement with customers, with research designed to inform the development of the business plan and test its acceptability.
- Establishment of a Company customer challenge group. The remit of the group would be to build upon work carried out for the PR09 price review and ensure the business plan is acceptable to customers. It would also be required to ensure that

any work undertaken by the Company achieved the agreed outcomes – including legally prescribed standards and other regulators' requirements – and was socially, economically and environmentally sustainable.

- In addition to this, Ofwat has also set up a sector-wide customer advisory panel. This comprises people with the expertise and experience to inform and challenge on key sector-wide assumptions, for example provisions for pensions, the cost of capital, and energy. Membership includes the Consumer Council for Water (CCWater) and large business organisations. The panel has not duplicated the companies' own engagement with businesses and other customers, nor has it advised on or challenged individual Company business plans.

Customer Challenge Group

To maintain an independent approach to PR14 and fulfil Ofwat's guiding principles, Customer Challenge Groups (CCGs) were formed in each region in 2012.

Membership of the CCGs is made up of CCWater, the Drinking Water Inspectorate, the Environment Agency and Natural England, together with representatives from local councils, the Citizens' Advice Bureau, the Federation of Small Businesses, the Chamber of Commerce, local representatives, and business customers.

Following the merger of the two companies in April 2013, and the decision to create a single business plan, representatives from the two businesses attended the regional CCG's from the April, joint task groups operated from the August and the two full CCGs joined together in September 2013.

The remit of the CCGs has been to challenge the Company's proposals and to offer an alternative perspective to South Staffs Water, taking account of the issues faced by the Company and ensuring it has addressed customer priorities.

There is one CCG report covering both regions. This report will elaborate on the extensive challenges that have influenced the plans by making sure they reflect customers' priorities and also the way in which the Company has presented the strategy.

Approach to Consultation and Research

To ensure the customer research activity was given in-depth oversight and scrutiny customer engagement sub groups were formed by the CCGs in each region to look at specialist areas:

- **The Customer Research Task Group**
  These groups worked with the Company to determine, formulate and review the customer research that was carried out to identify customers' priorities and their willingness to pay for service improvements.

- **The Outcomes Task Group**
  These groups worked with the Company to define the outcomes, associated measures and incentives that should be achieved.

- **The Water Resources Management Plan Task Group**
  Water resources are a key priority for the Company. A task group was set up in the Cambridge region to look at long term water supplies, specifically with a view to meeting the demands of future housing growth, without adversely impacting on the environment. In the South Staffs region, Community Research was employed to carry out research among household and non-household customers, specifically relating to water resources. Workshops were also held with members of the CCG so they fully understood all the issues related to the production of the draft Water Resources Management Plan (dWRMP).

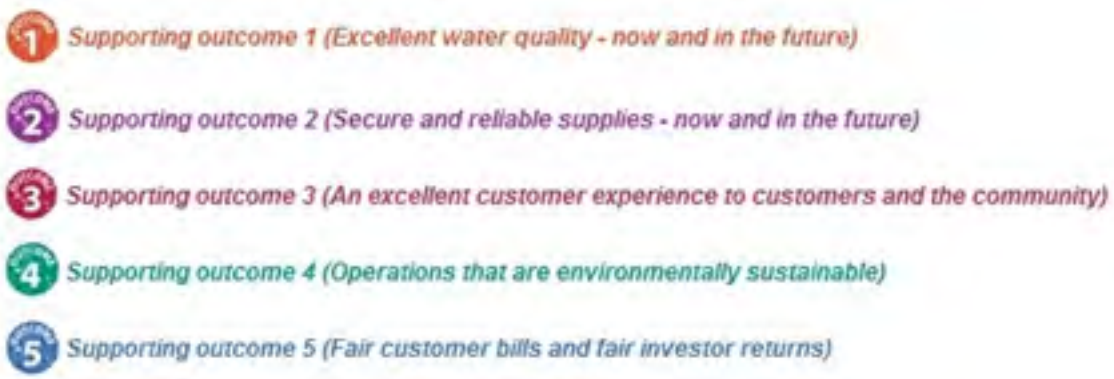
The CCGs remit covered all stages of the research cycle from commissioning consultants to ensuring that the results were interpreted appropriately in the context of the Company's business plan.

The Company commissioned the Consultation Institute to provide advice and challenge the engagement activity being proposed, and appointed the following companies to carry out the independent research:

- MVA Consultancy
- ICS Consulting
- Community Research

Based on their recommendations, the Company's approach to customer research can be broken down into four main elements:

- **Customer feedback**
  The focus of this research has been to identify which issues are important for customers, and what they think of existing levels of service. It has been carried out using a broad range of research techniques including focus groups, online panels and customer surveys and has been used to create and inform the following five outcomes:



- **Willingness to pay**
  Willingness to pay surveys seek to identify the benefit value to the customer – in monetary terms – of the impact in changes to water service levels. In 2012 the Company commissioned MVA Consultancy to carry out indicative willingness to pay research. Partly based on these findings, a second, more robust willingness to pay survey was carried out in both regions by ICS Consulting in the summer of 2013.

- **Acceptability**
  The final stage of the research has involved asking customers and stakeholders how acceptable they have found the proposals in South Staffs Water's draft business plan to be; whether they accept any proposed changes to the bill and if they believe the measures the Company plans to monitor itself on are acceptable. This research was based on a representative sample of the Company's customer base.

- **Consultation on the draft business plan**
  This consultation asked customers opinions on the draft business plan and whether they felt the proposals being put forward were acceptable. This element is separate from the more formal acceptability research detailed above.

  "Water customers are at the heart of the price-setting process", that there should be *"greater customer focus"* than during PR09 *"through direct engagement … on issues including local services and tariffs"* and *"the way the company meets their legal obligations (for example, on drinking water quality and the environment)"* *MVA Consulting – Engaging with customers*

To assist with the research the Company also sought feedback from customers via its website, contact centre and bills, as well as establishing its own online customer panel. It also liaised with a broad range of stakeholders.

The Company's overarching objective is to use the findings from its research and consultations to influence the proposals and desired outcomes for its business plan.

A commitment also exists to maintain the momentum behind the customer engagement process, to ensure customer and stakeholder views are taken into account when future business decisions are made. There is a strong desire to listen to customer feedback so the Company can be responsive to their needs.

Engagement Rates

South Staffs Water has proactively engaged with its customer base throughout the consultation process.

Both regions actively promoted the process on their websites and invited customers to get in touch to air their views, via its Your C**H$_2$O**ice campaign.

In the South Staffs region information about the customer engagement process was promoted via a recorded message played to customers who contacted the Company by telephone. A number of proactive tweets were also made via its Twitter account.

In the Cambridge region awareness was via an advert on customer bills, an article in its customer newsletter, Reflections, and a comprehensive email campaign.

A broad range of stakeholders have also been contacted, ranging from councillors, MEPs, representatives of hard to reach groups, environmental organisations, community groups, charities, health care providers, businesses and the media.

In summary, the Company is confident it has engaged with its customers and stakeholders via its website, social media channels, emails and customer bills. This activity resulted in the Company receiving more than 4500 responses, which is equal to contact with seven in every thousand customers. The table below shows the breakdown of the research with more detail shown in Appendix 1 - Table of Research and Customers Reached.

Breakdown of the research carried out as part of PR14

Type of research	Type of customer	Number of responses
Customer feedback To inform outcomes and the Long Term Strategy	Household	853
	Non-household	129
Willingness to pay To ensure investment reflects customer valuations	Household	984
	Non-household	422
Consultation on the business plan To test proposals, investment choices and outcomes	Household	1033
	Non-household	14
Acceptability testing To test how acceptable customers find the business plan	Household	841
	Non-household	203
Total (768)	Household (3,711) / Non-household	**4,479**

Key Findings from the Research

The research has been the most extensive ever undertaken by South Staffs Water and has highlighted some interesting results, which are summarised below:

- The quality of water is consistently the most important issue for customers.[1] While there is a strong desire to reduce the hardness of the tap water, the cost of doing so for all customers outweighs the desire for customers to pay for it.[2] Raising awareness

[1] Willingness to Pay

[2] In the MVA research only 9% of customers were willing to pay for improvements to the hard water, with 89% saying they preferred the current level of service with no bill change. The Willingness to Pay research carried out by ICS Consultancy showed that customers in the South Staffs region were prepared to pay £3.93 and customers in the Cambridge region were prepared to pay £8.53 to cover the cost of all water being softened. When multiplied by the number of properties this gives a figure of £2.2 million in the South Staffs region and £1.1 million in the Cambridge region. The investment cost of softening water in the South Staffs region alone is £55 million, with operational costs of £3.7 million per year.

around the issue of hard water and ways to minimise its impact on appliances, in addition to raising awareness of its health benefits, will be undertaken by the Company.

"I'm not satisfied with the hardness of the water… We have to treat our water with salt to soften it" – *Hotel, MVA research*

- More than three quarters of all customers are satisfied with the existing levels of service provided by the Company,[3] In the acceptability testing carried out by ICS Consulting, 96% of customers said they were either very satisfied or fairly satisfied with the levels of service they receive. The Company's aim is to continue to improve on these figures; using the customer research as a spring board for delivering changes that will benefit customers and the Company alike.
- Customers are generally happy with the amount they pay for their water and the majority would prefer bills and levels of service to remain unchanged.[4]
- If investment is required, customers attach more value to preventing existing risks getting worse (e.g. hosepipe bans and interruptions to supplies). Less value is attached to investing in improving levels of service. Hence they want to maintain the status quo.[5]
- While meters are recognised as being the fairest way of charging for water, there is no desire to increase meter penetration rates.[6]
- Leakage remains an emotive issue for customers with many stating a desire to reduce leakage levels; however, the willingness to pay research suggests there is no conclusive evidence of a desire to go beyond the sustainable, economic level of leakage (SELL) in the South Staffs region.[7] The Cambridge region is currently operating to 14Ml/d which is lower than its SELL at 15.5Ml/d.
- Around half of all customers are supportive of the need to protect the environment.
- Customers would prefer the merger savings to be passed on as lower bills rather than invested. If the savings are reinvested customers would prefer to see the money used for the repair of customer supply pipes, over helping vulnerable customers.[8]
- Customers are broadly accepting of the Company's business plan.[9] When surveyed 82% found a proposed £2 increase acceptable at today's prices. When inflation was added, 59% still agreed the plan was acceptable. In response to this research the company is not proposing to increase its bills over the five year period.

[3] In the MVA research over three-quarters (77%) of household customers were 'very' or 'fairly' satisfied with existing services, once informed compared with 83% when uniformed.
[4] In the Willingness to Pay research conducted by ICS Consulting, 71% of households said they would opt for bills and service remaining unchanged. In the MVA research over 83% of household customers said they would prefer the current level of service with no bill change.
[5] Willingness to Pay
[6]

Acceptability Testing
[7] Informed members of the CCG were supportive of the SELL concept in the South Staffs region and to maintain leakage at AMP5 levels for the Cambridge region.
[8] Introducing a social tariff
[9] Overall acceptability results

How the Research has informed the Business Plan

The research carried out by the Company has been instrumental in shaping the proposals put forward in the business plan. The Company has listened to what customers want and how much they are willing to pay for the services provided.

For example, customers value high quality water, high levels of service and low bills. This business plan has been shaped around delivering those key objectives, while taking into account customers' wishes to keep bills at an affordable level. More details on how customer feedback has influenced the Company's proposals are on page 58,

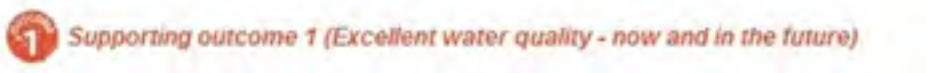
Business Plan Impact

The research informed the key priorities customers' place on the different aspects of service. This provided the basis to develop the outcomes presented in the plan. These were tested in the acceptability research and draft business plan consultation which was also used to develop the measures alongside the valued challenges of the CCG, which helped finalise the incentives.

The research allowed the Company to gather willingness to pay values which helped populate the investment optimisation tool and aid the finalised investment plan.

Following affordability testing the Company reviewed its plan and has now submitted a plan of flat bills whilst delivering the outcomes and expectation of customers and stakeholders as informed by the customer engagement.

The following summarises how the customer research has informed the outcomes:



Based on a customer desire for high quality water the Company is proposing the following activity to maintain the high quality of its water:

- Invest in maintain nitrate removal stations and storage reservoirs to significantly reduce current or future water quality risks.
- Investing in long-term in work with farmers and other landowners to improve the quality of water draining into watercourses, in order to reduce the quantity of the water it has to treat.

Although customer research indicated that customers are concerned about the hardness of the water, the Company has decided it will not heavily invest in reducing water hardness because of the significant financial and environmental cost. However, it has committed to educating customers about how the effects of hard water on plumbing and household appliances can be reduced.

Supporting outcome 2 (Secure and reliable supplies - now and in the future)

Research indicated that customers attach more value to preventing existing risks getting worse (e.g. hosepipe bans and interruptions to supplies). Less value is attached to investing in improving levels of service. Hence they want to maintain the status quo. Customers were also keen for the Company to raise more awareness of the need to be water efficient.

Based on these findings, the Company will:

- Spend about the same on underground pipes as it does now, but with a shift towards the increased maintenance of larger trunk mains.
- Work with house builders to promote the installation of water efficient devices, and consult with local planning authorities as part of its water resources planning in order to manage the risk of housing development.
- With dedicated business account management, a strategy will be implemented outlining services available to non-household customers.
- As outlined above, investing in storage reservoirs will not only help to significantly reduce current or future water quality risks, but will also help to ensure the reliability of the supply in those areas. In addition to this, there will be increased awareness of water efficiency through increased communication and education.

Supporting outcome 3 (An excellent customer experience to customers and the community)

Customers are generally happy with the existing services provided by South Staffs Water, but wanted communications to be improved and work in the community to increase. The Company is also keen to continue to improve on the high levels of services customers have come to expect. Based on this the Company will:

- Continue to use independent surveys and customer complaint levels as a way to monitor customer satisfaction and ensure that its provision for customers remains at a high standard.
- Continue to be involved and develop activities in the local community in both regions
- Further develop its customer contact channels by investing in improved online facilities, social media engagement and also telephone self-service.
- Non-household customers will receive a dedicated point of contact and dedicated account management.
- The Company will implement a strategy of further informing customers about its activities to preserve biodiversity and reduce its carbon footprint as well as other environmental issues.

Supporting outcome 4 (Operations that are environmentally sustainable)

Customers wanted the Company to take more responsibility for water efficiency and operate a sustainable business. They were particularly keen for the Company to improve their communications around the issue of the environment. Based on these findings:

- Water efficiency promotion will be stepped up, continuing to provide free water saving devices to customers.
- The Company will carry out schemes or trials to put water back into the environment at four areas and to work on biodiversity schemes to improve the water in rivers it abstracts from and in some boreholes.
- In addition, it will investigate improving fish and eel passages at surface water works, as well as other work to comply with legal obligations on the environment. It is also continuing to work hard to reduce its carbon footprint, by looking into alternative energy sources for treating and pumping water.
- Regarding meters, the Company intends to continue with its policy of installing meters upon a change of occupier, with these seen as the best way to fairly increase metering and ensure water efficiency.
- Leakage targets will remain a priority, with a proposed reduction in the South Staffs region, focusing on large trunk mains in order to prevent large bursts and disruption.

Supporting outcome 5 (Fair customer bills and fair investor returns)

While the acceptability research showed 82% of customers were accepting of a 2% price increase over five years in real terms and 59% when the effect of inflation was added. Based on these findings and the fact that the current economic climate has a pressing effect on affordability, South Staffs Water is keeping the bills flat (real) over the course of the five years, 2015-2020. The change from 2% at the draft stage to flat has largely been secured through a lower cost of capital. It has not been progressed by lowering proposals or compromising service commitments. The Company has further responded to those not finding the initial proposals acceptable. The Company will extend the Charitable Trust into the Cambridge region, In addition a discretionary fund will be made available to:

Further boost the Charitable Trust allowing more grant support to customers in need of support

Commence activities to offer debt advice to customers, working with specialist independent agencies such as CABs and other support agencies

In addition the Company will undertake further research in early 2014 regarding social tariffs.

Summary of Results

This section pulls together results from different elements of the customer research, eg focus groups, willingness to pay surveys and acceptability studies, under separate subject headings to give an overview of customer opinions relating to different areas of the business.

Overall Acceptability

Acceptability research was conducted by ICS Consultancy. This research was carried out among a demographically representative sample of the Company's customer base. It tested how acceptable a 2% (£3) water bill increase would be by 2020, and whether customers agreed with the Company's plans associated with this increase.

Future inflation is also relevant to customers and the research also explicitly tested and asked clear questions about the acceptability of nominal future bills.

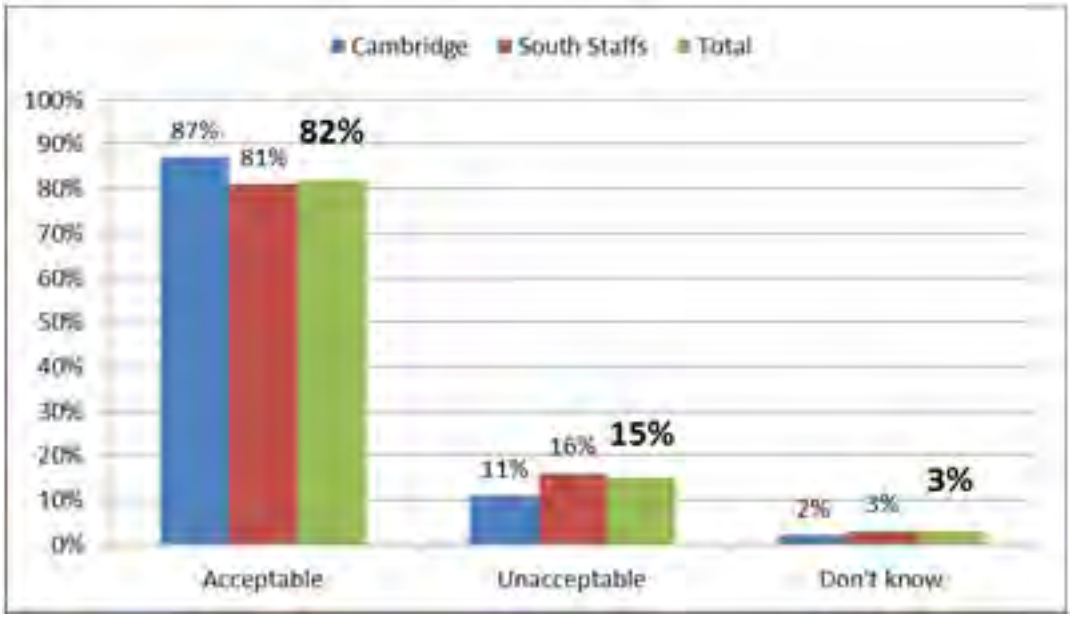
Overall 82% of respondents think the plan, shown in today's (real) prices is acceptable.

When weighted by region, 81% customers in the South Staffs region believe the plan is acceptable, and a slightly higher proportion (87%) believes the plan is acceptable in the Cambridge region.

When the impact of inflation until 2020 was tested, acceptability was again high at 59%.

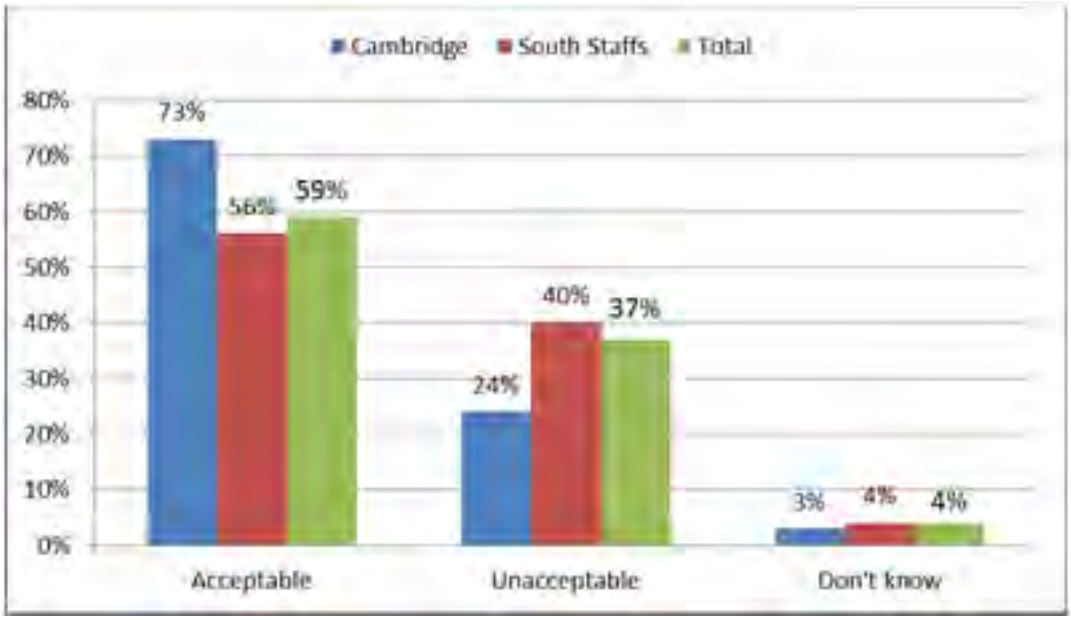
Professional advice together with the historic presentation in the sector and elsewhere is that the change in real prices should be the key consideration in evaluating such research.

Customers acceptability of the proposed bill increase before the impact of inflation is added (real terms)



Source: ICS Consulting - Acceptability research

Customers acceptability of the proposed bill increase after the impact of inflation is added (nominal terms)

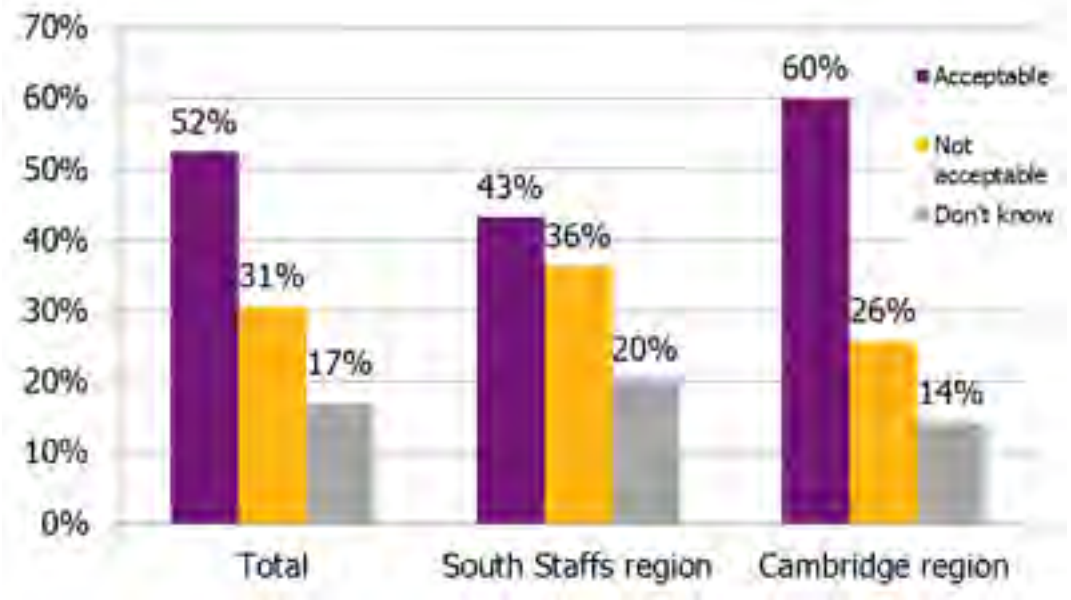


Source: ICS Consulting - Acceptability research

It also concluded there was a high level of agreement with the Company's proposals for the five specific areas (metering, environment, underground pipes, nitrate removal stations and storage reservoirs).

As part of the business plan consultation, consultees were also asked for their views on how acceptable a 2% (£3) water bill increase by 2020 would be. The question similar to the acceptability testing also highlighted the fact that, including inflation the increase would be a further £22. This research allowed customers and stakeholders to respond and therefore is not representative of the whole customer base,

Results from business plan consultation showing how acceptable customers find the 2% (£3) increase before inflation is added (real terms)



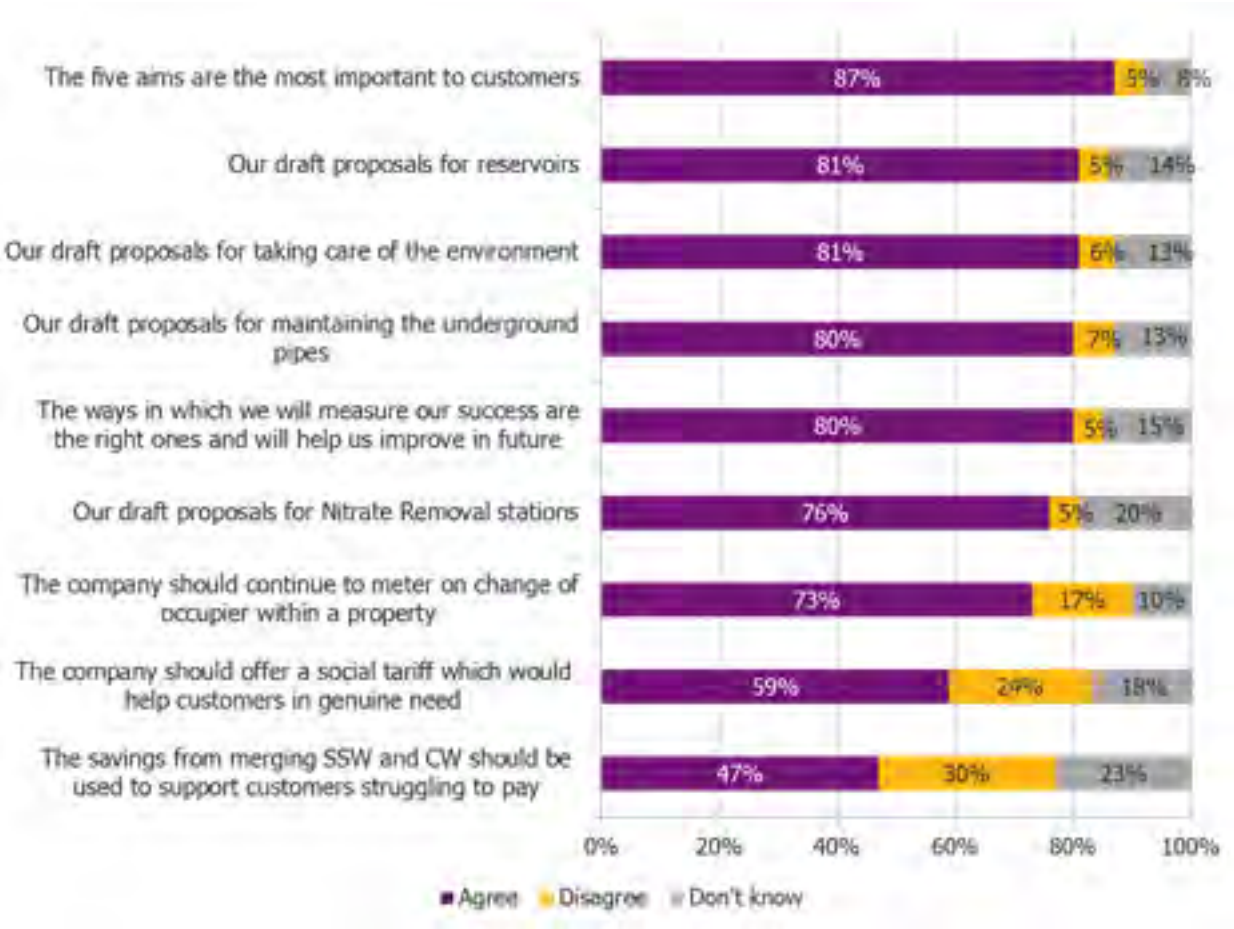
Source: Community Research – Business plan consultation

The results showed 60% of respondents from the Cambridge region thought proposed price increase was acceptable, against 43% in the South Staff region. The overall level of acceptability was 52%.

Outcomes

The table below was compiled using results from the business plan consultation. It shows 87% of customers agree the Company's five outcomes are the most important. Customers then gave the most positive responses to plans for improving reservoirs (81%), taking care of the environment (81%) and maintaining underground pipes (80%).

Results from business plan consultation showing how acceptable customers find the Company's proposed outcomes



Source: Community Research – Business plan consultation

Satisfaction of Existing Services

Customers at South Staffs Water are generally satisfied with their existing levels of service.

Unprompted customer research carried out by MVA Consultancy, suggests the majority of household customers (84%) and business customers (72%) were either very or fairly satisfied. Only a small minority of household (4%) and non-household customers (7%) were fairly or very dissatisfied.

When asked what they were most satisfied about, 80% of household customers and 73% of non-household customers quoted the taste, appearance and smell of the tap water.

Household customers also said they were satisfied with account management (79%) and water pressure (77%) while non-household customers quoted how quickly leaks were identified and repaired (61%) and account management (54%).

The respondents were provided with information outlining the service provided by South Staffs Water and again asked to indicate whether they were satisfied or not. The effect of this resulted in a slight fall in overall satisfaction levels. Just over three quarters (77%) of household customers were very or fairly satisfied with existing services once informed, compared to 83% when uninformed. A total of 64% of business customers said they were very or fairly satisfied compared with 72% when uninformed.

No more than 3% of all customers were dissatisfied with any individual aspect of service when informed. The areas where greatest dissatisfaction was recorded was with the appearance, taste and smell of tap water, followed by bill levels for household customers and leakage levels for business customers.

Aside from lowering bills (66%), the MVA research indicated household customers were keen to reduce the hardness of tap water (30%), reduce leakage levels (27%) and improve taste (16%).

The Focus group in the Cambridge region showed customers who had contacted the Company were very pleased with the response they received.

> *"You ring up the phone and the person who answers the phone, you explain to them what you need and they say yes, sure, I can sort it out for you. They don't need to put you through to someone else, it's very impressive*." - *(Non-household customer, Food Manufacturing)*

Satisfaction of the Amount Paid for by Bills

The MVA research also revealed that fewer than two in every three household customers (62%) thought they had some idea of their annual bill level. The mean annual bill level quoted was £300 – which is more than double the actual average bill level.

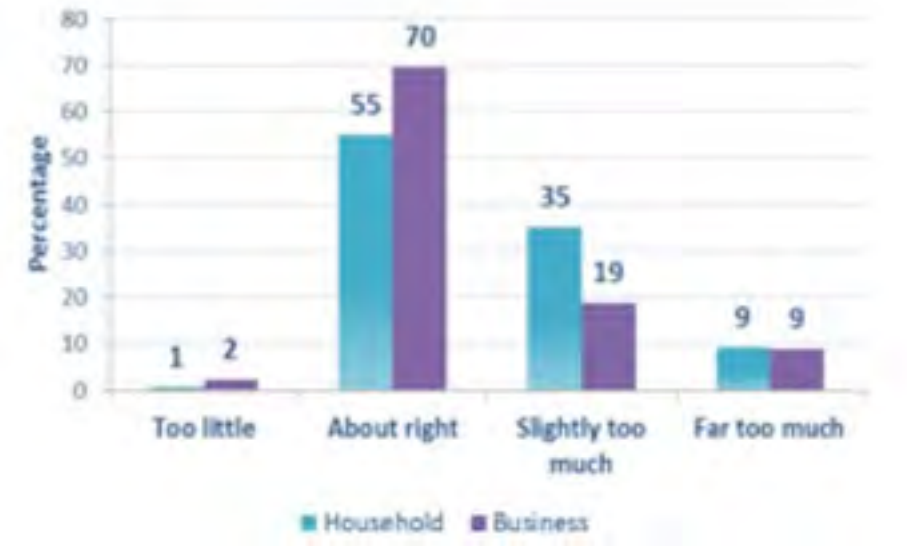
This suggests some customers over estimate their actual average bill level or fail to successfully differentiate between their water and wastewater bill. Business customers were more confident about their water bill, with 75% being able to quote the amount. The mean average water bill quoted was £8500.

The following tables were compiled using results from ICS Consulting's willingness to pay research. They show just over half of household customers felt their bill was about right, a third believe it is slightly too much and around 10% believe it is far too much.

Views on current customer bill in the South Staffs region

Source: ICS Consulting – Willingness to pay research

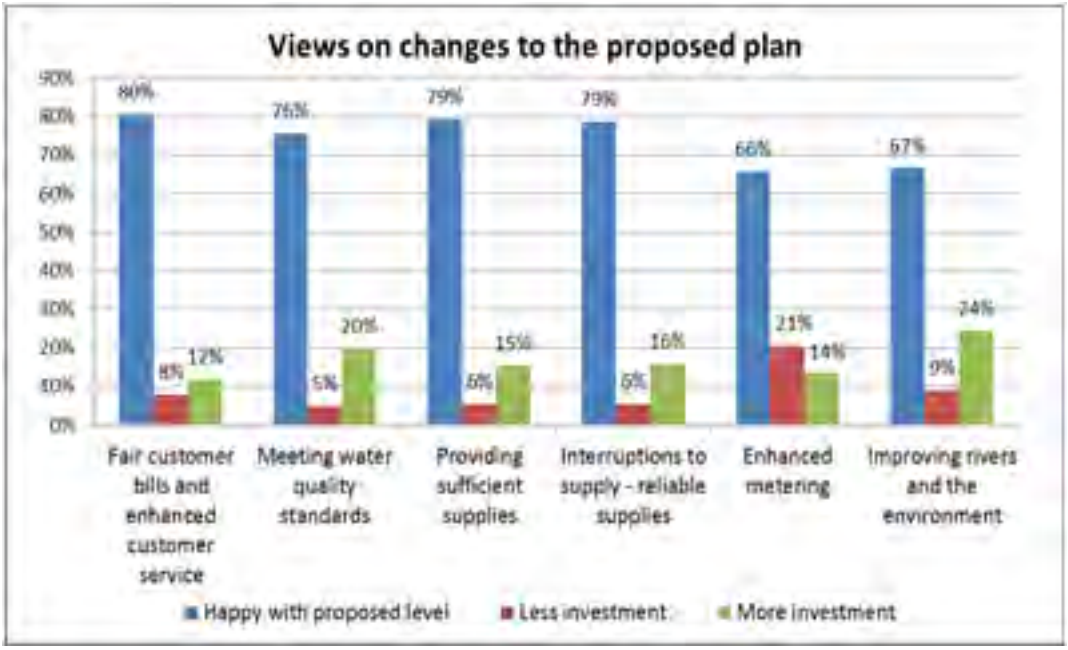
Views on current customer bill in the Cambridge region



Source: ICS Consulting – Willingness to pay research

As part of the acceptability research, customers were asked to comment on whether they were satisfied with the proposed investment levels. The table below supports the view that overall customers were happy with the proposed level of investment. An area to consider less investment is metering, while areas to consider more investment are water quality and the environment:

Customer views on how acceptable they find the proposed outcomes



Source: ICS Consulting - Acceptability research

Priorities for Improvement

As part of the MVA research, respondents were shown a list of eight service areas and asked to comment on which they considered to be the most important.

Uninformed responses showed lower bill levels, water hardness and leakage levels were the three areas where household and non-household customers would most like to see improvements.

When informed that bill levels are among the lowest in the country, these priorities shifted to include less disruption to roads.

The following table from the MVA research shows household customers' top five improvements from a list:

Customers top five priorities for improvement

Improvement	Domestic
Leakage – 100 litres per day lost through leaks (20 litres less than now)	38%
Hardness of tap water – Fewer customers need to use softeners	32%
Disruptions to roads – 300 roads disrupted (50 fewer than now)	26%
Discounts – a subsidy to help 5,000 customers (4,550 more than now)	18%
Risk of environmental pollution – 1 in 40 year risk (1 in 20 now)	17%

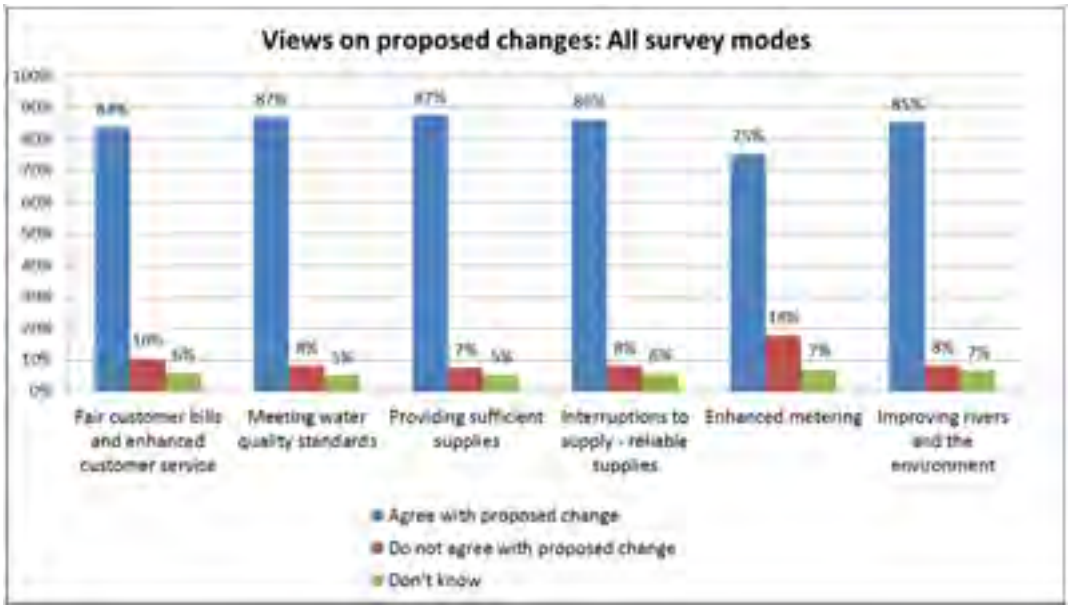
Source: MVA Consultancy- Customer research

Similarly, in the willingness to pay research carried out by ICS Consulting, hard water came out as the main priority for improvement in both regions. This is followed by the taste and the smell of tap water. The pressure of the tap water is the next greatest area for improvement in the South Staffs region. In the Cambridge region, more emphasis is placed on leakage.

Residents in the Cambridge region interviewed as part of the focus groups were also keen to ensure bills remain affordable and education is provided to customers about the importance of water conservation. Non-household customers tended to focus on the retention of competitive pricing structures, comprehensive water resilience plans and water conservation measures.

The table below was compiled from results in the acceptability testing. It provides an overview of customers who "agree" and "do not agree" with the proposed changes put forward in the business plan and typically illustrates widespread support.

Customers' acceptability of proposals put forward in the business plan



Source: ICS Consulting - Acceptability research

Customers gave the most positive responses to plans for meeting water quality standards, providing sufficient supplies and reducing interruptions to the supply. Enhanced metering has the least support.

Water quality (overall)

Throughout all the research the quality of the tap water came out as the main area requiring improvement, particularly levels of hardness.

The customer research carried out by MVA suggested 23% of household customers and 15% of non-household customers were dissatisfied with its hardness.

This was echoed in the willingness to pay research which showed households place a high value on reducing the hardness of the water.

> *"We get a lot of lime in this area so the water's quite hard but I don't think anything can be done about that."* - *(Cambridge household customer, C2DE)*

The Company has decided not to invest heavily to deal with water hardness, despite this featuring heavily in customer research. Such investment is not good value for money, leads to high carbon use, and may put public health at risk. Instead the Company will focus on informing customers about the health benefits associated with hard water and how to reduce its effect on household appliances.

Overall, customers in the South Staffs region are prepared to pay a 5% increase in their bill to address the issue of providing soft water to all properties. In the Cambridge region, where all the water is classified as being hard, this increases to 11.9%. While these figures appear high the actual cost of softening the water would require them to be much higher. As an example, the investment cost of softening water in the South Staffs region alone is £55 million, with operational costs of £3.7 million per year.

The customer research carried out by MVA also indicates that while customers are not willing to pay for improvements to reduce the risk of boil water notices being issued, or improving the aesthetic appearance of the water, they were willing to pay to avoid the risk of these increasing. In the South Staffs region households are twice as likely to be willing to pay for this as non-household customers.

Metering

Research carried out with the online panel showed the majority of customers in the South Staffs region (71%) agree or strongly agree 'that water meters are the fairest way for people to be charged for their water'.

However, there was inconclusive evidence to suggest the pace at which meters are installed should be increased.

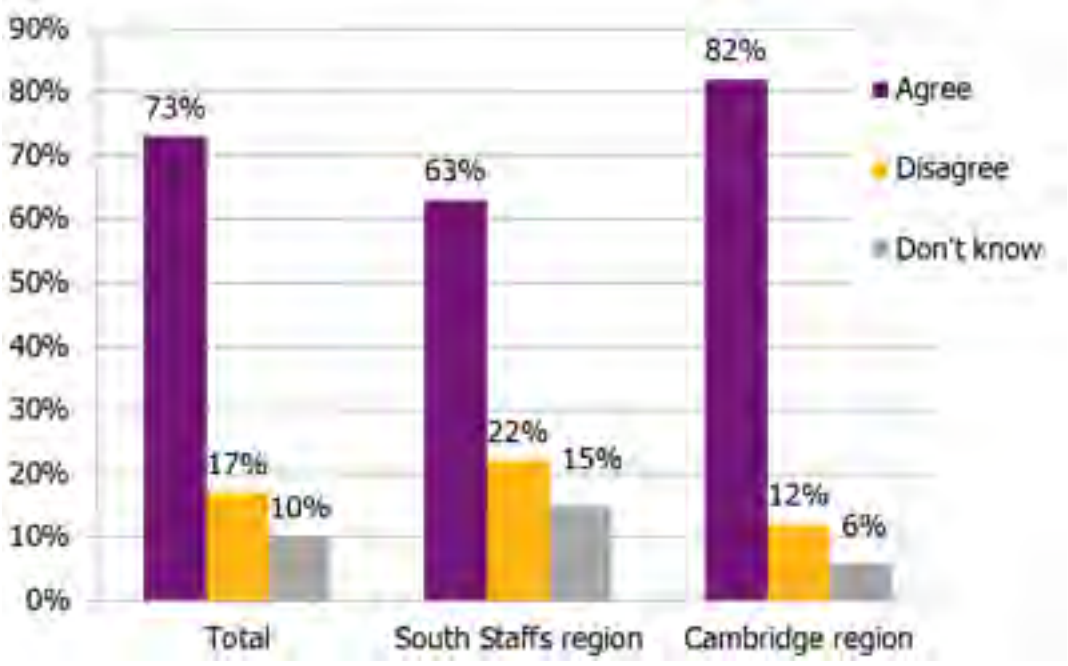
- The online panel showed two in five (40%) were of the belief that the speed of progress seemed about right, with a third (30%) of the opinion the level of metering should increase more quickly.
- The MVA research indicated that just over half (53% household and 57% Non-household) would prefer to see a policy of increased metering over a 10 year period.
- The MVA research further concluded that while two in five household customers were keen to see South Staffs Water focus more on reducing the demand for water through enhanced leakage and metering programmes, around a third (35%) said they would prefer a reliable service at least cost or accept a reduce service at a lower cost (26%).
- The acceptability research carried out by ICS Consulting concluded that an area to consider less investment is enhanced metering (see graph Customers' acceptability of proposals put forward in the business plan).

The general view is the Company should continue to install meters when a change of occupier occurs – with 55% of customers who had been in the situation, supporting this proposal, without accelerating the existing pace or adopting compulsory metering among those customers who remain unmetered.

This is further supported by MVA research which showed 78% of customers agree that 'people should never be made to have a water meter against their will.'

The table below was compiled using results from the business plan consultation and shows that overall 73% of customers support metering on change of occupier. Customers who said they had a meter were substantially more likely to agree (88% compared with 51% of unmetered respondents). Of 165 respondents who disagreed 13% thought that the Company should be doing more metering; 36% less, and half thought something else should be done.

Customers' support for metering on change of occupier



Source: Community Research – Business plan consultation

Leakage

The Company recognises the importance customers place on leakage. A desire to improve leakage levels regularly appears in the top three desires for customers in the MVA research, focus groups and online panels.

However, this needs to be balanced against the fact leakage levels are already around the economic levels and there is a general impression among customers that the Company finds and fixes leaks efficiently.

South Staffs Water manages leakage levels to an economic level, where the value of the water lost and the costs of managing that lost water, is at the lowest overall cost. This is known as the Economic Level of Leakage (ELL). The inclusion of social and environmental costs i.e. costs that are not directly affecting the business such as carbon, the value of water to society and disruption to the general public due to leakage repairs being carried out, results in a Sustainable Economic Level of Leakage (SELL). Currently, the latest analysis indicates the SELL is 70.8 Ml/d. This analysis is still in progress, so there is still potential for this value to be refined.

In the South Staffs region, a performance target based on the sustainable economic level of leakage (SELL) of 70.5 Ml/d is proposed in a normal year. This is 3.9 Ml/d lower than the AMP 5 target. If leakage rises above 73 Ml/d, a penalty is paid to customers at PR19. If leakage falls below 64.4Ml/d the Company receives a reward at PR19 (over a three year rolling average).

The Company expects to operate at the SELL, as this represents best overall value for the Company and its customers. The Company manages leakage levels through various measures, from leak detection, and the repair of the associated leaks found, through to mains renewal. The works proposed in the PR14 submission are to maintain the leakage

level at the SELL. There are no schemes proposed at this stage to reduce levels to below the SELL.

Operating at a level of leakage lower than the SELL would only be considered if there is customer support for this, and then only if funding was agreed by the regulator, Ofwat. The chart below provides the additional annual cost of reducing leakage below the SELL in the South Staffs region:

Additional cost of reducing leakage below the sustainable economic level of leakage (SELL)

Source: South Staffs Water

The MVA research indicted 61% of household customers were satisfied, or very satisfied with how quickly leaks are located and repaired.

While both household and non-household customers attach a value to further reductions, analysis of willingness to pay results indicate there is no economically viable case for going beyond the Company's current leakage control activity. In the South Staffs region customers were willing to pay £0.36 to reduce leakage by 10Ml/d. In the Cambridge region where the leakage target is 14Ml/d, this figure increased to £6.32 for 3.5Ml/d.

> *"… quite regularly you see the guys [in villages] with the listening stick or whatever it is walking around. So [they're] obviously on the ball with regards to the leaks." (St Ives household customer, ABC1)*

This is further supported by MVA research which shows only one in four customers would support this policy.

Hosepipe bans

Careful management of the Company's resources has meant it was able to avoid introducing hosepipe bans during the drought of 2012. A hosepipe ban was last adopted in the South Staffs region in 1976 and in the Cambridge region in 1991.

Given this heritage it is perhaps not surprising to note that this is one area where customers would, in principle, be most happy to see a deterioration in service (increasing the likelihood from one in 40 years to one in 20).

The willingness to pay results undertaken by ICS Consulting concluded that in the South Staffs region non-household customers are more likely to want to invest in reducing the risk of non-essential use bans than household customers were in reducing the risk of hosepipe bans.

The research carried out by MVA also showed than in principle customers would be willing to accept a higher risk of a hosepipe ban in exchange for a reduction in leakage levels. However the majority of household customers prefer the status quo.

Environment

The environment appears to be a dividing issue for customers, with preferences split between keeping customer bills down and minimising consequences on the environment.

In the South Staffs region both household and non-household customers place a high value on reducing the risk of pollution incidents, with both placing it in their top five priorities for improvement, while in the Cambridge region there is a greater desire to avoid general environmental impacts.

Willingness to pay research showed that non-household customers place more value on investing in improvements to improve the chance of incidents occurring (up to 5.6% on the current bill) while household customers are more willing to spend money on avoiding deterioration to the existing levels of service.

Research conducted with the online panel showed the proportion of customers who would support a bill increase purely on the basis of benefits to the environment and wildlife and without any cost savings for customers, was 38%.

Willingness to Pay

Bills in the South Staffs and the Cambridge regions are among the lowest in the industry.

Focus groups carried out in the Cambridge region showed most customers appreciated the fact their bill was relatively low compared to other utilities, but were also keen to express that bills should remain as low as possible. This feeling was echoed by the online panel, with 61% in agreement with the statement that ‘at the moment SSW should keep investment as low as possible because people can't afford bill increases.’

The willingness to pay surveys showed around half of customers felt the current bill was about right and 35% felt it was slightly too high.

Approximately two thirds of households (between 58% and 70%) and 57% of non-household would prefer bills to remain the same. Only 2-3% said they would prefer lower bills with lower service.

In the South Staffs region the survey highlighted an overall willingness to pay of £9.80 a year (equal to 6.7% of current bills) for a maximum improvement in all aspects of service.

The top values were for reducing water hardness at all properties (£3.92), reducing the incidence of discoloured water (£1.55) and reducing the number of pollution incidents (£1.12).

In the Cambridge region the total willingness to pay value is £29.12 a year, which is equal to 22% increase on current bills.

Customers in this region indicated they would be most willing to pay for reducing the level of hardness in the water at all properties (£8.53). Also of priority was reducing leakage (£6.32) and improving low flow in rivers (£3.95).

For non-household customers the equivalent value estimate is 5.1% in the South Staffs region and 5.65% in the Cambridge region.

They were most willing to pay for improvements to reduce pollution, river flow and interruptions to supplies.

The results are similar to those identified in the MVA research which showed customers would be most willing to pay for improvements to the hardness of the tap water (9%), reducing leakage levels (8%) and mitigating the effect of river abstraction/improving the environment (6% each).

Non-household customers would be most willing to pay for reducing leakage (11%), reducing the hardness of tap water (8%) and reducing the number of long term interruptions to their water supply (7%).

Overall though, the majority of household and non-household customers would prefer to see the existing service quality and bill levels maintained.

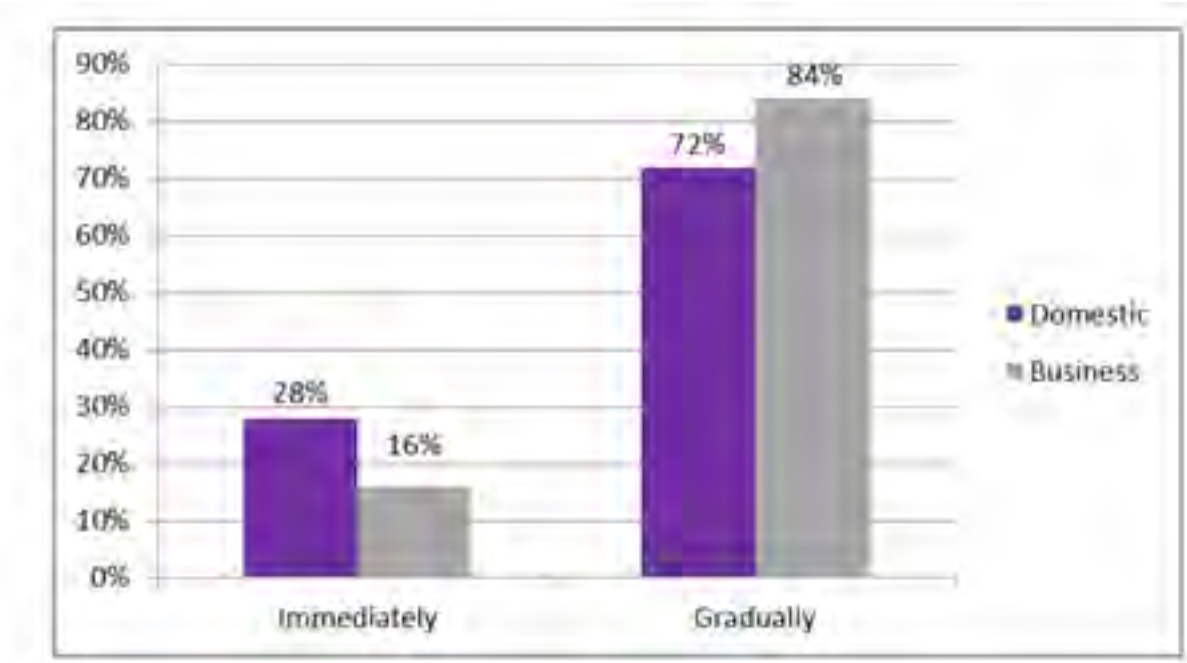
Bill Profile

In the online panel just over two thirds of customers (68%) agreed or strongly agreed that they would 'rather see a small increase in customers' bills now than a big increase in the future because of problems with poorly maintained equipment'.

By contrast, only (17%) leaned towards 'take the risk of possible future problems, in order to keep customers' bills low now'.

When asked about the bill profile and timing of any improvements, 72% of household customers, and 84% of non-household customers in the MVA research said they would like any improvements and associated bill increases to be introduced gradually (see table below). This was backed up by the acceptability research which showed generally a steady increase was preferred (41%).

Customers' preference for introducing increases to the bill



Source: MVA Consultancy – Customer research

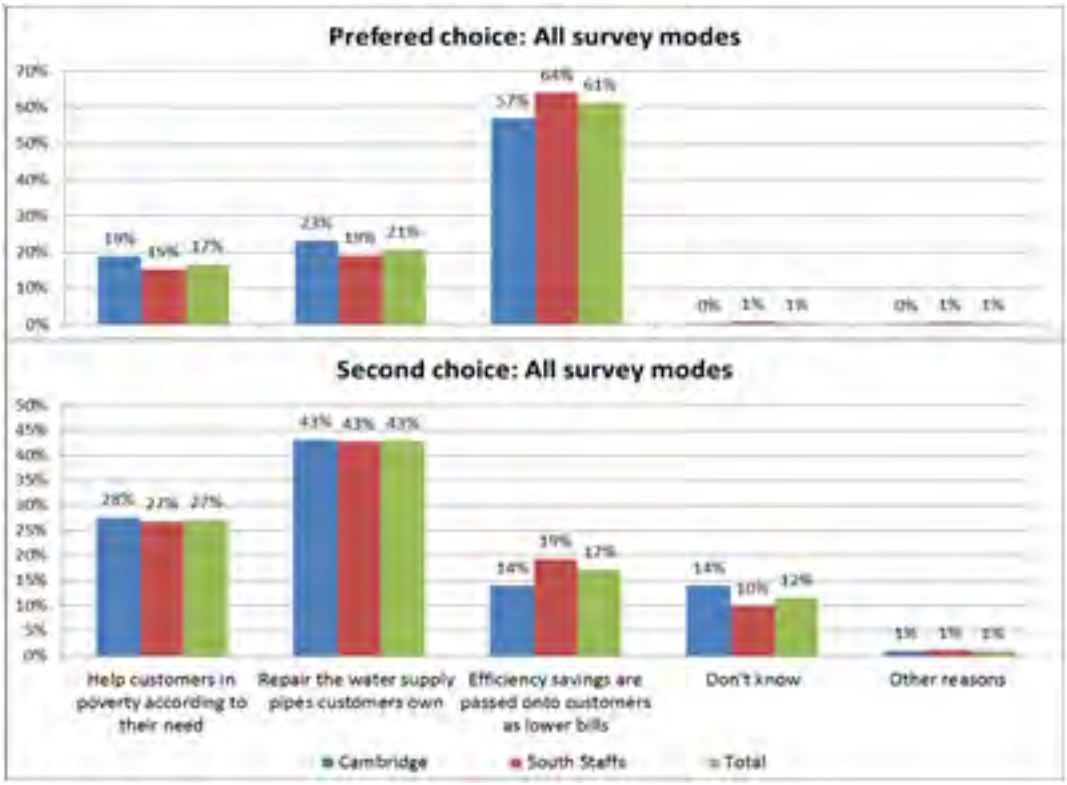
Investment in Merger Savings

As part of the acceptability research customers were asked to comment on how they believe merger savings, equivalent to £0.5 million over the AMP period should be invested.

The results concluded that customers would prefer the merger savings to be passed on as lower bills rather than invested.

If the savings are reinvested customers would prefer to see the money used for the repair of customer supply pipes, over helping vulnerable customers.

Customers' preference on how merger savings should be reinvested



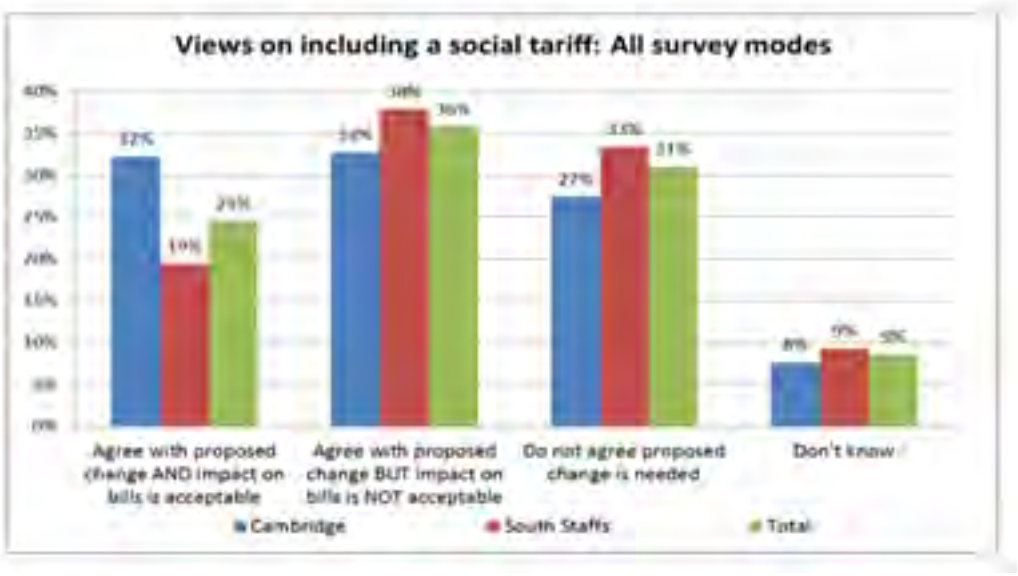
Source: ICS Consulting - Acceptability research

As part of the business plan consultation carried out by Community Research customers were asked to indicate whether they agreed or disagreed with the proposal that merger savings should be used to support customers struggling to pay. In total 47% of respondents agreed with the proposal, 30% disagreed and 23% were undecided.

The focus group held in the Cambridge region also concluded there was a "strong negative response to the establishment of a hardship fund with many feeling that the state should help support these customers."

Social Tariff

Customers' preference for introducing a social tariff



Source: ICS Consulting - Acceptability research

The acceptability study carried out by ICS Consulting revealed that although six in 10 customers (61%) said they would agree with a social tariff, of these only a quarter (25%) agreed to a social tariff that would have a 2% impact on their bills.

Just under a third of customers (31%) did not agree with a social tariff and 9% were undecided.

Introducing a social tariff had an impact of a 31% reduction in overall levels of acceptability.

Summary of the Results by Type of Research

Engaging with Customers

Customer Service Priorities and (indicative) Willingness to Pay

Consultant: MVA Consultancy
Date: November 2012
Region: South Staffs region

Summary

South Staffs Water commissioned MVA Consultancy to carry out a customer satisfaction survey in June 2012.

The aim of the survey was to obtain the views of household and non-household customers on the existing services offered by South Staffs Water.

Specifically the objectives were to:

- Discover household and non-household customers' views on South Staffs Water and obtain their levels of satisfaction, or dissatisfaction, with the existing service provision.
- Identify those aspects of service that are most important to household and non-household customers, and where improvements would be most valued.
- Explore customers' expectations regarding future service and delivery.
- Tentatively identify customers' willingness to pay for defined service improvements and/or reductions to the existing levels of service.

Methodology

A qualitative survey was carried out among 461 household customers via a web based survey and 150 face-to-face interviews with household customers who did not have access to the intranet.

An additional 108 online interviews were carried out (with a telephone booster) among non-household customers, of which 15 were extended qualitative interviews.

All the results were then weighted against Census population information.

Results

Customer satisfaction (uninformed)
When asked for their uninformed opinion the majority of household (84%) and non-household (72%) customers were either very or fairly satisfied with the service they receive from South Staffs Water. Only a small minority of household (4%) and non-household (7%) were fairly or very dissatisfied.

Those who were particularly happy were those who were over 65, female, tenants and/or did not have internet access. Among non-household customers high users were more satisfied.

When asked what they were most satisfied about 80% of household customers and 73% of non-household customers quoted the taste, appearance and smell of the tap water. Household customers also said they were satisfied with account management (79%) and water pressure (77%) while non-household customers quoted how quickly leaks were identified and repaired (61%), and account management (54%).

The greatest dissatisfaction was with the hardness of the water (23% household customers and 15% non-household customers).

Preferred service improvements – uninformed
Customers were then shown a list of eight service areas and asked to comment on which they considered to be the most important.

Lower bill levels, water hardness and leakage levels were the three areas where household and non-household customers would most like to see improvements.

Contacting South Staffs Water
Around one in every four household customers (27%) and one in three non-household customers (32%) had contacted South Staffs Water in the last 12 months. Typically this was to set up a payment arrangement (21%), enquire about the payment of a bill (17%), report that there was no water or a burst (15%) or advise of a change of contact details (15%).

Non-household customers contacted the Company to dispute a bill or meter reading (31%) or report that there was no water or a burst (15%).

The vast majority (85% for household customers and 63% for non-household customers) said there were satisfied with the way their enquiry was dealt with.

Awareness of bill level
Fewer than two in every three household customers (62%) thought they had some idea of their annual bill level. The mean annual bill level quoted was £300 – which is more than double the actual average bill level. This suggests some customers over estimate their actual average bill level of fail to successfully differentiate between their water and wastewater bill. Non-household customers were more confident about their water bill (75%). The mean average water bill quoted was £8500.

Customer satisfaction - Informed results
The respondents were provided with information outlining the service provided by South Staffs Water and again asked to indicate whether they were satisfied or not. The effect of this resulted in a slight fall in overall satisfaction levels. Just over three quarters (77%) of household customers were very or fairly satisfied with existing services once informed, compared to 83% when uninformed. A total of 64% of non-household customers said they were very or fairly satisfied compared with 72% when uninformed.

No more than 3% of all customers were dissatisfied with any individual aspect of service when informed. The areas where greatest dissatisfaction was recorded were with the appearance, taste and smell of tap water, followed by bill levels for household customers and leakage levels for non-household customers.

Customer priorities – informed

When there are no resource or financial constraints, the top three improvements that household customers most prefer are a reduction in leakage, softer water and less disruption to roads.

Specifically the research indicated that half of household customers who had access to the internet wanted improved leakage, while softer water was wanted by half those who drink bottled water/use water softeners.

A quarter of all tenants (25%) said they wanted improved social discounts.

The majority of all customers (71%) would not be willing to accept deterioration in service quality in return of their preferred service improvement.

Areas where household customers would be most happy to see a deterioration in service were hosepipe bans (increasing the likelihood from one in 40 years to one in 20), interruptions to supply (increasing the risk from one in 20 to one in 10), and water efficiency measures (withdraw the offer of free items to customers).

This shows that in principle customers would be willing to accept a higher risk of a hosepipe ban in exchange for a reduction in leakage levels. However the majority of household customers prefer the status quo.

Areas where non-household customers would be happy to see deterioration in service were leakage, disruptions to roads and water efficiency measures.

Indicative willingness to pay research

The top line willingness to pay research showed customers that customers would be most willing to pay for improvements to the hardness of the tap water (9%), reducing leakage levels (8%) and mitigating the effect of river abstraction/improving the environment (6% each).

Non-household customers would be most willing to pay for reducing leakage (11%), reducing the hardness of tap water (8%) and reducing the number of long term interruptions to their water supply (7%).

Overall though, the majority of household and non-household customers would prefer to see the existing service quality and bill levels maintained.

When asked about the bill profile and timing of any improvements, 72% of household customers and 84% of non-household customers would like any improvements and associated bill increases to be introduced gradually.

Balancing supply and demand

While two in five household customers were keen to see South Staffs Water focus more in reducing the demand for water through enhanced leakage and metering programmes, around a third (35%) said they would prefer a reliable service at least cost or except a reduce service at a lower cost (26%).

Balancing pressures on bills and the environment

Preferences were split between keeping customer bills down and minimising consequences on the environment. Among household customers there were equal levels of support and opposition to the idea of water trading, where water is sold to other regions that have difficulty sourcing sufficient water to meet demand.

Investment in technology

Three in every five non-household customers (60%) want South Staffs Water to invest in technology on the assumption that it will lead to efficiencies in the long run. Conversely, almost the same proportion of household customers would prefer the current level of service and price.

Other results showed:

- Around one in four customers support a policy of going beyond the economic level of leakage.
- A small majority of customers (53% household and 57% non-household) would prefer to see a policy of increased metering over a 10 year period.
- One in four household customers (24%) and one in six non-household customers (17%) would prefer South Staffs Water to extract from local water sources.
- Customer communication could be improved. While just over a third (36%) were fairly or very satisfied with information on Company activities, 55% said they were neither satisfied or dissatisfied.

Online Customer Research Panel

Consultant: South Staffs Water
Date: June 2013
Region: South Staffs region

Summary

In the South Staffs region, an online customer research panel of South Staffs Water customers has been set up using a respected online market research supplier. The aim of the panel is to provide a channel to help improve customer engagement, aid consultation and gather customer opinions to support Company decisions.

This panel was used to carry out a survey in June 2013, which focused on four key elements in preparation for the business plan, in areas where it was felt that further customer research was required:

- Metering policy.
- Investment in renewable energy.
- Investment in repairs and maintenance.
- Catchment management.

Methodology

For the survey 1002 customer panellists were emailed an invitation to participate, with 302 (30%) going on to complete the survey. The results were weighted using the demographic data of the region in order to ensure that the answers represent, as truly as possible, the wider South Staffs region customer base.

Results

The key findings from the June 2013 online panel were as follows:

Metering

The majority (71%) agree or strongly agree 'that water meters are the fairest way for people to be charged for their water'. However, just over three quarters of customers (78%) agree that 'people should never be made to have a water meter against their will.'

The Company was interested to understand the feelings of customers who had a water meter in their home when they moved in (as opposed to having requested its installation) in order to ascertain whether meter installations that are not actively chosen by the customer appear to cause resentment. In total, 48 customers fell into this category. Three quarters (75%) of these customers were happy about having a meter. The results showed:

- The majority (55%) of customers believe the Company should continue installing meters when a change of occupier occurs.
- Two in five customers (40%) felt the speed of progress seemed about right.
- Twice as many customers believed that the level of metering should be increased more quickly (30%) as believe installations should proceed at a slower pace (16%).

Investment in renewable energy

Three quarters of customers (75%) agreed that the Company should invest in renewable energy schemes, in particular solar panels. Almost one in four customers (24%) were

strongly in agreement with this proposal while one in 10 (10%) express a degree of disagreement.

Investment in repairs and maintenance

Just over two thirds of customers (68%) agreed or strongly agreed they would 'rather see a small increase in customers' bills now than a big increase in the future because of problems with poorly maintained equipment'.

A similar proportion (65%) agreed or strongly agreed that they 'would rather see a small bill increase if this prevents future disruptions, such as burst water mains'.

However, just under two thirds (61%) were also in agreement with the statement that 'at the moment SSW should keep investment as low as possible because people can't afford bill increases.'

When asked to indicate which of two choices they would prefer the Company to tend towards in their approach to investment in maintenance, almost three quarters of customers (74%) expressed a preference towards 'investment in maintenance now, to prevent possible problems and larger costs later'. By contrast, only (17%) leaned towards 'take the risk of possible future problems, in order to keep customers' bills low now'.

Catchment management

The vast majority of customers (83%) agreed or strongly agreed with the idea that the Company should invest in work with farmers, if such work might reduce the need to treat drinking water.

A slightly lower proportion, but nevertheless a clear majority, (79%) also agreed such work should be carried out because of the benefits to the local environment and wildlife.

The majority of customers (61%) agreed a small increase in bills to pay for work with farmers would be acceptable, if this results in less need to treat drinking water, cost reductions and benefits to the environment and wildlife.

The proportion of customers who would support such a bill increase purely on the basis of benefits to the environment and wildlife and without any cost savings for customers is lower, at 38%.

Customer Focus Groups

Consultant: Community Research
Date: January 2013
Region: Cambridge

Summary

In the Cambridge region, four qualitative focus groups were organised to identify customers' spontaneous views of water related issues. They were also asked to comment on their opinion of the Company and the factors which they felt were likely to affect the services it provides in the short and long term.

Methodology

The research comprised:

- Four group discussions with household customers (two from ABC1 socioeconomic groups and two from C2DE socio-economic groups)
- Six depth telephone interviews with vulnerable household customers on the WaterSure scheme
- Six telephone depth interviews with key non-household customers.

Interviews were also carried out at the Citizens Advice hub in Cambridge, with an adviser and a number of clients.

Results

Attitudes to water

Most household customers had not needed to contact Cambridge Water much, if at all, and had little experience of dealing with the Company except to pay their bills.

Customer priorities

Household customers focused on Cambridge Water maintaining a consistent supply of good quality water. They also saw action to tackle leakage, educating customers about the importance of water conservation and ensuring that water bills remain affordable as key priorities.

Non-household customers tend to focus on the retention of competitive pricing structures, comprehensive water resilience plans and water conservation measures.

Feedback on key issues

Leaks and leakage

Respondents who mentioned leakage did so in the context of wasting water and of maintaining/repairing aged infrastructure. However generally, most had a positive impression that the Company detects and fixes leaks efficiently.

> *"… quite regularly you see the guys [in villages] with the listening stick or whatever it is walking around. So [they're] obviously on the ball with regards to the leaks."* - *(St Ives household customer, ABC2)*

> *"I was quite positive that they just came round and found a leak because I wouldn't have noticed it."* - *(St Ives household customer, C2DE)*

Water meters

Some felt strongly that water meters should be encouraged for reasons of the environment and equity. However, there was no general appetite for compulsory metering.

> *"Advising that they could maybe have a meter as well, advising that they could be on a different tariffs."* - *(Cambridge household customer, C2DE)*

Tariffs and affordability

Many recognised that their water bill was relatively low compared with other utility bills, however, they were keen that water bills should remain as low as possible.

> *"…for the last four years it's becoming more and more of an issue…a lot of people have struggled with money, a lot of benefit changes are coming in this year that will affect people's level of income…they will have to survive on less and less. So I think it will be a bigger issue."* - *(Citizens Advice, Adviser)*

Non-household customers were also positive about the current pricing levels but indicated that, in spite of general satisfaction with customer service, they would be likely to switch to a lower-priced competitor once competition is introduced. There was little appetite among household customers for competition in the water industry.

There was a strong negative response to the establishment of a hardship fund with many feeling that the state should help support these customers.

The idea of charging for water seasonally (i.e. a higher price for water during summer months when it was scarcer) did not resonate at all with customers.

Environment/water efficiency

Many participants wanted the Company to do more to encourage customers to use less water, and to do its part by reducing leaks.

Water resilience plans and resources

The Company's management of resources in terms of water resilience and future planning was felt to be a key priority.

Communication

Although customers were very satisfied with the Company's responsiveness when contacted, many felt that general communication could be improved particularly in relation to the current metering policy, free water efficiency devices, leaks on supply pipes and pressure from new housing developments.

> *"Every year when our water prices are reviewed we are sent a booklet that explains everything they've done in the past year, what they plan to do in the future. So if you took the trouble to read it, it is very informative."* - *(Cambridge, household customer ABC1)*

Willingness to Pay

Consultant: ICS Consultancy
Date: 2013
Region: Both regions

Summary

The Company also commissioned two willingness to pay studies to help understand the value customers place on different levels of service in the South Staffs and Cambridge regions.

The studies were independently carried out by ICS Consulting and followed industry best practice for undertaking stated preference research.

Methodology

An initial survey was developed using focus groups and cognitive testing with customers. It was then pilot tested, discussed with the CCG task group and refined before being carried out among 506 household customers and 300 non-household customers in the South Staffs region. In the Cambridge region, 484 household customers completed the survey online and 122 non-household customers were recruited by telephone and completed the survey online.

Each survey covered a range of questions about the current and future water services. Baseline questions were asked at the start of the survey to establish customers' current views on the service provided by South Staffs Water and the bills they pay.

Customers were then asked to make choices on four broad categories:

- **Drinking water quality**
  This included questions about boil water notices, the hardness of the tap water and its aesthetic appearance (discoloured water, taste and smell).
- **Water availability and the environment**
  These questions focused on low flows in rivers, pollution, hosepipe bans and caring for the environment.
- **Reliability of the water supply**
  Customers were asked for their views on interruptions to the water supply, low pressure, leakage and internal flooding.
- **Customer Service**
  Customers in the Cambridge region were also asked to comment on Customer Service.

For each area customers were informed about the current level of service provided. They were then shown what two levels of improvements to the existing service would be and what up to two levels of service reductions would be.

Respondents were asked to make choices about the combination of service and the price they would prefer.

The results are presented in monetary terms for household customers and as a percentage of the bill for non-household customers.

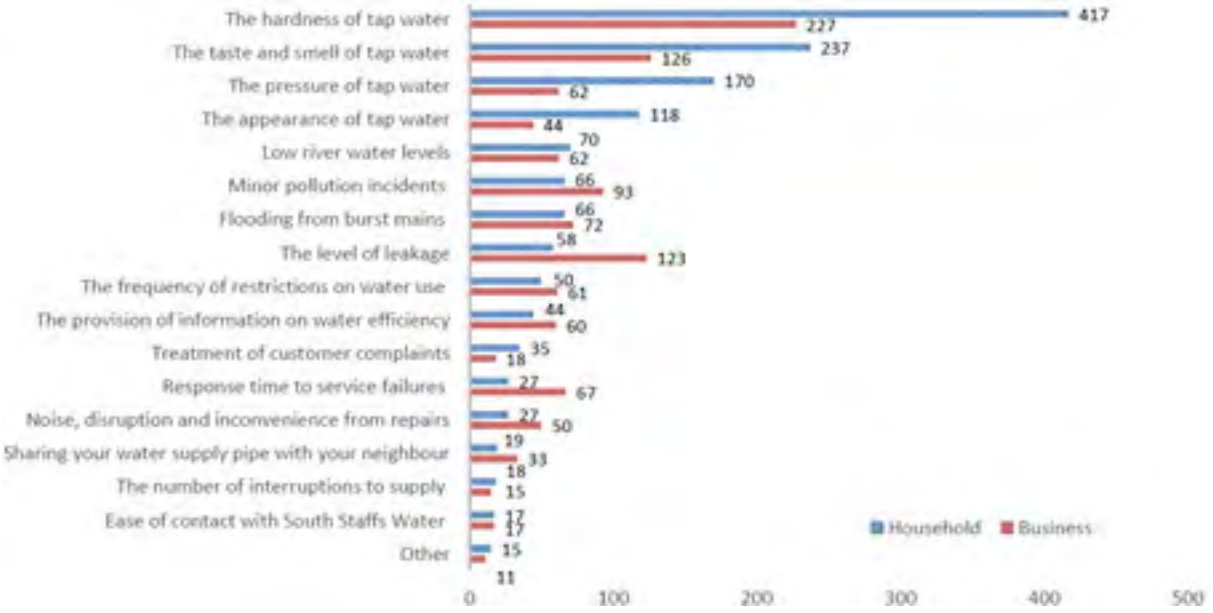
The study at all stages was peer reviewed by Professor Ken Willis at the University of Newcastle upon Tyne.

Results

Priorities for improvement

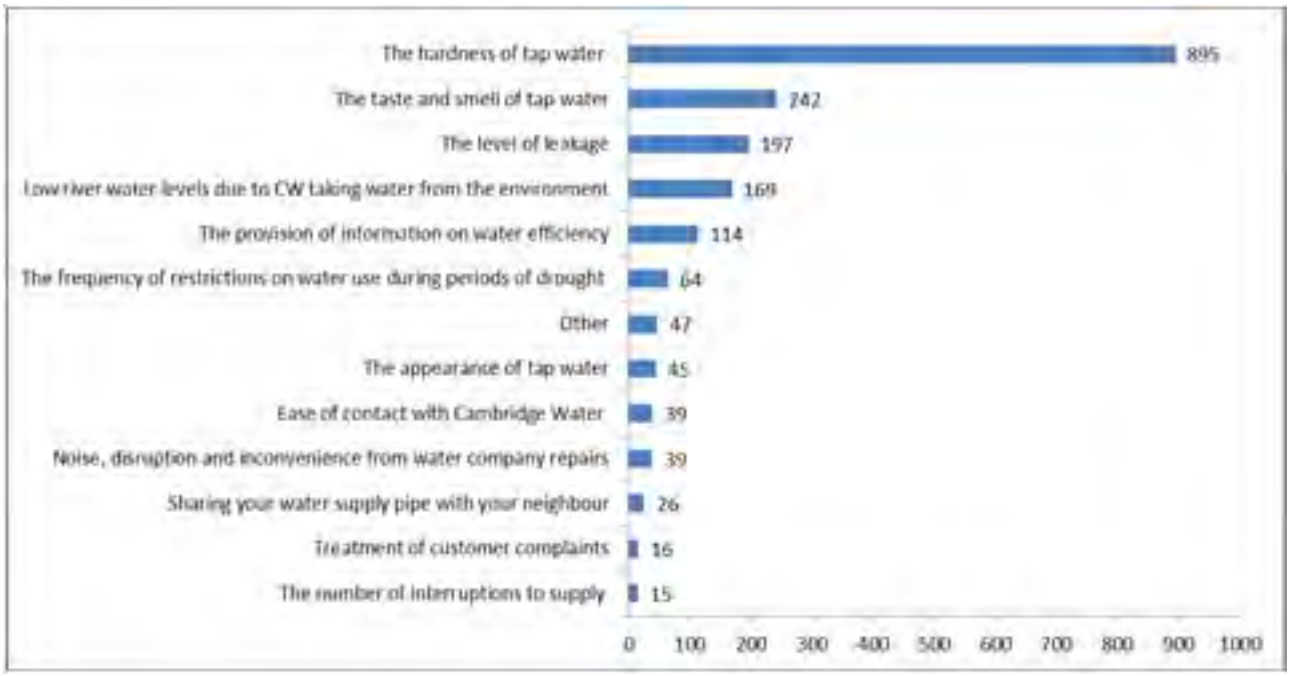
Hard water comes out as the main priority for improvement in both regions. This is followed by the taste and the smell of tap water. The pressure of the tap water is the next greatest area for improvement in the South Staffs region. In the Cambridge region, more emphasis is placed on leakage.

Priorities for improvement in the South Staffs region



Source: ICS Consulting – Willingness to pay research

Priorities for improvement in the Cambridge region



Source: ICS Consulting – Willingness to pay research

Current levels of service and customer bills

- In both regions, around half of the respondents felt the current bill was about right and 35% felt it was slightly too high.
- Approximately two thirds of households (between 58% and 70%) and 57% of non-household customers would prefer bills to remain the same. Only 2-3% said they would prefer lower bills with lower service.

Willingness to pay

In both regions there is strong evidence to suggest customers' value more highly avoiding service reductions compared to investing in service improvements.

- In the South Staffs region the survey highlighted an overall willingness to pay of £9.80 a year (equal to 6.7% of current bills) for a maximum improvement in all aspects of service.
- In the Cambridge region the figure is £29.12 a year, which is equal to 22% of current bills.
- For non-household customers the equivalent value estimate is 5.13% in the South Staffs region and 5.65% in the Cambridge region.

Allocation of household package values in the South Staffs region

Source: ICS Consulting – Willingness to pay research

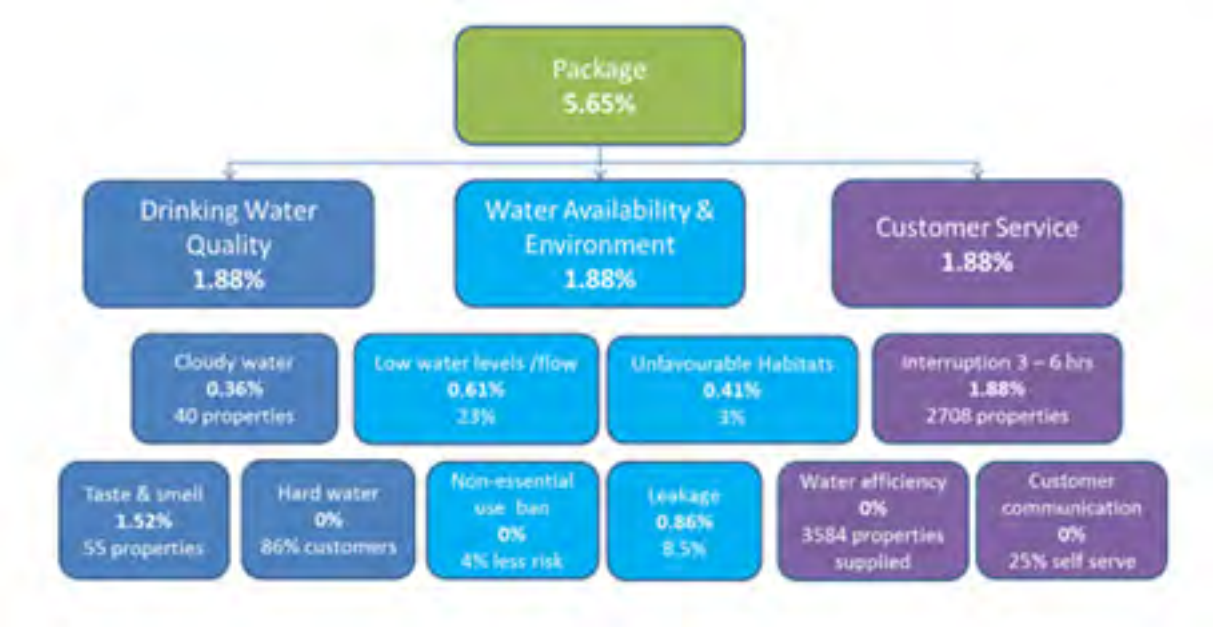
Allocation of household package values in the Cambridge region

Source: ICS Consulting – Willingness to pay research

Allocation of business package values in the South Staffs region

Source: ICS Consulting – Willingness to pay research

Allocation of business package values in the Cambridge region



Source: ICS Consulting – Willingness to pay research

Water Quality findings

The results showed that in both regions the quality of the tap water came out as a high service priority, especially for household customers.

In the South Staffs region, household customers were willing to pay £6.30 on improving the quality of water (£3.92 for improvements to hard water, £1.55 for reducing the incidence of discoloured water, £0.79 for taste/smell improvements and £0.04 for reducing the incidence

of boil water notices). In the Cambridge region, customers were willing to pay £14.80 (£8.53 for improvements to hard water, £5.10 for improving its taste and smell and £1.19 for reducing the incidence of cloudy water.)

Non-household customers in the South Staffs region were willing to pay 1.13% for an improvement in drinking water quality. (Boil water notice 0.01%, hard water 0.37%, taste and smell 0.27%, and discoloured water 0.49%). In the Cambridge region, non-household customers did not attach a value to reducing the amount of hard water. They were prepared to pay up to £1.52 for improving its taste and smell and £0.36 for reducing the incidence of cloudy water.

While customers were not willing to pay for improvements to reduce the risk of introducing boil water notices, or improving its aesthetic appearance, they were willing to pay in order to avoid the risk of these increasing. In the South Staffs region households are twice as likely to be willing to pay for this as non-household customers.

Hardness

Households place a higher value on reducing the hardness of the water. Overall they are prepared to pay an additional £3.92 on their bills in the South Staffs region to provide soft water to all 560,000 properties, and £8.53 to provide soft water to all 130,000 properties in the Cambridge region.

Availability and the environment

Overall customers in the South Staffs region were willing to pay £2.66 for improvement to secure the availability of the water supply and the environment. (Pollution £1.12, hosepipe ban £0.68, low water levels/flow £0.86).

In the Cambridge region, customers are willing to pay £3.95 for improvements to low flow in rivers, and £0.98 for reducing the incidence of a hosepipe ban.

Non-household customers in the South Staffs region were willing to pay increases of 1.01% for improvements to pollution, 0.56% for reducing the incidence of non-essential use bans and 0.72% for improving low water levels/flow. Those in the Cambridge region were willing to pay 0.61% for improving low flows in rivers and 0.41% to support habitats.

The results again show that customers attach more value to avoiding these risks getting worse in the future compared to reducing the current risks.

In the South Staffs region non-household customers are more likely to want to invest in reducing the risk of non-essential use bans than household customers are in reducing the risk of hosepipe bans.

In the South Staffs region both households and non-household customers place a high value on reducing the risk of pollution incidents.

For low flows in rivers, only improvements to the current service were offered. This is consistent with the “no deterioration” requirement of the EU Water Framework Directive. Both households and non-household customers place value on reducing the percentage of river length affected by low flows. In the South Staffs region non-household customers value this aspect of service more than households, however, this is reversed in the Cambridge region.

Reliability of supply

Overall customers in the South Staffs region were willing to pay £0.84 for improving the reliability of the water supply (leakage £0.36, interruptions to supply £0.27, and internal flooding £0.21).

In the Cambridge region customers were prepared to spend up to £6.32 on leakage.

The results again show that household and non-household customers place more value on avoiding the deterioration of services as opposed to investing money in improvements.

Households value more highly avoiding any increase in low pressure problems than non-household customers. Non-household customers, however, would like to see fewer properties affected by supply interruptions.

Non-household customers and household customers also placed more emphasis on the desire to reduce flooding than interruptions to supply.

The Company's leakage levels are around the economic levels. Both household and non-household customers would like to see further leakage reductions. However, analysis of the results has shown customers are not prepared to meet the full cost of achieving leakage levels beyond the SELL.

Customer service

In the Cambridge region customers were also asked to consider service levels around customer communications. This did not attract a statistically significant willingness to pay from either household or non-household customers. This could indicate customers are satisfied with the current level of service, or it could be indicative of customers expecting a high level of customer service and therefore, not prepared to pay more for this.

Summary of values

The willingness to pay results show customers place more benefit in reducing the risk of something happening than in investing in improvements to that particular service.

The value customers place on reducing the risk of something happening also changes when that risk is presented as part of package. Usually a package of service changes will attract a lower value than the sum of the individual values.

The values represent the maximum benefit (on monetary terms) of improving the service by one unit.

Area for improvement	South Staffs region		Cambridge region	
	Household	Non-household	Household	Non-household
Drinking water quality	£6.30	1.13%	£14.80	1.88%
Availability and the environment	£2.66	2.29%	£14.32	1.88%
Reliability	£0.84	1.71%	-	-
Customer service	-	-	£0	1.88%
Total	**£9.80**	**5.13%**	**£29.12**	**5.65%**

- In the South Staffs region the final figure of £9.80 is 28% lower than when the individual valuations are added together.
- For non-household customers in the South Staffs region the package valuation is 5.1% on current bills, which is 84% lower than the independent valuations.
- In the Cambridge region the final figure of £29.12 is 65% lower than when the individual valuations are added together.
- For non-household customers in the Cambridge region the package valuation is 5.65% on current bills, which is 80% lower than the independent valuations.

These package values can be used to constrain the overall scale of spending by South Staffs Water to within the overall willingness to pay. The Investment Optimisation Strategy explains this in more detail.

Acceptability Testing

Consultant: ICS Consultancy
Date: 2013
Region: Both regions

Summary

Customer acceptability builds on willingness to pay studies. It allows companies to understand whether a potential combination of bill and service is acceptable to customers.

Acceptability testing recognises there is a constraint on what customers can afford and therefore what is an acceptable change in their bill; and it recognises there are non-discretionary investments (e.g. quality) that put cost pressures on bills – and impact on acceptability.

A simple way of assessing acceptability is to undertake a customer survey that allows customers to state their acceptability of the proposed investment plan, relative to a baseline position, which is generally the bill associated with maintaining service levels at the end of AMP5 levels during AMP6. This gives the percentage of respondents that consider proposed plan to be acceptable. This method of acceptability testing is most useful if a company wishes to assess the acceptability of one plan, which is the position for South Staffs and Cambridge.

One important issue is the definition of 'acceptability', which is likely to be more than just whether the plan is seen to be cost beneficial and provide good value for money.

Methodology

The survey was compiled by ICS Consulting and approved by the CCG. At its request the Company chose to adopt a larger sample size so the results could be analysed more thoroughly, particularly by region.

In total 1044 surveys were conducted with customers.

A total of 841 household customers were surveyed, of these 510 were carried out fact to face (CAPI) and 331 were carried out online. 522 surveys were carried out in the South Staffs region and 319 took place in the Cambridge region.

The business survey was carried out online. In total 203 non-household customers completed the survey. 103 were carried out in the South Staffs region and 100 in the Cambridge region.

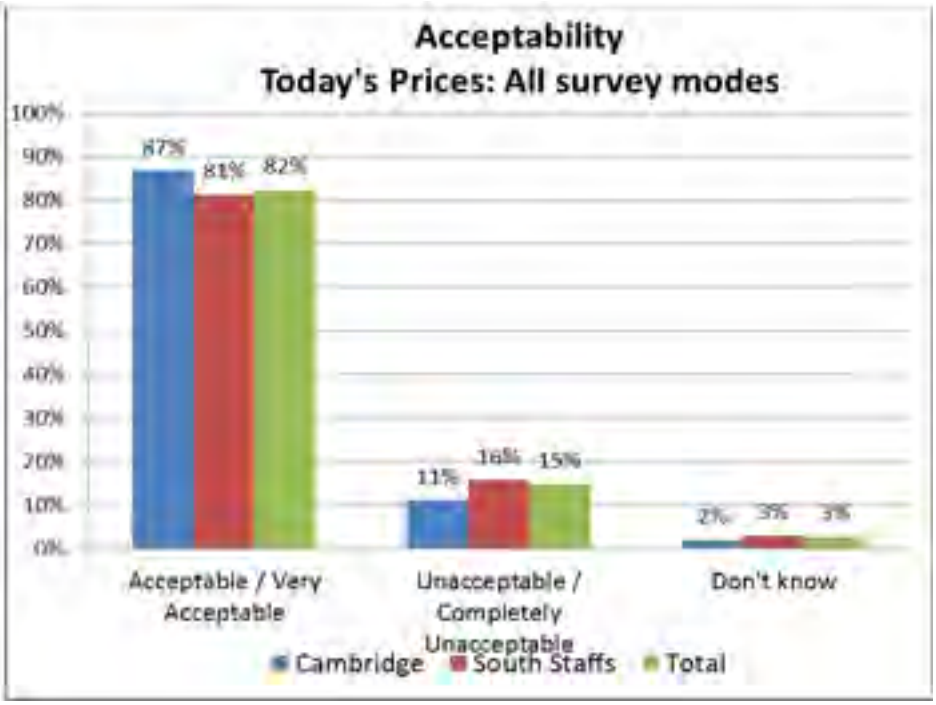
Quotas were set for each customer type.

Results

Overall acceptability results

The results showed that 82% of respondents think the 2% bill increase, shown in today's prices is acceptable.

Customers' acceptability of the proposed bill increase before the impact of inflation is added (real terms)



Source: ICS Consulting - Acceptability research

When weighted by region, 81% customers in the South Staffs region believe the plan is acceptable, and a slightly higher proportion (87%) believes the plan is acceptable in the Cambridge region.

Future inflation is also relevant to customers and the research also asked clear questions about the acceptability of nominal future bills. Here the overall acceptability was also high at 59%.

Professional advice together with the historic presentation in the sector and elsewhere is that the change in real prices should be the key consideration in evaluating such research.

The percentage of people who did not accept the plan were broadly similar across all socio economic groups, although slightly lower in in C2 and DE.

The results show 18% think plan is unacceptable at today's prices and 41% unacceptable when shown with inflation. The reasons quoted for this unacceptability were:

- Water companies make too much profit.
- Bill expensive enough.
- Customers object to paying higher bills.
- Customer feel improvements should be made without increasing bills.

Analysis of proposed improvements

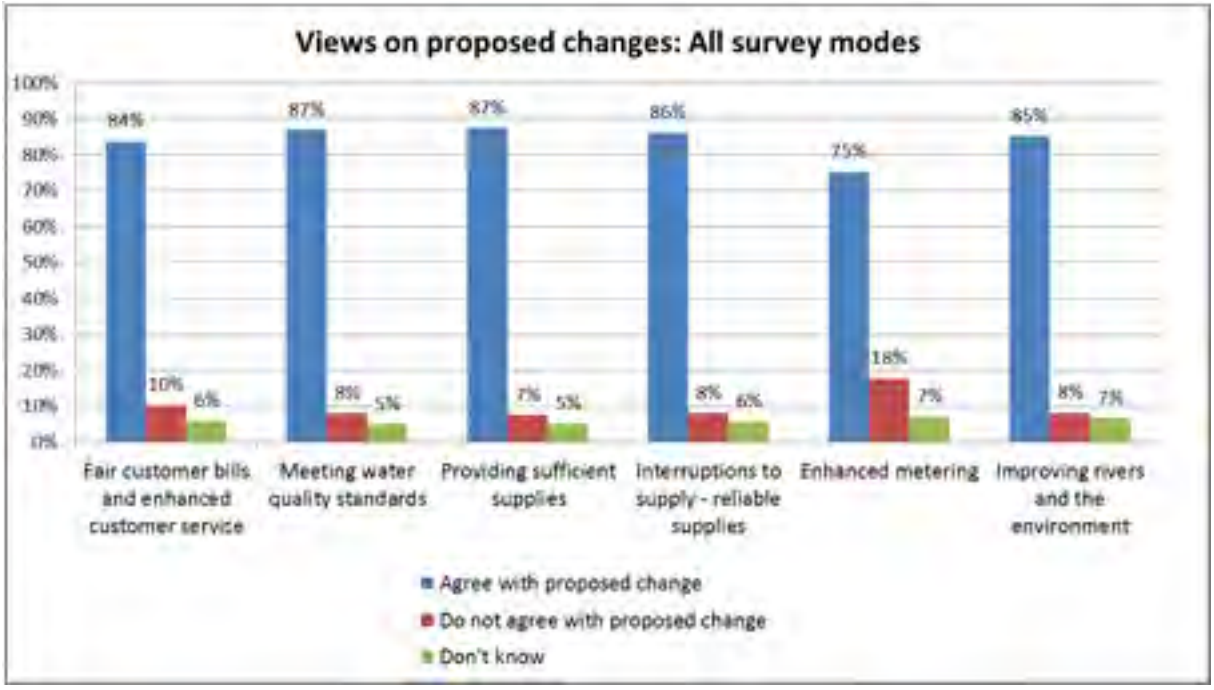
Customers were also asked for their views on the following elements:

- Fair customer bills and enhanced customer service
- Meeting water quality standards

- Providing sufficient supplies
- Interruptions to supply and reliable supplies
- Enhanced metering
- Improving rivers and the environment

The results conclude that customers are supportive of each of these elements and happy with the proposed levels of investment.

Customers' acceptability of proposals put forward in the business plan



Source: ICS Consulting - Acceptability research

Proposal	Percentage of customers agreeing with the proposals	Percentage of customers happy with the proposed level of investment
Fair customer bills and enhanced customer service	84	80
Meeting water quality standards	87	76
Providing sufficient supplies	87	79
Interruptions to supply and reliable supplies	86	79
Enhanced metering	75	66
Improving rivers and the environment	85	67

- An area to consider less investment is enhanced metering.
- An area to consider more investment is water quality and the environment.
- Many customers would also like to see improvements with a lower impact on customer bills.

Investment in merger savings

Savings of £0.5 million have been made as part of the merger between South Staffs Water and Cambridge Water.

As part of the acceptability testing, customers were given three choices on how the savings could be invested:

- Help customers in poverty according to their need
- Repair the water supply pipes customers own
- Efficiency savings are passed onto customers through lower bills

The results concluded that customers would prefer the merger savings to be passed on as lower bills rather than invested.

If the savings are reinvested customers would prefer to see the money used for the repair of customer supply pipes, over helping vulnerable customers.

Investing the merger savings had an overall impact of 8% of customer acceptability of the plan.

Introducing a social tariff

Customers were also asked for their view on whether a social tariff should be included in the plan.

Although six in 10 customers (60%) said they would agree with a social tariff, of these only a quarter (25%) agreed to a social tariff that would have an impact on their bills.

Just under a third of customers (31%) did not agree with a social tariff and 9% were undecided.

Introducing a social tariff had an overall impact of a 31% reduction in acceptability.

Impact of sewerage bill

Customers receive waste water services from either Severn Trent or Anglian Water. The survey asked customers how changes to the amount they pay for wastewater bill would impact on the acceptability.

Household customers were asked to comment on bills which ranged from a £5 increase to a £5 decrease.

The results showed an increase of £5 would reduce their overall acceptability of the business plan by 9%.

Non-household customers were asked to comment on bills which ranged from a percentage increase of 4% to a percentage decrease of 4%.

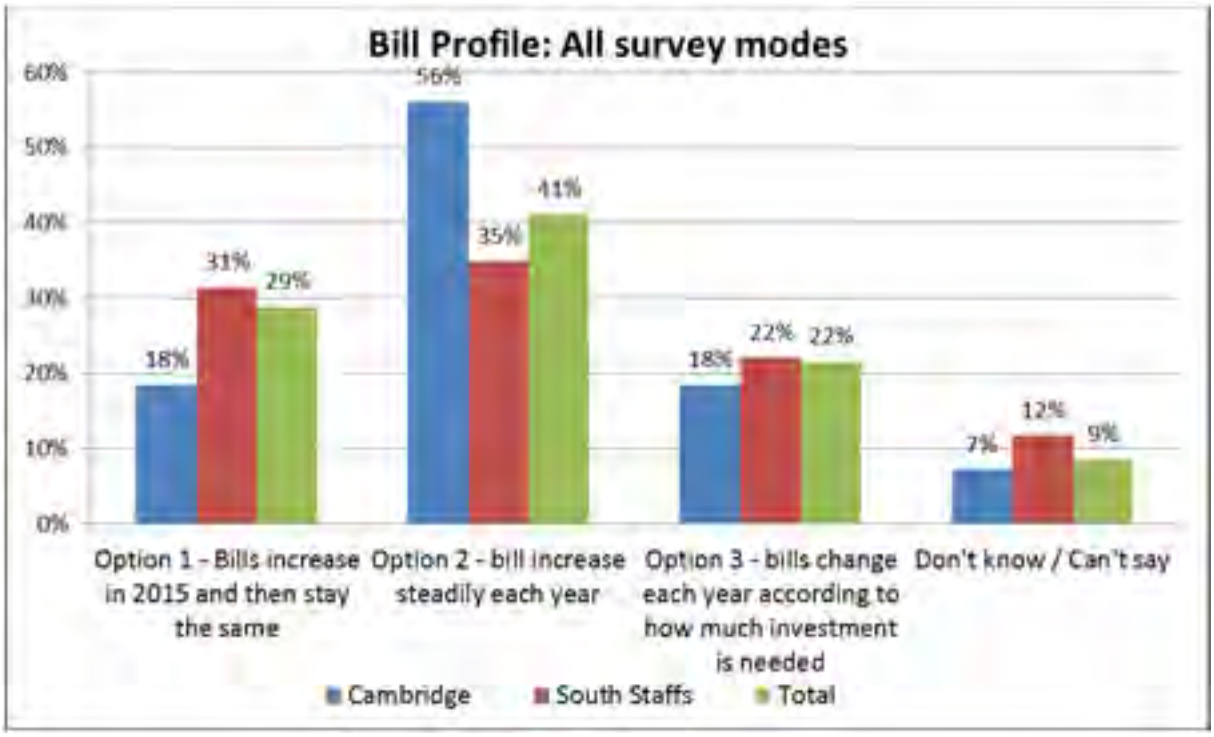
Increasing bills from 2% to 4% resulted in 24% rise in the number of respondents who thought the plan was unacceptable.

Bill profile

Finally the customers were asked to comment on whether they would prefer any increases to their bills to:

- Be implemented in 2015 and the stay the same.
- Introduced steadily each year.
- Change each year according to how much investment is needed.

Customers' preference for proposed bill increases



Source: ICS Consulting - Acceptability research

The results showed that generally a steady increase was preferred (41%).

Summary

The results suggest the proposed plan is acceptable to the majority of customers with 82% agreeing it is acceptable or very acceptable when shown in today's prices (weighted). However, these results were reduced to 59% when inflation was added.

Customers would prefer the merger savings to be passed on in the form of lower bills rather than the savings being reinvested in repairing water supply pipes or assisting vulnerable customers.

The introduction of a social tariff would have a large, negative impact on acceptability.

Increases to the sewerage bill of £5 for households and 4% for non-household customers would also impact on acceptability.

Customers have mixed views on how they would like any increases to their bills introduced, but a steady increase is generally preferred.

Inflation note

ICS Consulting advises that care is needed in how information on inflation is presented to customers who are being asked to make future choices.

When carrying out the willingness to pay and acceptability studies, customers were asked for their view on the changes based on today's prices and when taking into account changes to inflation.

There are various views on how the issue of inflation should be presented, but the Company's overall recommendation, in line with industry research and standard practice, is that customers should be presented with messages which ask them to bear in mind the impact of inflation on their choices, rather than presented with the cost of the changes in monetary terms that include inflation. This is to avoid bias in the choices made by customers and to determine the economic value to customers of real changes to the services they receive.

Business Plan Consultation

Consultant: Community Research
Date: 2013
Region: Both regions

Summary

The final part of the research involved asked a wide variety of stakeholders, including customers, to comment on the proposals in the business plan, titled "The future is your C**H$_2$O**ice 2015-2020."

To promote awareness of the consultation, South Staffs Water published the document on its website, contacted customers for whom it had email addresses and sent a hard copy to 500 key customer groups and stakeholders. It also sent out 300 letters and some posters signposting the consultation to health centres, schools and children's centres, and issued a press release. In addition, customers calling South Staffs Water heard a recorded message directing them to the website to respond to the consultation. The Company also engaged a pre-recruited online consumer panel to further widen the reach of the consultation.

To help customers engage with the consultation, the document provided background information about South Staffs Water and explained some of the challenges the Company faces. It also summarised the customer research that had been carried out at that point and summarised what the Company was doing in response.

Methodology

Each question comprised a closed question to ascertain the consultee's level of agreement and also a free text space to encourage respondents to explain the reasons for their answers.

The overarching objective was to gain feedback on ley elements of South Staffs Water, including the five outcomes that South Staffs Water has identified,

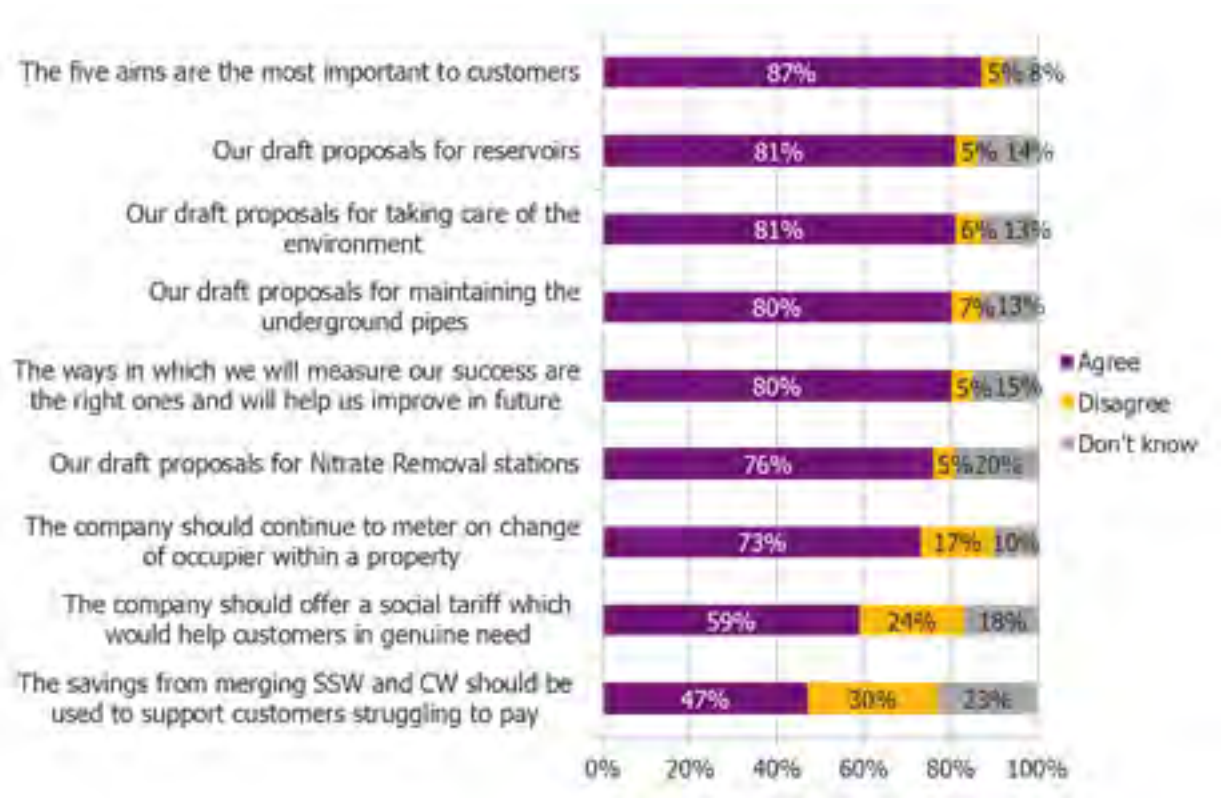
In total consultation responses were received from 983 individuals and organisations. The vast majority (969) of these were household customers, and 14 were non-household customers or other stakeholders. In total, 525 responses were received in the Cambridge region and 446 from the South Staffs region, with 12 customers stating they did not know.

Results

Consultee's were genuinely positive, for the most part agreeing with the proposals set out in the consultation document. In a number of areas, respondents in the South Staffs region had lower levels of agreement than those from the Cambridge region.

There was a high level agreement with the main aims and how they will be measured. Consultants were then asked about the Company's proposals for five specific areas (metering, environment, underground pipes, nitrate removal stations and storage reservoirs). Respondents gave the most positive response to plans for investing in reservoirs, underground pipes and the environment.

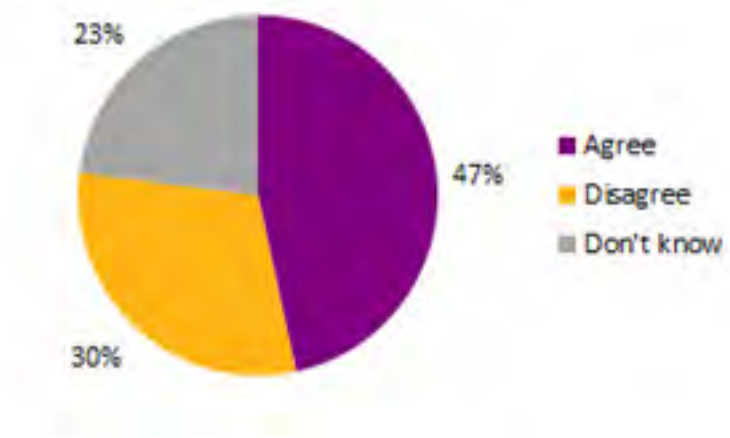
Results from business plan consultation showing percentage of customers who support merger savings being used to support customers struggling to pay



Source: Community Research – Business plan consultation

When asked about helping customers who are in need or struggling to pay their water bills by means of a social tariff or using merger savings, there was less support, although just 59% and 47% of respondents indicated agreement respectively.

Results from business plan consultation showing percentage of customers who support merger savings being used to support customers struggling to pay



Source: Community Research – Business plan consultation

Draft Water Resources Management Plan Consultation

Name of research: Consultation on the draft Water Resources Management Plan (dWRMP)
Consultant: South Staffs Water
Date: 2013
Region: Both regions

Summary

Consultation and engagement for the dWRMP includes both a range of regulatory requirements with statutory consultee's and engagement activities among customers.

At the point at which the draft plans were produced, the South Staffs and Cambridge regions were still operating under separate licences, hence this involved separate engagement in each area, with each region producing their own plan. In addition, the geology and hydrology of the two areas are quite distinct, each with their own separate challenges.

Methodology

Engagement and consultation for the dWRMP in both regions included statutory pre-consultation among key stakeholders, with points raised addressed in the drafts. In addition, there was regular liaison with the Environment Agency during the development of the drafts. The draft was made available to download from the Company's websites in both regions, with an invitation for anyone to send comments to Defra. Both websites carried a home page banner signposting the consultation period, further the publication of the drafts and the consultation were publicised by press releases to local media covering the South Staffs and Cambridge region.

In the South Staffs region in September 2012, MVA Consultancy carried out research with CCG members, resulting in the document "Engaging with Stakeholders – Customer Service Priorities" (Oct 2012) which specifically covered aspects of the dWRMP. In addition, MVA Consultancy was engaged to carry out research among household and non-household customers during this period, with some of the issues covered ("Engaging with Customers: Customer Service Priorities and Willingness to Pay" Dec 2012) also used to help inform the dWRMP. For information on the methodology, see Engaging with Customers.

A workshop was held for CCG members in the South Staffs region in November in which members were given briefing notes on relevant issues.

Finally, a full day's deliberative workshop was held in January, 2013 at South Staffs Water's offices in Walsall. The objectives of the exercise were to:

- Understand customers' informed and uninformed views about various aspects of the WRMP.
- Gather direct feedback from an informed group of customers regarding SSW's current thinking on:
  - Water metering
  - Leakage
  - Customer restrictions (hosepipe bans)

- Water efficiency (encouraging customers to conserve water)
- The environment

In total 27 customers attended the workshop with a demographic profile broadly in line with what is known about the South Staffs region in terms of age, gender, ethnic background and employment status.

In the Cambridge region, in addition to statutory consultations, engagement has involved in depth discussions on the issues by a specific subgroup of the Local Water Forum, followed by qualitative research carried out by an independent consultancy (Community Research), which set up four focus groups. In addition telephone interviews were held with WaterSure customers, non-household customers (via the Chamber of Commerce), advisers and clients at the Citizens Advice Bureau and at educational institutions. The draft document was also made available to download on the website with comments to go in to Defra.

Results

Following the publication of the two draft plans, South Staffs region received eight responses and Cambridge five – all were from statutory or public bodies and have resulted in only minor changes being made to the final plans which were submitted to Defra in November.

Key priorities highlighted in the various strands of research in the South Staffs region, and which were taken into account in the drafting of the plan were:

- Water efficiency
- Leakage levels and strategy
- River abstraction
- Environmental pollution
- Environmental impacts
- Supply interruptions
- On site leak detection (for non-household customers)
- Water efficiency audits (for non-household customers)

Among the CCG research, many participants were willing to accept a deterioration in service levels on hosepipe bans; increased metering and tackling leakage beyond the SELL as a way of managing the supply-demand balance. There was broad support for water trading; and participants were keen to see investment in technology to improve management and monitoring of water resources – even if bills increased in the short term.

In the customer research, when asked "uninformed" for priorities on service improvements, third highest on the list was to improve leakage levels (27% household and 35% for non-household customers). Informed satisfaction levels showed that non-household customers listed leakage levels, water efficiency levels and risks of long interruptions among the issues they were most dissatisfied with, however, these were not an issue for household customers.

Priorities for improvements among household customers included:

- Leakage levels to be reduced (38%)
- Environmental pollution risks to be halved to a one in 40 year risk (17%)

Household customers listed among the top five most acceptable quality reductions:

- Hosepipe ban risk to be halved to a one in 20 year risk (16%)
- Withdraw free water efficiency measures (8%)

Priorities for improvements among non-household customers included:

- Reduced leakage levels (44%)
- More proactive water efficiency measures (27%)
- Environmental pollution risks to be halved to a one in 40 year risk (20%)

Non-household customers listed among the top five most acceptable quality reductions:

- Hosepipe ban risk to be halved to a one in 20 year risk (9%)

Non-household customers also listed tailored services, including water efficiency audits (41%) and on site leakage detection (37%) as being of value.

Key recommendations to arise from the full day workshop with customers were:

- Customers believe there is considerable potential to increase meter levels through education and communication
- A slight majority of workshop participants were keen to see more ambitious leakage reduction, even beyond the SELL, and just over half were willing to see an increase in their bills to pay for this
- The current service level on customer restrictions should be maintained
- There was a very strong sense the Company should significantly increase its activities and communications regarding water efficiency among the customer base
- Customers wished to see the Company take its local environmental responsibilities seriously, but there was no broad based support among customers to pay more to support environmental improvements, beyond those specified by the Environment Agency. Decisions on individual environmental projects would need to be specifically defined and subject to separate consultation
- More and better communication was called for across the board

In the Cambridge region, key priorities that came out of the research were:

- Leakage levels
- Security of water supply, particularly during drought periods
- Water efficiency
- Metering levels
- Having the infrastructure available to cope with housing growth
- Water efficiency audits for non-household customers
- Supply interruptions

More specifically, leakage was referred to in the context of wasted water and the maintenance and repair of infrastructure, though respondents generally had a good impression of the Company's detection and repair service.

On the issue of security of supply, non-household customers in particular were keen to see evidence of water resilience and future planning, while household customers saw it more in terms of repair and maintenance of infrastructure. There were also concerns over supply pressures caused by housing development in the area.

Customers also wanted to ensure rainwater is stored efficiently in order to ensure sufficient water is available during times of drought.

Customers felt that water efficiency should be practiced by both customers and the Company, with non-household customers suggesting they would like water audits to be offered. While there was no general appetite for compulsory metering, meters were seen as a priority for reasons including possible cost savings, water efficiency, environmental benefits and equity among customers.

Concern was expressed over the additional pressures housing developments put upon the infrastructure. Non-household customers were also concerned over possible detrimental effects of supply interruptions.

Business Plan Impact

Customers and stakeholders have been instrumental in determining the Company's five outcomes. The studies detailed in the previous section, alongside the views of both regions' CCG groups, have helped to shape the draft proposals and the two further studies measured the acceptability of those proposals prior to the publication of the final business plan.

In addition to the engagement undertaken as part of PR14 planning, the Company also pays close attention to customer opinion gathered during day-to-day activities, such as causes of customer complaints, customer feedback gathered as part of regular customer service standards monitoring and any other activities that might involve customer engagement. This customer opinion has also been taken into consideration in support of, and in many cases to inform the direction on, the dedicated PR14 engagement.

The following information provides a summary of customer and stakeholder views, and how these views have impacted upon the Company's plan.

How customer and stakeholder feedback has influenced the outcomes of the business plan

Supporting outcome 1 (Excellent water quality - now and in the future)

Customers and stakeholders told the Company:

- They are used to receiving high quality water through their taps and wanted to see this maintained or even improved upon[10]
- They are happy for South Staffs Water to engage with farmers and landowners in order to ensure water quality is maintained at a high level and, water treatment costs are reduced[11]
- Customers were concerned about water hardness[12]

As a result:

The Company has proposed investment to replace three nitrate removal stations with more modern and efficient ones, and to develop one new station, which will help to ensure that water quality standards continue to be met.

In addition, major investment on up to four storage reservoirs will help to significantly reduce current or future water quality risks.

The Company will also invest long-term in work with farmers and other landowners to improve the quality of water draining into watercourses, in order to reduce the quantity of the water it has to treat.

The Company will not heavily invest in reducing water hardness because of the significant financial and environmental cost, however, it has committed to educating customers about how the effects of hard water on plumbing and household appliances can be reduced.

[10] MVA Consultancy- Engaging with customers
[11] Consultations for the draft Water Resources Management Plans
[12] Community Research – focus groups, MVA Consultancy- Engaging with customers and ICS Consulting – Willingness to pay

Supporting outcome 2 (Secure and reliable supplies - now and in the future)

Customers and stakeholders told the Company:

- Good service is valued and they wanted to see the service remain so (no deterioration) [13]
- The number of supply interruptions should be reduced, and in the event of a burst, the response time should be shorter and flooding as a result of bursts should also be reduced[14]
- Non-household customers were particularly concerned about supply restrictions or interruptions, in order to avoid disruptions to their own activities[15].
- They wanted assurances that the Company's infrastructure is good enough to cope with further housing developments[16].
- To ensure water availability is sufficient to cover drought periods[17].

As a result:

The Company will spend about the same on underground pipes as it does now, but with a shift towards the increased maintenance of larger trunk mains. To offset this, less will be spent on renewing smaller mains pipes as the Company is already seeing the benefits of work previously done in this area. This change of focus should reduce the risk of large supply interruptions and the accompanying disruption they can bring while maintaining the service as before.

The Company will work with house builders to promote the installation of water efficient devices, and consult with local planning authorities as part of its water resources planning in order to manage the risk of housing development.

With dedicated business account management, a strategy will be implemented outlining services available to non-household customers.

As outlined above, investing in storage reservoirs will not only help to significantly reduce current or future water quality risks, but will also help to ensure the reliability of the supply in those areas. In addition to this, there will be increased awareness of water efficiency through increased communication and education.

[13] MVA Consultancy- Engaging with customers
[14] Consultations for the draft Water Resources Management Plans and MVA Consultancy- Engaging with customers
[15] As above
[16] As above
[17] As above

Supporting outcome 3 (An excellent customer experience to customers and the community)

Customers and stakeholders told the Company:

- Stakeholders wanted the Company to maintain its close links with the community[18].
- They wished to see contact with the Company made easier[19].
- Non-household customers wanted a dedicated point of contact within the Company.
- Non-household customers wanted help from the Company, for example water audits[20].
- They wanted to hear more from the Company about environmental issues to help customers understand what the Company does around environmental activities, water hardness awareness, lead and water efficiency.

As a result:

The Company intends to continue to use independent surveys and customer complaint levels as a way to monitor customer satisfaction and ensure that its provision for customers remains at a high standard. It also continues to be involved in the local community in both regions, as an employer and by supporting local activities such as education, and engaging with customers, stakeholders and businesses within the supply area.

The Company will further develop its customer contact channels by investing in improved online facilities, social media engagement and also telephone self-service. This will allow customers to complete simple transactions quicker and easier at any time of the day, and also free contact centre capacity to allow for a better, less congested service for customers who choose to use that channel.

The Company is committed to offering a dedicated account management service, providing business customers with a single point of contact for all aspects of the business. Acting as the conduit for all Group services, the Key Account Manager's (KAM) role is to fully understand the business and operational needs of its non-household customers, offering effective solutions and improving the customer journey.

The Company will implement a strategy of further educating customers about its activities to preserve biodiversity and reduce its carbon footprint as well as other environmental issues.

[18] Comments from the CCG
[19] Comments from the CCG
[20] MVA Consultancy- Engaging with customers

Supporting outcome 4 (Operations that are environmentally sustainable)

Customers and stakeholders told the Company:

- They would like to see more promotion of water efficiency, with water efficiency audits offered to non-household customers.[21]
- Leakage levels, which have fallen in recent years, should be reduced further[22].
- Less water should be taken from rivers[23].
- Pollution levels should be cut[24].
- Metering levels should be increased, as they see meters as a fair way to pay, while encouraging reduced consumption[25].

As a result:

Water efficiency promotion will be enhanced, continuing to provide free water saving devices to customers as part of the strategy for non-household customers.

The Company will carry out schemes or trials to put water back into the environment at four areas and to work on biodiversity schemes to improve the water in rivers we abstract from and in some boreholes. In addition, it will investigate improving fish and eel passages at surface water works, as well as other work to comply with legal obligations on the environment. It is also continuing to work hard to reduce its carbon footprint, by looking into alternative energy sources for treating and pumping water.

Regarding meters, the Company intends to continue with its policy of installing meters upon a change of occupier, with these seen as the best way to fairly increase metering and ensure water efficiency.

Leakage targets will remain a priority, with a lower target being proposed in the South staffs region, with work focusing on large trunk mains in order to prevent large bursts and disruption.

[21] MVA Consultancy- Engaging with customers
[22] MVA Consultancy- Engaging with customers– 39% of household customers and 50% of non-household customers said they would like leakage levels reduced further.
[23] MVA Consultancy- Engaging with customers– indicative willingness to pay research.
[24] MVA Consultancy- Engaging with customers– indicative willingness to pay research.
[25] MVA Consultancy – Engaging with customers – 52% of household customers and 57% of non-household customers would like to see increased metering over a 10 year period.

Supporting outcome 5 (Fair customer bills and fair investor returns)

Customers and stakeholders told the Company:

- With bills already among the lowest in the country, they want them to remain affordable, and the majority expressed that the proposed rise was acceptable.[26]
- Non-household and household customers wanted to maintain the current low bill, with service levels staying at the accustomed high level[27].
- They wanted investment kept low, but agreed that small increases were acceptable as this would help to avoid future problems and sudden bill increases to pay for large investment[28].
- Less than half agreed that the money saved by merging South Staffs Water and Cambridge Water should be used to support customers facing difficulties with paying their bill.[29] Most would prefer it to be handed back to the customers in the form of lower bills

As a result:

The Company wishes to continue to offer low bills, but in order to cover its investment plans and energy costs is proposing to keep the bills flat (real) over the course of the five years, 2015-2020. The change from 2% at the draft stage to flat has largely been secured through a lower cost of capital. It has not been progressed by lowering proposals or compromising service commitments. In addition the Company has further responded to those not finding the initial proposals acceptable. The Company will extend the Charitable Trust into the Cambridge region, A discretionary fund will be made available to:
Further boost the charitable trust allowing more grant support to customers in need of support
Commence activities to offer debt advice to customers, working with specialist independent agencies such as CABs and other support agencies
Also the Company will undertake further research in early 2014 regarding social tariffs.

[26] ICS Consulting – Acceptability research
[27] ICS Consulting – Acceptability research
[28] Online panel, ICS Consulting – Acceptability research, MVA Consultancy – Engaging with customers.
[29] Community Research – Businessplan consultation

Acceptability of the Business Plan

During the business plan consultation period, customers and stakeholders acknowledged that they find the plan acceptable, that the proposed price rise is fair to customers, that the Company has captured the issues that are important to customers and that the measures for success are the right ones to help with further improvements.

Appendix 1 - Table of Research and Customers Reached

Research	Region	Target	Number contacted	Total responded	Face to face	Letter	Online assisted	Online	Focus groups	Workshop/ sub groups
Customer feedback - To inform outcomes and the Long Term Strategy										
MVA research	South Staffs	Household	501	501	150	-	-	461	-	-
	South Staffs	Non-household	n/a	123	15	-	108	-	-	-
Online customer research panel	South Staffs	Household	302	302	-	-	-	302	-	-
Focus group	Cambridge	Household	50	50	12	-	-	-	38	-
		Non-household	6	6	6	-	-	-	-	-
Willingness to pay - To ensure investment reflects customer valuations										
Willingness to pay	South Staffs	Household	500	500	-	-	500	-	-	-
		Non-household	300	300	-	-	300	-	-	-
	Cambridge	Household	14,000	484	-	-		484	-	-
		Non-household	1000	122	-	-	122	-	-	-
Consultation on the business plan- To test proposals, investment choices and outcomes										
Draft Water Resources Management Plan	South Staffs	-	n/a	33	-	8	-	-	-	27
	Cambridge	-	n/a	31	-	5	-	-	-	26
Business plan consultation - Community Research	Both	Household	14,000 +	969	-	-	-	969	-	-
		Non-household	1000+	14	-	-	-	14	-	-
Acceptability research - ICS Consultants	Both	Household	8412	841	510			331		4
		Non-household		203						
Total				4479						

South Staffs Water

incorporating

CAMBRIDGE WATER COMPANY

Market Reform

Business Strategy

December 2013

Market Reform

The water industry will change fundamentally on 1 April 2017 when the OpenWater programme opens up the competitive market for all non-household customers.

The Company already has its own retail function in place, which bills and provides high levels of service for its customers (see Retail strategy document).

It also provides billing and customer services to two other water and wastewater businesses and maintains a data cleansing programme, which is focused on ensuring individual bills are accurate.

Based on this existing retail experience, high levels of customers service and low charges, the Company is confident of retaining all of its existing non-household customers post April 2017.

It will also pursue opportunities with existing customers that operate from sites outside of its supply area if the commercial environment is attractive.

Customer Research

In the MVA research some business customers indicated a willingness to switch water supplier if the alternative service was significantly better. Cost was a key influencing factor, but there is confidence amongst many non-household customers that competition drives improved quality of service as well as a competitive price.

> *"that freedom of choice [that comes with an open market] … initially improves prices, but it's not always going to be this way, so it's a difficult one to answer. … Probably yes is the answer… open market commerce seems to work better so it would be better if we could have a choice" [Nursery]*
>
> *"Not at the moment, no [would not switch]… I suppose it's always down to finances" [Care House]*
>
> *"It would purely be for money reasons" [College]*

OpenWater Programme

South Staffs Water believes the OpenWater programme presents an opportunity for water companies to influence the way in which the new market evolves and is fully committed to supporting and enabling this vehicle.

Its approach to engagement and the regulated business implications of this, are outlined below:

- The Company's Finance Director is committed to overseeing the practical and governance issues around the OpenWater process. This will be supported by other resource as appropriate. The Company will also make resource available for testing

and pilot activities, and will champion the position of water only companies (WOCs) if required

- The Company will meet the funding requirements determined by the programme, and will challenge - on behalf of customers - to ensure these costs represent value for money. The Company will also commit to incur costs as necessary to deliver any internal change to facilitate the new market in line with OpenWater timeframes (eg systems, personnel, processes, structures, governance) and will again ensure that customers receive value for money
- The Company will continue to engage to ensure this market develops appropriately
- The Company will ensure that customers are not disadvantaged at any point throughout the market transition, by taking a pragmatic approach wherever possible. For example, when determining default tariffs (for any customer not switching provider at 1 April 2017), it will ensure they are based on existing tariffs subject to any pre-determined annual change

South Staffs Water

Incorporating

CAMBRIDGE WATER COMPANY

Affordability Business Strategy

December 2013

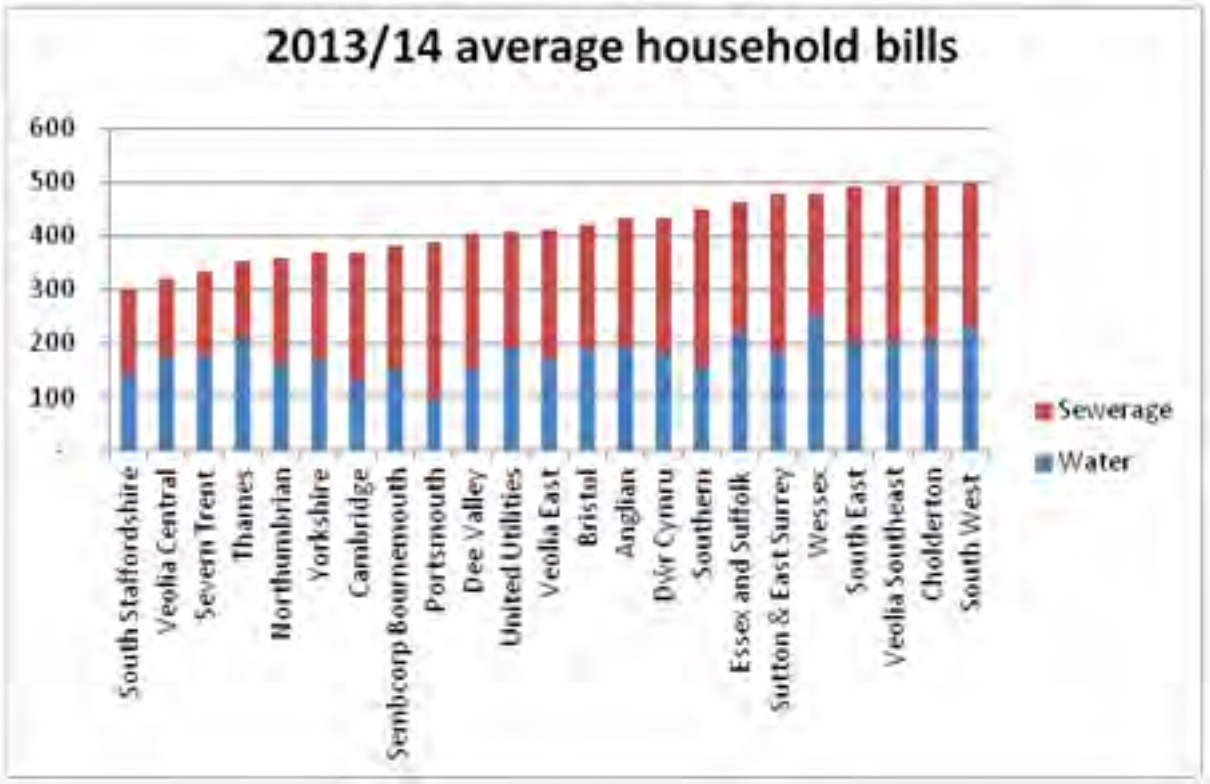
Affordability

Supporting outcome 3 (An excellent customer experience to customers and the community)

Supporting outcome 5 (Fair customer bills and fair investor returns)

In an economic environment where income levels are falling, living costs are rising and Welfare Reform is underway, addressing affordability is a high priority for the Company.

South Staffs Water customers receive the second and third lowest water bills in the country; with prices in both regions over 25% lower than the national average. The graph below shows the total amount customers paid for their water and wastewater bills in 2013/14. In reviewing issues around affordability, the Company recognises it is important to look at bills from the perspective of the customer, rather than look solely at the water element of the bills which it is responsible for. It has therefore committed to working with Severn Trent Water and Anglian Water when seeing to address the general issue of affordability.



The Company is focused on keeping bills low, while delivering the service customers require. Tackling affordability issues is an aim for the whole business, led by customer services at the first point of contact right through to debt & collections if the customer gets into difficulty.

This Affordability strategy delivers a solution that will:

- Be implemented collaboratively with customers and stakeholders in a controlled manner
- Be targeted to enable clear monitoring, reporting and understanding of its effectiveness

- Recognise that one solution does not fit all, and where there is variation across regions (or groups of customers), consider the wider application of solutions if they could prove beneficial.

The Affordability strategy is represented by the life cycle below:

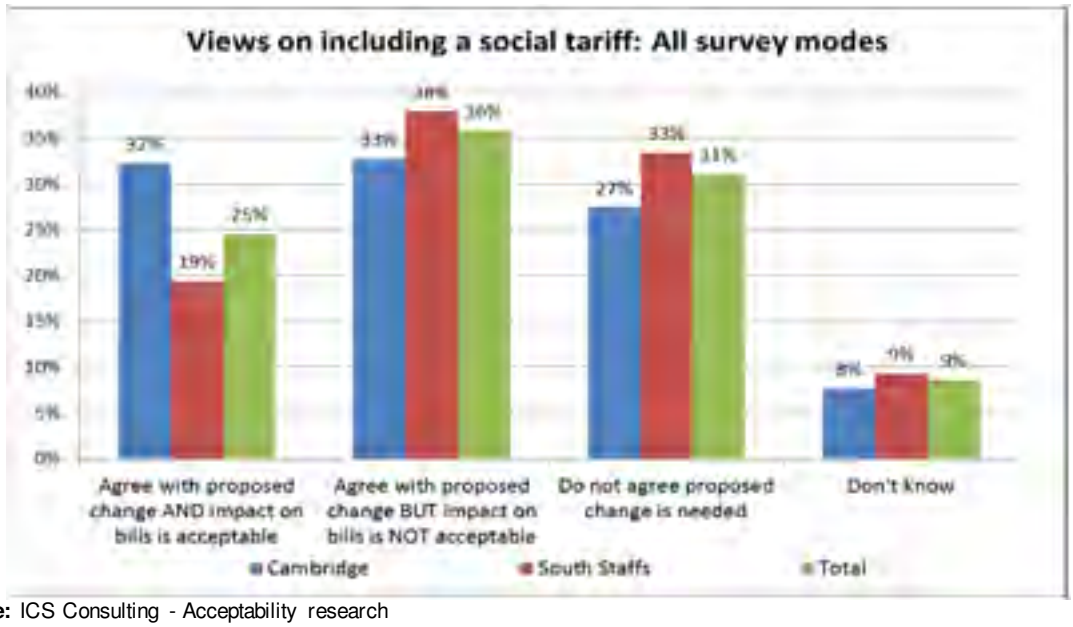
The Company will continuously review this process, to ensure the strategy remains effective. Where variation does exist between regions it will adopt and improve upon best practice for the benefit of all customers.

Consultation with Customers and Stakeholders

The acceptability study carried out by ICS Consulting revealed that although six in 10 customers (61%) said they would agree with a social tariff, of these only a quarter (25%) agreed to a social tariff that would have a 2% impact on their bills. (Customer Engagement business strategy)

Just under a third of customers (31%) did not agree with a social tariff and 9% were undecided.

Introducing a social tariff had an impact of a 31% reduction in overall levels of acceptability.

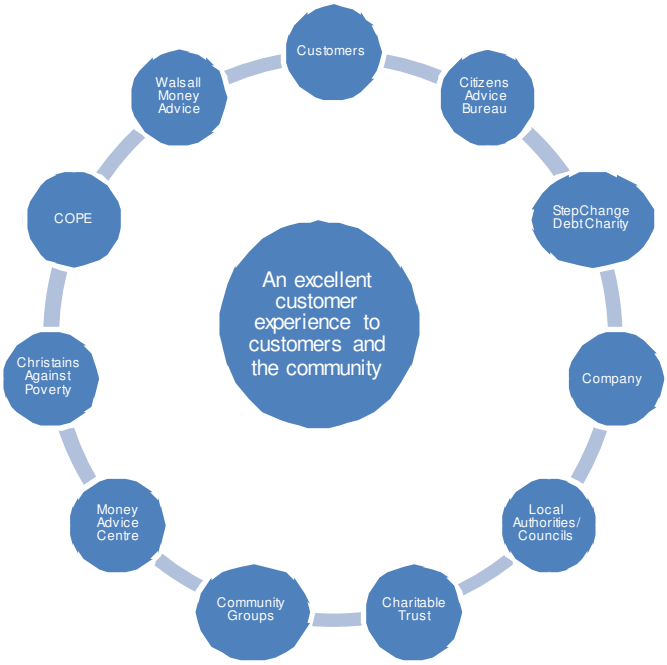


Source: ICS Consulting - Acceptability research

Consultation on the proposals put forward in the business plan by Community Research showed 59% supported introducing a social tariff which would help customers in genuine need and 47% thought savings from the merger should be used to support customers that were struggling to pay.

The Company has not yet launched a social tariff but there is a commitment to review this further with customers, stakeholders and neighbouring sewerage undertakers (for whom billing is carried out). If low customer support for a social tariff continues ie, a subsidy, the Company will review further self-financing and affordability initiatives. The Company will also ensure consideration is given to how different tariffs interact across water and wastewater elements of a customer's bill, following the anticipated guidance from Ofwat in this area.

In early 2014 the Company will commence further customer research and stakeholder consultation, to build on the existing research already undertaken in this area.



Watch and Adopt Industry Best Practice

The Company is committed to improving the information it provides to customers and the quality of information it holds on customers.

Existing work has already been aligned to ensure full compliance with Ofwat's directive on Information Provision.

In line with considered best practice, as reaffirmed in Ofwat's response to a Thames Water Interim Determination of K (IDoK) given in October 2013, the Company has also engaged with credit reference agencies to identify how sharing data can be used to enhance collection strategies.

Work is also underway to implement the National Landlord Portal. This is an industry-led initiative which seeks to encourage landlords to register occupier details with water companies through a web-portal. The Company has been actively involved throughout its development by participating in expert user groups and specifying desired outcomes.

It is expected the National Landlord Portal will help reduce debt on tenanted properties by identifying occupiers sooner, enabling prompt billing and reducing accumulated debt and affordability issues.

In total 22% of properties in the South Staffs region and 11% of properties in the Cambridge region are registered as tenanted. This amounts to 146,673 properties (a significant number could also be unidentified).

If successfully adopted, the National Landlord Portal has the potential to identify and address affordability issues for a significant number of customers, and improve efficiencies and reduce costs associated with income and debt management.

Participation in industry led initiatives, workshops and consultations will enable the consideration of currently used schemes, allowing the Company to learn from and build upon the design and application.

The Company will continue to monitor the impact of Welfare Reform on customer affordability and is already engaged with stakeholders on the impact this may have on Third Party Deductions and WaterSure. The Company has already taken steps to inform customers of potential changes that may affect them and will continue to monitor this.

Debt Management Review

The Company, through internal communications and training materials, ensures that all relevant employees and partners can undertake comprehensive reviews of customer accounts to ensure that affordability issues are recognised and addressed as part of the high quality service.

The Company currently offers a comprehensive range of solutions to address affordability issues, as shown in the table below:

Metering/Billing	Tariffs	Payment Methods	Payment frequencies/amounts	Payment Schemes

• Water meter
  • Billed for consumption
• Billing Frequency
	• Watersure
	  • Metered - low income/high water use
	• SoLow
	  • Metered - low user. Higher wastewater volume charge, no wastewater service charge
		• Water Direct
		  • in receipt of qualifying benefits
		• Direct Debit
		  • annual discount applies
		• Credit/Debit Card
		• Online payment
		• GIRO
		• Paypoint
		• Doorstep visit
		• Company offices
		• Payment card/Payment Book
			• Flexible payment arrangements
			  • short term plans for temporary difficulties
			  • reduced amounts/longer term to assit budgeting
			  • income receipt date/payment date matching
				• Charitable Trust
				  • customers in debt able to show committement to clear debt
				• NewStart
				  • payment matching facility

The Affordability strategy encompasses the evolution of a debt collection approach into one of debt management in order to address issues of affordability. This is tackled by early intervention and identification of affordability issues.

Recovery strategies are made more effective through customer segmentation. This is predominantly determined by property type and customer payment history. Further segmentation is achieved through type of debt and whether an account is current or discontinued. Customers with repeated payment plan defaults may also determine a different strategy, escalating through the recovery process to identify issues (such as affordability) and ultimately to minimise accumulated debt.

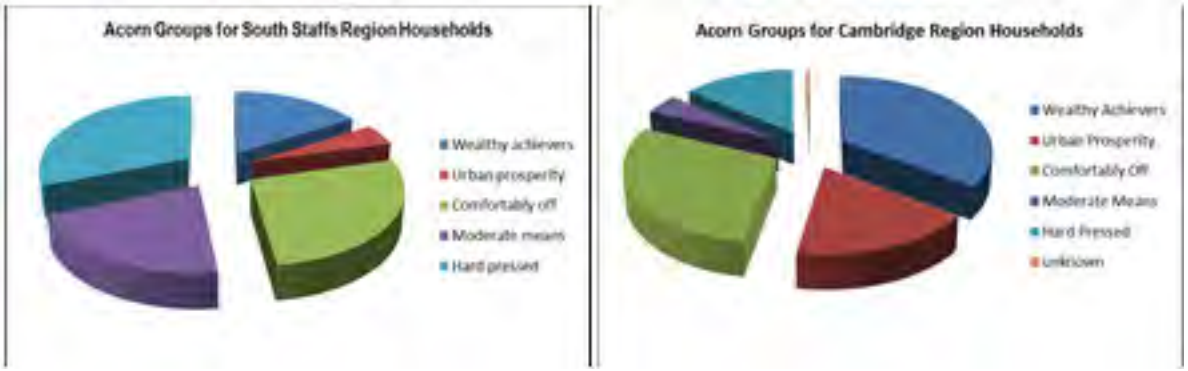
In addition the Company will use external data to identify income and wealth characteristics based on the customer postcode which can be used to determine areas with affordability issues. This data can be used to explore the probability of factors such as low income that may help inform more suitable paths of recovery, offering more suitable payment schemes, tariffs, payment methods and other solutions as they are developed and identified.

ACORN (A Classification of Residential Neighbourhoods) is used extensively for market research purposes, this has been used to characterise the status of people living in the Company's catchment area.

ACORN classification comprises 56 types, which are subdivided into 15 groups and five categories. The groups and categories are defined as follows:

Wealthy achievers	Urban prosperity	Comfortably off	Moderate means	Hard pressed
Wealthy executives	Prosperous professionals	Starting out	Asian communities	Struggling families
Affluent greys	Educated urbanites	Secure families	Post-industrial families	Burdened singles
Flourishing families	Aspiring singles	Settled suburbia	Blue-collar roots	High-rise hardship
		Prudent professionals		Inner-city adversity

The distribution of the company customer base is shown below:



Whilst "comfortably off" proportions are similar, there is a striking variation between the regions in other groups, which is a key reason why approaches to affordability need to be careful and well designed.

Deliver Innovative Solutions through a Controlled and Monitored Implementation Plan

The Company will be extending the Charitable Trust that operates in the South Staffs region, funded by the Company's owner, into the Cambridge region from April 2014. Customers in the Cambridge region who are unable to afford their bill will have a new opportunity for assistance in paying. In addition a new discretionary fund over the AMP6 period will be made available to:

- Further boost the Charitable Trust through allowing more grant support to customers in need of support (this initiatives is over and above the extension to the Cambridge region)
- Commence activities to offer debt advice to customers working with independent agencies such as the Citizens Advice Bureau and other support agencies

This presents opportunities to reach out to the wider community and target help to the most vulnerable without additional costs impacting the whole customer base.

The Affordability strategy will evaluate the basis of an affordability tariff structure (not necessarily a Social Tariff). As an example of this, early research indicates that a possible route is to provide access to an affordability tariff based on household income and not solely on the existence of Universal Credit (UC) as a signpost. With changes to UC still evolving it is difficult to understand its scope and possible implications to the customer base, along with

challenges in understanding the data available in respect of recipients and resistance to data sharing from the Department of Work and Pensions.

Should access be addressed at a more local level, the passing of the administration of Council Tax Benefit to local authorities from central government (now replaced with Council Tax Relief) could be considered as a potential signpost to an affordability tariff if the data can be legitimately obtained.

Summary

By exploring behavioural economics and how these may be used to encourage appropriate payment from debtors and those struggling to pay their bills, the Company will consider the mechanisms of intrinsic motivation and perception of fairness. As noted in Ofwat's research of February 2012, 'Payment Incentives Report', these mechanisms are incentive based and have at their core a strong element of negotiation.

The strategy in this area is to review and enhance how the business addresses affordability and consider the introduction of a tariff (or approach) which will complement and not conflict with established solutions. By working with customers and exploring relationships with support agencies and charitable organisations, the aim is to deliver a complete affordability solution which does not present an administrative burden on the Company or its customers.

It is also important for solutions to reach customers before any debt issue arises. The Company will provide a clear message to customers that embraces the principles of information provision and presents an affordability solution (possibly a social tariff) that does not adversely affect debt; either by allowing customers to fall into debt to benefit from a lower tariff or to impact the ability of other customers to pay should a cross subsidy be introduced.

South Staffs Water

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CAMBRIDGE WATER COMPANY

Water Quality Business Strategy

December 2013

Water Quality

Supporting outcome 1 (Excellent water quality - now and in the future)

The overarching outcome that drives all the AMP 6 proposals is for excellent water quality (now and in the future).

Customers expect to consistently receive high quality water from their taps and it is vital South Staffs Water is able to deliver this by maintaining and investing in its network and mitigating any risks to the water quality as appropriate.

All of this activity is closely monitored by customers, stakeholders and regulators alike and has been identified by the company as a key driver in its rewards and penalty business strategy.

While the company will always strived towards 100% compliance with the Drinking Water Inspectorate's mean zonal compliance (MZC) measure, it has set its performance commitments at the industry average of 99.96%, to allow for random variation and events outside of the Company's control.

Customer Research

Water Quality Findings

The results showed that in both regions the quality of the tap water came out as a high service priority, especially for household customers.

In the South Staffs region, household customers were willing to pay £6.30 on improving the quality of water (£3.92 for improvements to hard water, £1.55 for reducing the incidence of discoloured water, £0.79 for taste/smell improvements and £0.04 for reducing the incidence of boil water notices). In the Cambridge region, customers were willing to pay £14.80 (£8.53 for improvements to hard water, £5.10 for improving its taste and smell and £1.19 for reducing the incidence of cloudy water.)

Non-household customers in the South Staffs region were willing to pay 1.13% for an improvement in drinking water quality. (Boil water notice 0.01%, hard water 0.37%, taste and smell 0.27%, and discoloured water 0.49%). In the Cambridge region, non-household customers did not attach a value to reducing the amount of hard water. They were prepared to pay up to £1.52 for improving its taste and smell and £0.36 for reducing the incidence of cloudy water.

While customers were not willing to pay for improvements to reduce the risk of introducing boil water notices, or improving its aesthetic appearance, they were willing to pay in order to avoid the risk of these increasing. In the South Staffs region households are twice as likely to be willing to pay for this as non-household customers.

Hard Water

Households place a higher value on reducing the hardness of the water. Overall they are prepared to pay an additional £3.92 on their bills in the South Staffs region to provide soft water to all 560,000 properties, and £8.53 to provide soft water to all 130,000 properties in the Cambridge region.

The customer research carried out by MVA suggested 23% of household customers and 15% of non-household customers were dissatisfied with its hardness.

This was echoed in the willingness to pay research which showed households place a high value on reducing the hardness of the water.

> *"We get a lot of lime in this area so the water's quite hard but I don't think anything can be done about that."* - (Cambridge household customer, C2DE)

The Company has decided not to invest heavily to deal with water hardness, despite this featuring heavily in customer research. Such investment is not good value for money, leads to high carbon use, and may put public health at risk. Instead the Company will focus on informing customers about the health benefits associated with hard water and how to reduce its effect on household appliances.

Overall, customers in the South Staffs region are prepared to pay a 5% increase in their bill to address the issue of providing soft water to all properties. In the Cambridge region, where all the water is classified as being hard, this increases to 11.9%. While these figures appear high the actual cost of softening the water would require them to be much higher. As an example, the investment cost of softening water in the South Staffs region alone is £55 million, with operational costs of £3.7 million per year.

Wholesomeness

The Company operates its assets to achieve wholesomeness as defined by the Water Supply (Water Quality) Regulations 2000.

Wholesomeness is achieved through understanding the raw water itself and ensuring treatment is effective so that customers receive water that is safe to drink.

There are many risks associated with the process of ensuring compliant water, which are recognised and minimised or mitigated by Company action – see the next section.

The Company also believes that it should achieve this wholesome status at the lowest possible cost to the customer, recognising the risks associated with each option considered.

Short and Long Term Risks

Some risks have mitigation methods that are short term and deal with the immediate risk to supply.

An example of a short term measure taken in the South Staffs region was when a nitrate sample taken at Hayley Green Reservoir had higher nitrate levels than the Permitted Concentration or Value (PCV) as prescribed by the Water Supply (Water Quality) Regulations 2000.

This high value was a result of the higher than permitted nitrate levels in the water supplied by Churchill Water Treatment Works, which was the major feed to the reservoir.

As a result, the treatment works was removed from supply and the water feeding the reservoir is currently made up of a blend of water from other sites.

Some of the mitigation methods are long term measures, such as the on-going investigations of the possibility for employing catchment management methods to manage future nitrate levels in the Cambridge Water catchments (see business strategy on Protecting the environment).

These control methods are the Company's way of managing future water quality.

Managing Risks

In order to mitigate risks posed to the network, the Company identifies all possible known risks throughout its entire water supply system.

This involves identifying risks that exist in the water catchment, at treatment works, in reservoirs, throughout the distribution system and at customers' taps.

Any risks identified are reviewed and regularly monitored as part of the Company's Drinking Water Safety Plans.

It is these Drinking Water Safety Plans that drive the water quality programme for the business, as they identify where a potential risk at one point of the supply system can impact on the water quality received at customers' taps.

Monitoring Quality

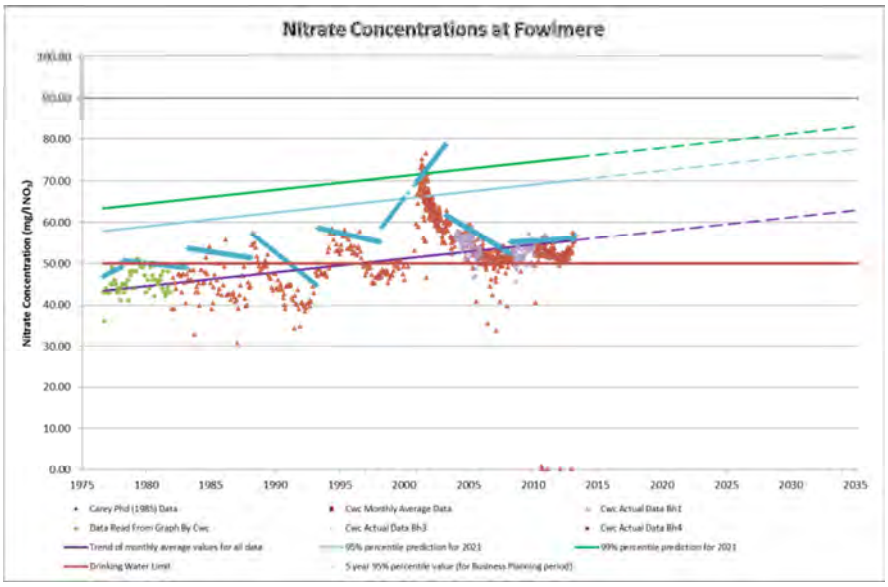
The Company monitors water quality at many locations throughout its water supply system by adopting a rigorous sampling programme, enhanced by continuous monitoring instruments at key locations.

Through this monitoring programme the Company is able to identify any existing or forthcoming water quality concerns.

The following have all been identified as challenges for the Company in meeting the wholesome criteria during AMP6:

- **Lead** - in a number of water quality zones lead samples have exhibited concentrations that are above the future permitted threshold of 10 µg/l, which is being introduced in December 2013.

- **Nitrates** – the Company has several sites where the raw water nitrate concentrations are making it difficult for it to be confident of supplying water below the permitted threshold of 50 mg/l.



- **Metaldehyde** – the removal of metaldehyde, a pesticide that enters the water course by use of slug pellets in agriculture, continues to be difficult. Its presence in the raw water at two of the Company's largest sites regularly causes treated water samples to be above the 0.1 µg/l threshold.

- **Trihalomethanes** - trihalomethanes (THMs) are the unwanted bi-products of disinfecting the water.

The Company wishes to adopt a mixture of solutions to control these risks and proposes to adopt a combination of engineering solutions, which will provide effective mitigation against the risks once constructed, and investigative approaches, which will have an impact over a longer term.

Responsiveness to Customer Contact

While the Company is aware of its regulatory obligations regarding to water quality, it is also aware of its requirements to address customer concerns and complaints. The Company is committed to responding to any contact from either household or non-household customers should the need arise to assess water quality outside of its normal monitoring processes.

Balancing Cost and Investment

The Company recognises that in addition to investment costs associated with dealing with risk, there may also be an environmental cost, in terms of the amount of energy used/ carbon generated. The Company seeks to balance these issues when proposing technical solutions.

South Staffs Water

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CAMBRIDGE WATER COMPANY

Leakage Business Strategy

December 2013

Overview

The Company acknowledges that leakage is an important issue for customers and other stakeholders, as well as the wider environment and community. A key Company objective is to operate in line with the sustainable economic level of leakage (SELL) targets.

The Company's approach to leakage management is one of continuous development, incorporating innovative opportunities where appropriate and improving operational efficiency and knowledge to enable lower leakage levels to be achieved over the longer term and in a sustainable way.

As the South Staffs and Cambridge regions are discrete Water Resource Zones they are discussed separately in the sections below, identifying a common approach but two separate SELL targets.

Additional detail can be found in the section on Maintaining the Serviceability of Network Assets.

AMP5 Leakage Performance

AMP5 to date has seen markedly different weather conditions that have impacted significantly on the levels of leakage reported. The winter of 2010/11 was extreme, resulting in significant increases in leakage; however this was managed well in both regions, using the lessons learnt from the previous year's harsh winter.

This meant both regions were still able to meet their targets despite the severity of the weather impact. The following two years in 2011/12 and 2012/13 were characterised by generally benign winter conditions. 2011/12 was dry, with drought conditions across some areas of the UK. In 2012/13, wet weather limited the leakage breakout during the summer, the subsequent winter was longer than normal but not as harsh as in 2010/11 and although the annual average level remained low, the exit leakage levels were higher than seen in the previous two years.

The reported leakage level for both regions over the last five years is shown in the table below, together with the regulatory targets (in Ml/d), confirming the unusually low levels during the last two years.

Region	2008/09	2009/10	2010/11	2011/12	2012/13
CAM (Target)	14.00	14.00	14.00	14.00	14.00
CAM (Actual)	13.95	14.17	13.68	12.39	12.36
SST (Target)	75.00	75.00	74.40	74.40	74.40
SST (Actual)	74.25	74.43	72.83	68.17	65.25

Current Leakage Management Strategy

The Company's strategy is to manage leakage levels to achieve the SELL target. This is achieved through a number of activities, including:

- Active leakage control (ALC) - covering operational leakage detection, location and repair, using DMAs to improve operational targeting
- Pressure management - new schemes as well as optimisation and maintenance of existing installations
- Asset management - including mains and service pipe renewals
- Customer supply pipe policies

District Meter Areas

The Company's district meter areas (DMAs) form the core tools for effective and efficient targeting of resources and investment. There are 523 DMAs in the South Staffs region and 93 DMAs in the Cambridge region and data is collected from 99.7% of DMAs in the South Staffs region and 100% in the Cambridge region on a daily or more frequent basis. This data is used to target DMAs for active leakage control (ALC) intervention.

As a minimum active leakage control is undertaken in each DMA at least once every 12 months. But in the main, data from DMAs is used on a continuous basis to instigate additional reactive interventions where required, to maximise the efficiency and performance of available ALC resources to achieve the SELL targets.

Customer Supply Pipes

Around a third of leak repairs are carried out on customer supply pipes. Both regions carry out active leakage control to identify leakage on customer supply pipes. The Company has free leak repair schemes (or subsidy towards replacement, South Staffs region only), as set out in the Codes of Practice. Customer supply pipe leakage is also identified via customer reports and through meter installation.

Repair Times

Repair run times for both reported and detected leaks are monitored and managed to ensure delivery of the short run SELL. Reported leaks are an important aspect for customers, being that they are usually the visible leaks. The Company response times to these are important to balance leakage performance, customer perception of waste and customer satisfaction.

Leakage Upstream of DMAs

Also, to support improvements to the efficient short term operational strategy of ALC, and to help manage leakage over the longer term the Company undertakes active leakage control surveys to identify leakage upstream of DMAs.

Trunk main network operational meters are used to assess areas of potential leakage, however, it is recognised that there is some uncertainty regarding the accuracy of leakage assessments upstream of DMAs. Investment in AMP4 and AMP5 in the South Staffs region has been undertaken to improve metering to reduce this uncertainty. Further improvements in AMP6 and beyond are forecast to continue to provide a more effective and efficient approach to monitoring and targeting leakage upstream of DMAs. In the Cambridge region,

bi-annual waste tests are also carried out for areas/trunk mains that are not wholly contained within DMAs.

Pressure Management

A further programme of pressure management in the South Staffs region during AMP5 is nearing completion. This was justified to counteract an increase in the natural rate of rise (NRR) of leakage forecast over AMP5, and is considered to have been successful.

Mains Renewal Programmes

Both regions carry out mains renewal programmes to maintain serviceability. Without these activities leakage would increase. Therefore, although these may be driven primarily to maintain asset serviceability in relation to burst mains, they are also a key activity in managing leakage and halting the NRR effect observed in ageing mains infrastructure.

Innovation

The Company has also undertaken a series of trials in AMP5 to support the development of longer term business strategies in terms of leakage identification and management, metering and asset management. These included fixed radio network trials to gather data to continue to improve the understanding of supply pipe leakage, household consumption and night use as well as start to assess longer term benefits of different metering strategies in relation to leakage management.

The Company will continue to review leakage management options and innovation opportunities to improve efficiency and knowledge to reduce the SELL over the longer term, but at this stage further leakage reductions are not currently economic.

Customer Research

The Company recognises the importance customers place on leakage. A desire to improve leakage levels regularly appears in the top three desires for customers in the MVA research, focus groups and online panels.

However, this needs to be balanced against the fact leakage levels are already around the economic level and there is a general impression among customers that the Company finds and fixes leaks efficiently. This was proven at a focus group held in the South Staffs region, and when explained the importance of leakage dropped as a future priority.

While both household and non-household customers attach a value to further reductions, analysis of willingness to pay results indicate there is no economically viable case for going beyond the Company's current leakage control activity. In the South Staffs region customers were willing to pay £0.36 to reduce leakage by 10 Ml/d. In the Cambridge region where the leakage target is 14 Ml/d, this figure increased to £6.32 for 3.5 Ml/d.

"… quite regularly you see the guys [in villages] with the listening stick or whatever it is walking around. So [they're] obviously on the ball with regards to the leaks." (St Ives household customer, ABC1)

This is further supported by MVA research which shows only one in four customers would support this policy.

AMP6 SELL Methodology

Both regions have assessed the SELL using regional specific data, but with a common methodology and review process to provide a consistent approach. This approach is in line with the guidelines set out in the Review of the Calculation of Sustainable Economic Level of Leakage and its Integration with Water Resource Management Planning[1] and the respective Draft Water Resources Management Plans submitted in March 2013[2] and the Final Water Resources Management Plans. In previous assessments of the SELL, WRc's generic APLE model had been used. For the current revision in 2013, one of the most significant changes in methodology has been the development of a Company specific relationship between leakage management costs and the level of leakage. The Company utilised Beal Consultants to provide general support and challenge, as well as an overall review of data and approach to ensure this assessment was robust[3,4]. This approach has been utilised in both regions.

The Company analysis used the marginal cost of water production as forecast for 2015/16, and inflated the latest available leakage management cost and performance data to 2015/16. The analysis takes into consideration external factors such as social and environmental impacts and the cost of carbon.

South Staffs Region - Sustainable Economic Level of Leakage

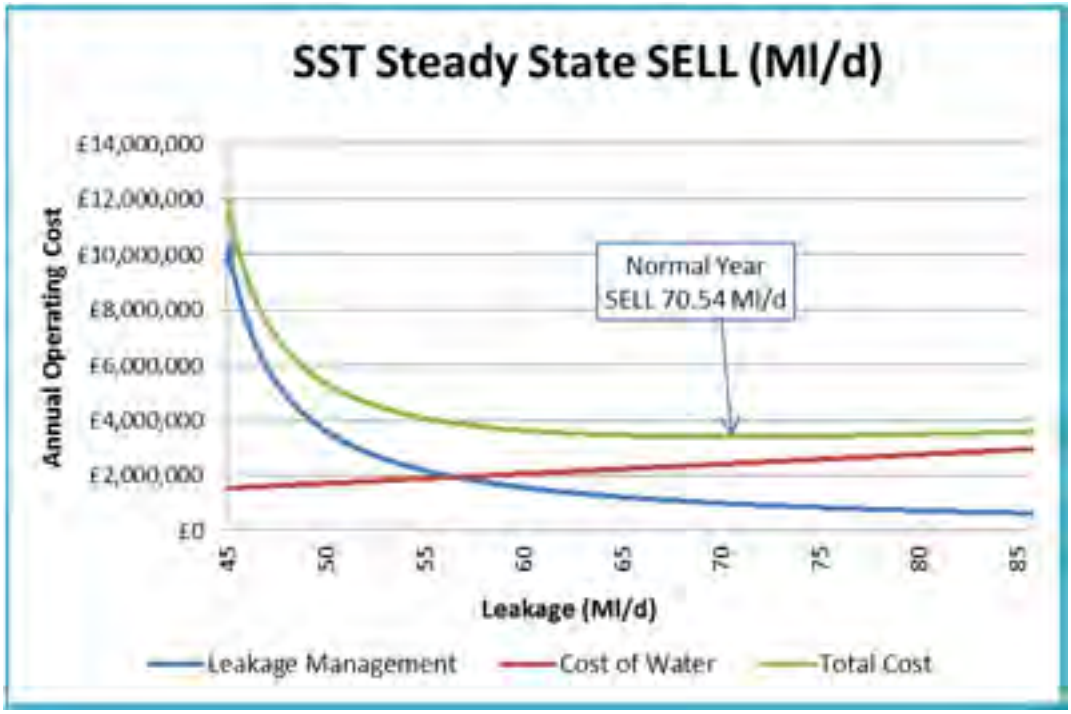
The resulting steady state SELL for a normal year is 70.54 Ml/d. The peak in operational leakage during an extreme winter and associated recovery adds 2.71 Ml/d to the normal year SELL. Therefore a fixed leakage target for AMP6 to cover all expected weather impacts would be 73.25 Ml/d. The SELL assessed at PR09 was 74.40 Ml/d for comparison. The proposed "like for like" AMP6 target is therefore 1.15 Ml/d lower than for AMP5. The steady state normal year SELL of 70.54 Ml/d represents the lowest total operating cost shown in the chart below.

[1] Environment Agency, Ofwat, Defra (2012). Review of the Calculation of Sustainable Economic Level of Leakage and its Integration with Water Resource Management Planning.

[2] Draft Water Resources Management Plan (South Staffs Water and Cambridge Water), 2013.

[3] Beal Consultants, Review of SELL modelling for Cambridge Water, 2013

[4] Beal Consultants, Review of Sustainable Economic Level of Leakage for South Staffs Water, 2013



As a relatively consistent level of resource was maintained in this region over recent years, a small transition is considered to have already been delivered during 2011/12 and 2012/13 due to two successive benign winters as well as a need to manage leakage levels during a dry year. As a result the South Staffs region calculated SELL value of 73.25 Ml/d for an extreme winter is considered achievable going forward without the need for additional investment to make the transition from the AMP5 target of 74.40 Ml/d.

It is proposed that the SELL is set as a range for AMP6, rather than a fixed regulatory target as currently is the case in AMP5, to enable lower leakage targets for normal years and more efficient operations. On this basis, the South Staffs region would expect to achieve a leakage level of 70.54 Ml/d for a normal year. Using the impact of different weather scenarios on the level of leakage, the upper bound of this range would be 73.25 Ml/d and the lower bound 64.36 Ml/d. These scenarios have been developed using different operational profiles of leakage for summer and winter events, linked to weather impacts observed in recent years, and assessing the likelihood of these events occurring again in the future.

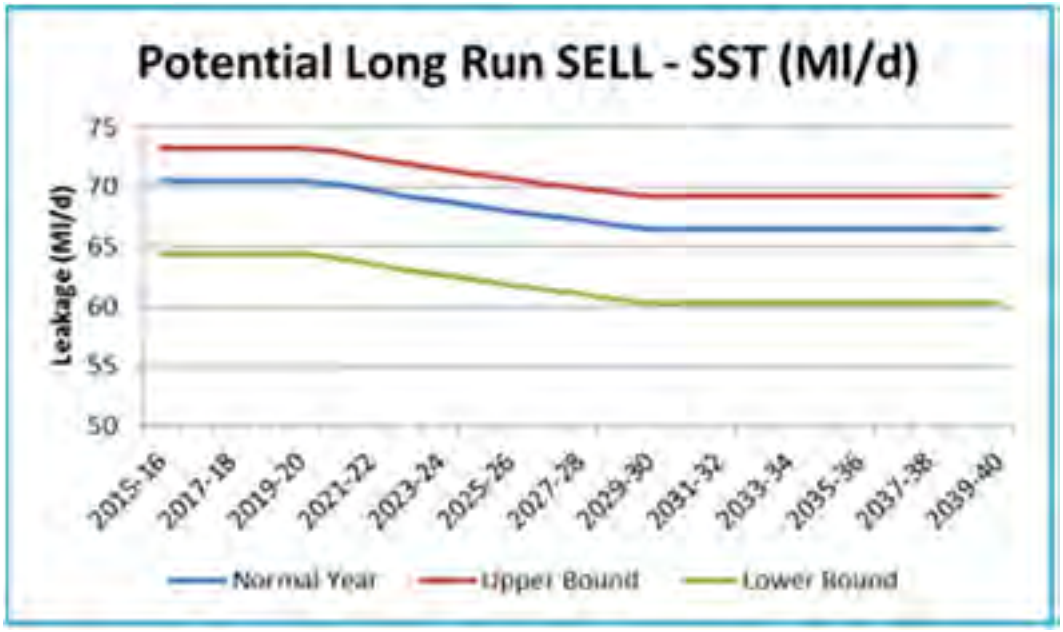
The winter event of 2010/11 forms the basis for an extreme winter scenario. Through analysis of over 100 years of weather data, the return period for a winter event of this magnitude is around 1 in 10 years, although the occurrence of these events is largely irregular.

The lower bound is based on a benign winter which reduces the breakout of leakage through less freeze/thaw events. This scenario, in conjunction with a wet summer, is likely to suppress leakage levels further. In the context of setting the SELL as a range, the benign winter and wet summer could reduce the normal year SELL by 6.2 Ml/d (i.e. the difference between 70.54 Ml/d and 64.36 Ml/d). Recent winters have been relatively benign, particularly those in 2011/12 and 2012/13, resulting in lower leakage levels.

A range of longer term factors such as network deterioration, population growth, increased metering penetration, cost of carbon, pressure management, metering, improvements in

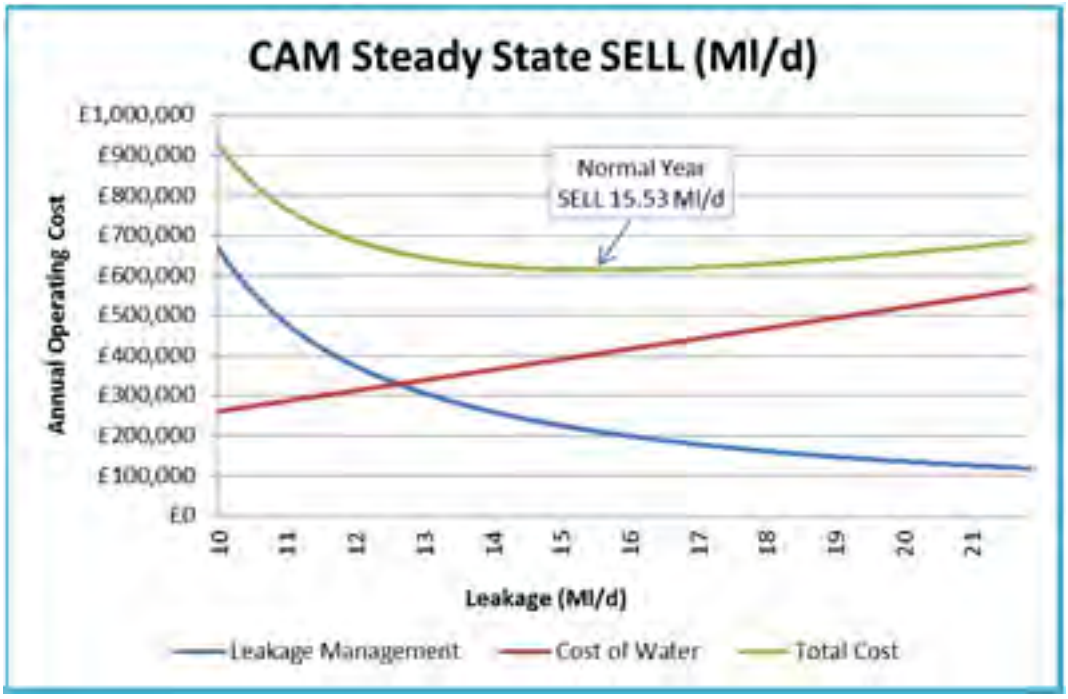
assessing leakage upstream of DMAs, and mains renewal have all been considered, to understand their long term impacts on managing leakage. The net forecast effect of these factors is presented in the chart below and represents a potential reduction in economic levels of leakage in the future, outside of the AMP6 period. In AMP6 there is no net overall change from the short run SELL values described above. However, a potential reduction in the economic level of leakage in AMP7 may be appropriate due to the impact of the current forecast cost of carbon during this period.

It is recognised that the short and long run SELL should be fully re-assessed at least every five years in line with the Price Reviews, to ensure the latest cost and benefit information is used. However, this latest analysis indicates the potential reduction in the longer term SELL, based on current information.



Cambridge Region - Sustainable Economic Level of Leakage

The steady state short run SELL for the Cambridge region is 15.53 Ml/d. This is the lowest total operating cost as shown in the chart below.



The AMP5 regulatory leakage target of 14.00 Ml/d is significantly below the assessed SELL. Water Resources Management Planning guidelines identify that future total leakage should not increase above AMP5 target levels. As a result, for AMP6 the Company is proposing to target a leakage level performance commitment in the Cambridge region of 14.00 Ml/d, but recognises that as a result of the impact of extreme weather it is appropriate for leakage levels to vary above or below this target on occasion to maintain efficient operations.

To effectively and efficiently manage this variation the Company is proposing to set a leakage target range, consisting of upper and lower bounds around the target performance commitment. However, the Company would, on a long term average, expect to report leakage levels at or below the proposed performance commitment of 14.00 Ml/d.

The upper and lower bounds of the leakage target have been established based on the impact of previously experienced weather events on the proposed performance commitment.

As the proposed performance commitment is already below the assessed SELL, an upper bound leakage target of 14.20 Ml/d is proposed, as part of a leakage target range to cover an extreme winter impact. This is considered appropriate, as it is already below the SELL, and minimises the need to operate even more uneconomically to provide excessive headroom to cover for extreme winter events.

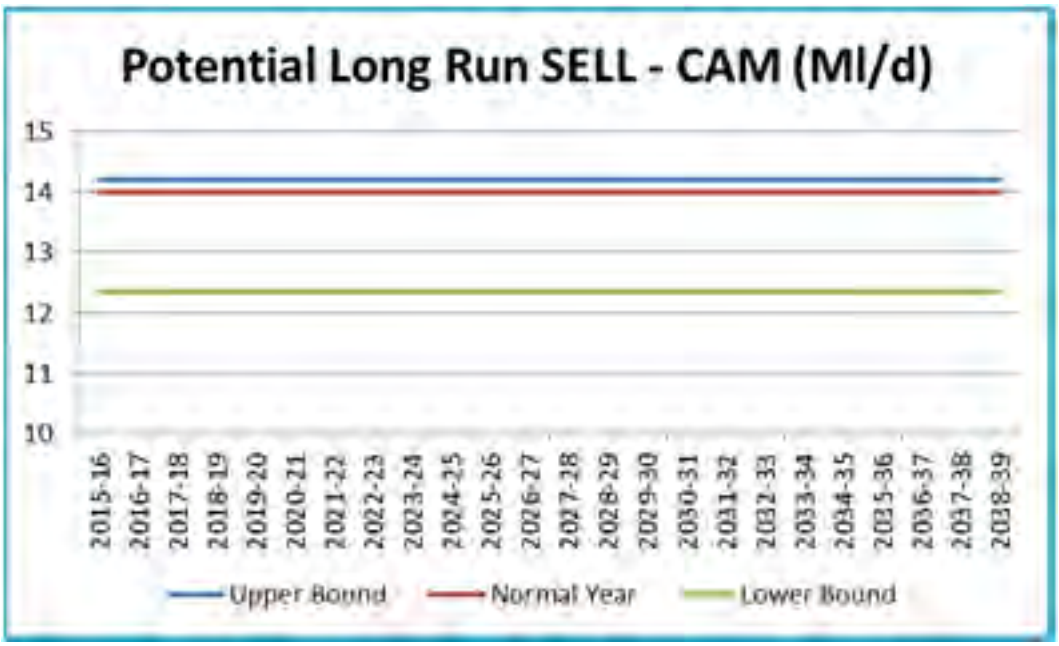
2012/13 was very wet, with a benign winter, and therefore is indicative of the level of leakage that can be achieved with more favourable weather conditions. Therefore the lower bound leakage target of the range would be set at 12.36 Ml/d.

Results from the FWRMP indicate that there will be no water resource headroom deficit over the planning period; therefore there is no economic driver to reduce leakage further, below

the steady state short run SELL. However, the Company's approach to leakage management is one of continuous development, incorporating innovative opportunities as appropriate, to improve operational efficiency and knowledge to enable lower leakage levels to be achieved over the longer term in a sustainable way.

In terms of long run options for leakage management there is minimal scope for economic pressure management in the Cambridge region due to the topography, and constraints regarding network configuration. However, as the region is in an area of the country that is water stressed, these options will continue to be reviewed periodically. A number of improvements to current problematic DMAs are to be undertaken to increase operational efficiency, with the net impact aimed at mitigating any leakage increase from ageing infrastructure assets.

As a result, as shown in the chart below, current forecasts for the long run SELL do not indicate any change from the currently proposed leakage target range and performance commitment. This will however be kept under regular review to ensure this remains appropriate, especially if there is any change in supply demand balance headroom or operational costs or benefits.



AMP6 Strategy

The overall strategy for the Company is to manage leakage at or below the SELL.

The Company approach to assessing the SELL is considered to be in line with the guidelines set out by Defra, the Environment Agency and Ofwat[5]. A more detailed breakdown of the Company's compliance with these guidelines is set out in Maintaining the Serviceability of Network Assets.

[5]Environment Agency, Ofwat, Defra (2012).Review of the Calculation of Sustainable Economic Level of Leakage and its Integration with Water Resource Management Planning.

For the South Staffs region, the strategy is to manage leakage at the SELL. In the Cambridge region, as leakage is already below the SELL, the strategy is to prevent it from rising above the proposed performance commitment based on the AMP5 regulatory target.

Leakage management is an important issue for customers and other stakeholders. As a result this was widely discussed as part of the Company's customer engagement activities to establish future customer priorities as part of the overall PR14 process.

Whilst customer research identified a desire and general support for the Company to operate at lower levels of leakage, particularly when this subject was discussed in isolation, when considered in relation to the overall impact on the bill, they were unwilling to pay for reductions due to wider affordability concerns.

Neither region is forecasting any deficit in terms of water resources headroom over the next 25 years starting from 2015/16. Therefore, there is no economic driver to reduce leakage further. However, long run options for leakage management have been explored to understand the costs and benefits associated with these, to understand if customer support and willingness to pay would have made any of these options viable.

The Company's approach to leakage management during AMP6, to achieve the proposed targets, would follow that used during AMP5.

In addition to the activities required to maintain the short run SELL, long run options for leakage management have been assessed for inclusion in the Company's Business Plan. The following leakage management options are proposed to continue to achieve the SELL, and provide increased knowledge to support further sustainable leakage reductions in future AMP periods, in line with customer expectations:

- Additional pressure management, where assessed as economic and practical to implement.
- Further enhancement to operational metering, to improve assessment and location of trunk main and service reservoir leakage.
- DMA improvements to increase the operational efficiency in a small number of problematic DMAs, while also incorporating more individual household monitoring in some areas to improve the assessment of night use, particularly in terms of providing seasonal data.
- Mains rehabilitation to maintain asset serviceability, and where appropriate synergies in leakage benefits will also be explored.
- On-going maintenance and replacement of DMA meters, PRVs and data loggers, to maintain current operational efficiency and effectiveness.
- Continuation of the current strategy of trialing emerging technology, as appropriate, to support improvements to future operational efficiency.
- Investment in one of the Company's larger supply zones through a more concentrated deployment of technology, with a key driver being to assess the longer term benefits of leakage management as a result of technology such as fixed radio networks, permanent noise logging or trunk main and surge monitoring, as part of an integrated smart network approach.

This approach should enable the Company to continue to achieve the SELL targets during AMP6 and over the longer term. The approach adopted by the Company is delivered in a

way that ensures it meets customer expectations, as some of the activities such as mains rehabilitation can have a disruption factor for customers and the community. The whole of this strategy is delivered in a way which achieves the outcomes of the business.

Proposed AMP6 Leakage Targets

The Company proposes that leakage targets for AMP6 are set as a range, to take account of the impact extreme weather conditions can have. This will enable lower leakage targets for normal years, while also reflecting the need for the Company to operate in an efficient manner during periods of extreme weather impact. This will result in improved leakage performance and lower customer bills over the longer term.

The table below sets out the proposed leakage targets (in Ml/d) as a range of upper and lower bounds around the performance commitment for a normal year for both regions.

Scenario	2015/16	2016/17	2017/18	2018/19	2019/20
SST Upper Bound	73.25	73.25	73.25	73.25	73.25
SST Normal Year Performance Commitment	70.54	70.54	70.54	70.54	70.54
SST Lower Bound	64.36	64.36	64.36	64.36	64.36
CAM Upper Bound	14.20	14.20	14.20	14.20	14.20
CAM Normal Year Performance Commitment	14.00	14.00	14.00	14.00	14.00
CAM Lower Bound	12.36	12.36	12.36	12.36	12.36

The performance commitments in the above table represent the revised and reduced AMP6 normal year SELL for the South Staffs region (70.54 Ml/d), and uses the AMP5 regulatory leakage target for the Cambridge region (14.00 Ml/d) as this is already significantly less than the assessed SELL of 15.53 Ml/d. The Company's objective is to target leakage management activities to achieve these performance commitment levels, but recognises that as a result of the impact of extreme weather it is appropriate for leakage levels to vary above or below these targets on occasion to maintain efficient operations. This is covered by the proposed target approach using upper and lower bounds around the performance commitment. However, the Company would, on a long term average, expect to report leakage levels at or below the proposed performance commitments in both regions.

The upper and lower bounds for the leakage targets have been established based on the impact of previously experienced weather events on the proposed performance commitment leakage levels.

The leakage target values in the above table are also aligned to the Outcome incentive (penalty and reward) trigger proposals in the Company's PR14 business plan. For the South Staffs region the upper bound leakage target represents the same trigger level (73.25 Ml/d) for a penalty payment, while the lower bound leakage target represents the same trigger level (64.36 Ml/d) for a reward payment. In the Cambridge region, as the proposed performance commitment is already below the assessed SELL, the trigger level for a penalty payment (14.50 Ml/d) is higher than the proposed upper bound leakage target (14.20 Ml/d).

To balance this, the trigger level for a reward payment (12.00 Ml/d) is lower than the lower bound leakage target (12.36 Ml/d) to make the achievement of a reward more difficult. The incentive (penalty and reward) trigger levels use a 3 year rolling average.

As identified, the Company's preference is for future regulatory leakage targets to be set as a range, with the proposed AMP6 values shown in the table above. If however, it is decided that future regulatory leakage targets are to continue as spot values, the Company would propose the use of the upper bound leakage targets. The use of a leakage target range, with an associated performance commitment, is considered the most appropriate way forward as this enables lower leakage targets to be set for normal years, while also reflecting the need for the Company to operate in an efficient manner during periods of extreme weather impact. This will result in improved leakage performance and lower customer bills over the longer term, and aligns with customer and other stakeholder expectations.

South Staffs Water

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CAMBRIDGE WATER COMPANY

Outcome Delivery Incentives

Business Strategy

December 2013

Executive Summary

The Company has designed a package of incentives which reflects its commitment to the five outcomes.

Excellent water quality
(now and in the future)

Secure and reliable supplies
(now and in the future)

An excellent customer experience
to customers and the community

Operations which are environmentally
sustainable

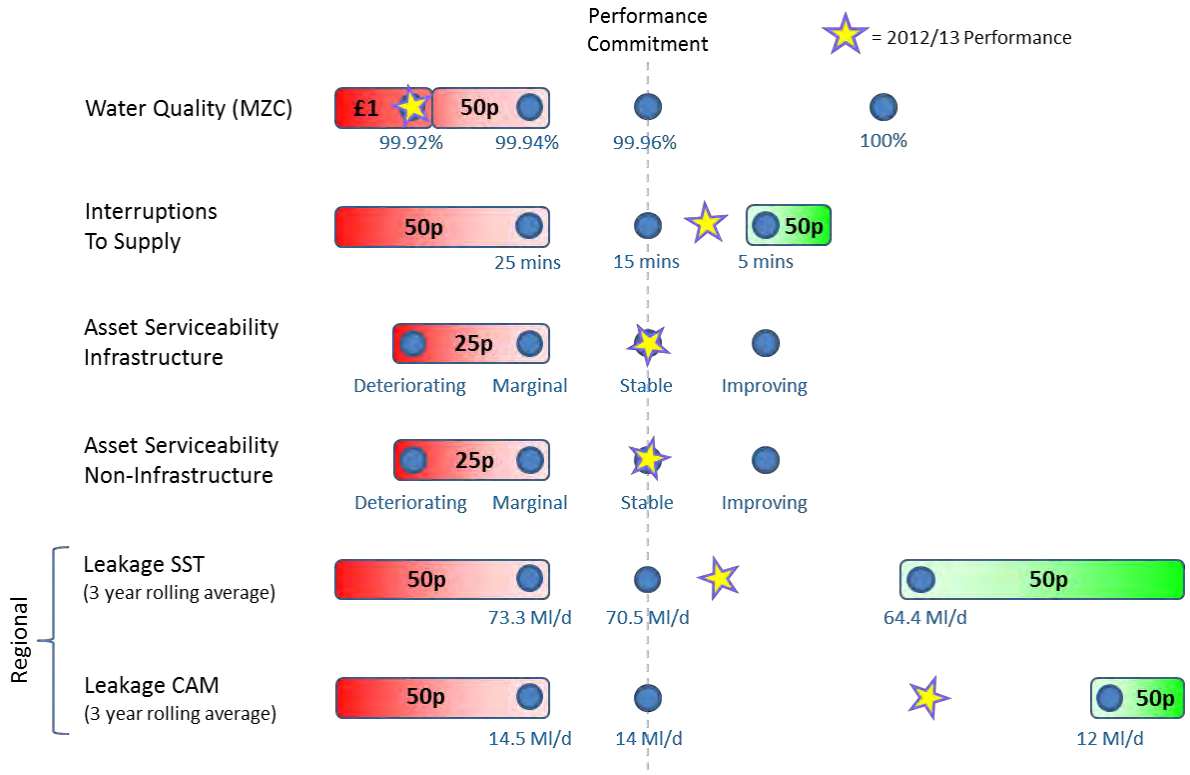
Fair customer bills and fair
investor returns

The penalty package, excluding SIM, is worth a total of £1.64 million (£2.50 per household customer). This incentivises the Company to deliver the performance commitments set out whilst ensuring that the penalties are not set so unreasonably high to encourage focus on these measures above all else. This is the right balance so that the business can be operated efficiently and effectively, which is in the long term interests of customers.

The reward package, excluding SIM, is worth a total of £0.66 million (£1.00 per household customer). This is substantially lower overall than the proposed penalty package. This is right as the plan is predominantly a maintenance plan. Customer research has shown that customers are happy with the current service level and that they wish this to be maintained. It is therefore right that unwanted service improvements are not imposed on customers in order to claim additional rewards. The measures set out in the rewards package are those which customers have said that they value and for which there is some room to make improvements in the future through innovation and improved operational productivity.

There are also has a range of reputational incentives which reflect the company vision and these will continue into the long term beyond AMP6.

The following diagram shows the overall package of incentives proposed, along with the current performance level. All measures are for the combined SST and CAM regions, with the exception of leakage which remains split by region.



All of the incentive values have been derived from willingness to pay values in the first instance, with the exception of serviceability which has been based on the shortfalling method available to Ofwat at previous price reviews. For simplicity however the initial derived values have been rounded to give final values of 25p, 50p or £1. The Board felt that this was appropriate in order to present a package of incentives that was presentable to its CCG and customers.

Contents

1. Introduction

The package of penalty, reward and reputational incentives proposed in this business strategy has been developed with the following objectives:

- Provide robust protection for customers against underperformance of the committed targets;
- Be affordable for the business as a package, when considered alongside cost performance incentives;
- Ensure that those elements of service which customers value the most are incentivised;
- Take account of penalties and incentives already in place from other regulators;
- Provide an appropriate and fair balance of reward and penalty;
- Provide for appropriate rewards for innovation where there is customer support; and
- Be clear to customers, transparent to regulators and simple to operate for the business.

Willingness to pay survey data has been used as a basis for calculating the incentive values where possible. This has required translations in some cases as the willingness to pay data did not always correlate exactly with the measures of success. Qualitative data from other customer engagement activity has also been used to ensure that the incentives themselves are appropriately balanced towards those elements of service which customers' value. For example, water quality is valued highly and so this incentive is the highest value incentive.

In total the package of penalty incentives developed (excluding SIM) is worth £1.64 million per annum (£2.50 per customer); and the package of reward incentives (excluding SIM) is worth £0.66 million per annum (£1.00 per household customer). The penalty incentives are greater than the reward incentives, as the plan is predominantly a maintenance plan and therefore it is right that incentives are geared more towards penalties for underperformance than rewards for outperformance, which customers have generally said they do not want. Reward incentives have been developed for supply interruptions and leakage only, as these are areas that customers value and which have scope for outperformance within the AMP6 period though innovation and improved operational productivity.

2. Outcomes and Performance Measures

A full commentary of the customer engagement journey followed by the Company for this price review can be found in the Customer Engagement accompanying document.

The Company has extensively used its willingness to pay surveys and other customer engagement processes, including its Customer Challenge Group, in the design of the outcomes, performance measures and incentives for the PR14 business plan.

The five outcomes the Company has identified are those that were found, through extensive research, to be of the most important to the Company's customers. Once research was complete and the five draft outcomes were identified, consultation was carried out with the CCGs who endorsed their selection but encouraged a bolder approach to the environmental commitments and to reflect the role of the Company in the local community. These challenges led to revisions to the outcomes. The emphasis made on the long term is deliberate since this is important to customers. The five outcomes featured in the Draft Business Plan and in the Long Term Strategy consultations to provide further re-assurance from customers that the right ones were selected.

Following the consultations, the Company adapted the five outcomes accordingly to the final five which were carefully worded by the Board:

Excellent water quality
(now and in the future)

Secure and reliable supplies
(now and in the future)

An excellent customer experience
to customers and the community

Operations which are environmentally
Sustainable

Fair customer bills and fair
investor returns

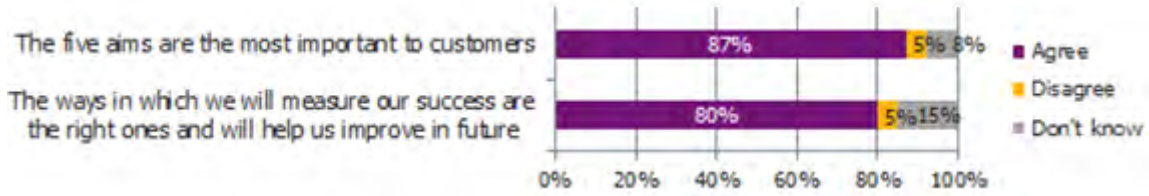
The performance measures that will be used to measure the outcomes were initially developed after the first piece of major customer research where customer priorities and service valuations were attained. This research allowed the Company to develop measures that were important to customers.

The key principles adopted by the Board in defining these measures were:

- The measures selected are stretching and reflect the standards customers and stakeholders expect from a high performing company;
- They have been discussed and challenged by the CCG and developed accordingly. The likelihood of rewards and penalties being triggered is realistic against real measures of service failure or improvement;

- The Board was keen to reassure customers that the high standards achieved will be maintained for the long term; and
- The majority of measures are set as a Company-wide target. The exception is the leakage measure that has a regional split due to different resource zones, historic position and resource challenges.

The Company has carried out acceptability research which includes the outcomes and performance measures. The following extract from that research shows that customers have a high acceptability for both the outcomes and performance measures:



The Board selected six measures for a potential penalty and three for a reward (including Ofwat's SIM). The remaining measures were either long term or reputational in nature. The Board considered this is an appropriate balance, reflecting customer priorities and showing commitments to both customers and stakeholders on important service metrics whilst offering an incentive for improvements to be encouraged in the future.

The joint CCG considered the rewards and penalties. They were less keen on the principle of rewards. In terms of the penalties, they encouraged the Company to base these on targets that offered a realistic chance of being breached, even if they meant that the financial valuation of the penalty was less significant. They preferred this to a scenario whereby the financial penalty was high but the probability of it being paid was very low. This engagement was considered and the Board re-assessed the performance commitments and the trigger levels of the rewards and penalties proposed. The CCG also wished to see any penalties and rewards applied at the next price review when all were known, rather than the possibility for bills to vary each year.

In response to representations from the CCG, the Company made two penalties more likely to be triggered, one reward harder to achieve and another initial proposal for a reward was dropped.

In setting the incentives for the agreed performance measures, the Company has utilised both the quantitative and qualitative elements of its willingness to pay research extensively. More information on how the incentive rate has been derived for each measure can be found further into this commentary.

The overall package of outcomes, performance measures and reward and penalty incentives were presented to the CCG task group and to the final CCG meeting before submission. The package was accepted with no further challenges presented.

3. Incentive Summary

3.1 Penalties

The table below summarises the package of penalty incentives:

Outcome	Measure of Success	Measurement Period	Region	Performance Commitment	Penalty Deadband	Penalty Collar	Band	Annual Value
Excellent water quality now and in the future	Mean Zone Compliance (MZC)	Annual	SSC	99.96%	99.94%	99.90%	1) 99.94% ≥ x > 99.92%	£0.50
							2) 99.92% ≥ x	£1.00
Secure and reliable supplies now and in the future	Interruptions to supply	Annual	SSC	15 minutes	25 minutes	n/a	1) x ≥ 25 minutes	£0.50
	Asset Serviceability Infrastructure	AMP6 (2015-2020)	SSC	Stable	Marginal	n/a	1) x = Marginal or Det'ing	£0.25
	Asset Serviceability Non-Infrastructure	AMP6 (2015-2020)	SSC	Stable	Marginal	n/a	1) x = Marginal or Det'ing	£0.25
An excellent customer experience to customers and the community	Service Incentive Mechanism (SIM)	Ofwat will determine the penalty associated with the SIM assessment.						Ofwat will determine
Operations which are environmentally sustainable	Leakage (SST Region)	3 year rolling average	SST	70.54 Ml/d	73.3 Ml/d	n/a	1) x ≥ 73.3 Ml/d	£0.50
	Leakage (CAM Region)	3 year rolling average	CAM	14 Ml/d	14.5 Ml/d	n/a	1) x ≥ 14.5 Ml/d	£0.50
Fair customer bills and fair investor returns	Application of profit sharing mechanisms if external benefits arise (windfalls)	Annual	SSC	Each year the Board will review if any external financial windfalls have been experienced and whether to share these with customers through either lower bills or greater investment. Examples are high inflation, low interest rates, taxation changes etc. A 50:50 sharing approach is envisaged.				To be quantified when these circumstances arise

3.2 Rewards

The table below summarises the package of reward incentives:

Outcome	Measure of Success	Measurement Period	Region	Performance Commitment	Reward Deadband	Reward Cap	Band	Annual Value
Secure and reliable supplies now and in the future	Interruptions to supply	Annual	SSC	15 minutes	5 minutes	n/a	1) x ≤ 5 minutes	£0.50
An excellent customer experience to customers and the community	Service Incentive Mechanism (SIM)	Ofwat will determine the reward associated with the SIM assessment.						Ofwat will determine
Operations which are environmentally sustainable	Leakage (SST Region)	3 year rolling average	SST	70.54 Ml/d	64.4 Ml/d	n/a	1) x ≤ 64.4 Ml/d	£0.50
	Leakage (CAM Region)	3 year rolling average	CAM	14 Ml/d	12 Ml/d	n/a	1) x ≤ 12 Ml/d	£0.50

3.3 Reputational

The table below summarises the package of reputational incentives:

Outcome	Measure of Success	Measurement Period	Region	Performance Commitment
Excellent water quality now and in the future	Acceptability of water to customers	Annual	SSC	1.9 contacts per thousand population when averaged over both SST and CAM regions.
	Catchment management	End of AMP6	SSC	Completion of a £1 million agreed programme within AMP6 otherwise the funding received from customers to implement these catchment management projects will be logged down at the next price review.
Secure and reliable supplies now and in the future	Water re use in the Cambridge Region	End of AMP6	SSC	Completion of the agreed programme in the CAM region.
An excellent customer experience to customers and the community	Customer satisfaction from independent surveys (not SIM)	Annual	SSC	A score of 4.5 out of 5 when averaged over both SST and CAM regions.
	Customer written complaint levels per 1000 customers	Annual	SSC	2.8 written complaints per thousand customers when averaged over both SST and CAM regions.
	Community activity and engagement with customers	End of AMP6	SSC	Completion of the agreed programme of community activity and customer engagement.
Operations which are environmentally sustainable	Water efficiency programme – household per capita consumption	Annual	SSC	A downward trend (weather adjusted) when averaged over both SST and CAM regions.
	Biodiversity activity	End of AMP6	SSC	Completion of the agreed programme of biodiversity activity.
	Power and carbon use (t CO_2 e/Ml)	Annual	SSC	A downward trend (weather adjusted) when averaged over both SST and CAM regions.
Fair customer bills and fair investor returns	Independent customer surveys of value for money, affordability and fairness	Annual	SSC	A rising trend in customer's views of value for money, affordability and fairness.
	Support for customers in debt	Annual	SSC	Completion of the agreed programme of assistance for customers in debt.

4. Incentive Details - Penalties

4.1 Mean Zone Compliance (MZC)

This measure of success supports the Company's continued commitment to its first outcome, 'excellent water quality now and in the future'. In designing this incentive the role of the DWI as the quality regulator has been considered, in that they have their own set of regulatory powers to incentivise performance.

Incentive details:

Incentive Name:	**Mean Zone Compliance (MZC)**	
Type of Incentive:	Penalty	
Measurement Period:	Annual	
Split by Region:	Combined SSC	
Incentive Parameters:		
Performance Commitment:	99.96%	
Penalty Deadband:	99.94%	
Penalty Collar:	99.90%	
Maximum Incentive Value:	£1.00 per customer	
Bands	1) 99.94% ≥ x > 99.92% 2) 99.92% ≥ x	£0.50 £1.00

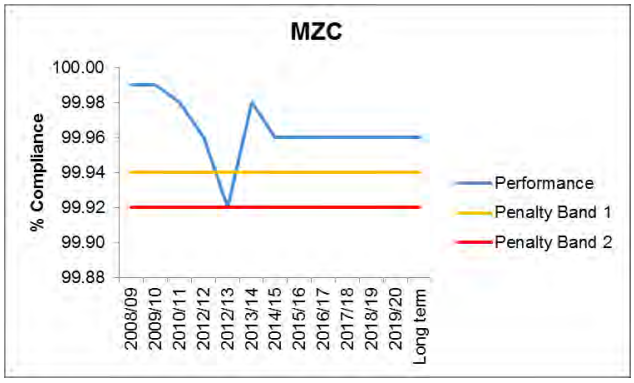
This penalty is appropriate as customers' value water quality very highly, and there are statutory obligations to maintain full compliance with the DWI MZC measure. The Company will always strive towards 100% compliance, however, practically speaking, it is rare for a company to achieve 100% compliance and practicality is needed in accepting that random variations will occur in the random sampling programme which is used to calculate the MZC measure. For this reason the performance commitment is set at 99.96% for each year of AMP6 which is the industry average.

To allow for random variation and events outside of the Company's control which may influence the MZC measure, a penalty deadband of 99.94% has been set for this incentive. To reflect the regulatory powers the DWI have available for enforcement actions on companies which underperform significantly on any area of water quality compliance, a penalty collar of 99.90% has been set for this incentive although this has no effect on the proposed penalty payment.

The incentive rate used for this measure has been based on the Company's willingness to pay survey data. WTP values for boil water notices, discolourations and taste and odour events were obtained, which can be linked to three of the thirty five different parameters used in the MZC calculation. The Company has used its actual MZC data to apportion these WTP values to derive a value for the performance measure as a whole. This was calculated to be £0.44 per customer. The Board felt that a two tier payment was appropriate for this measure as water quality is top priority for customers, and that the value of £0.44 should be rounded up to £0.50 for simplicity and to fit with the rest of the incentive package.

Performance Level (x)	**Penalty**	
99.94% ≥ x > 99.92%	£0.50	50p for the first tier
99.92% ≥ x	£1.00	An additional 50p for the second tier (i.e. £1 total)

The chart below shows the historical performance for this performance measure, along with the future performance commitment and the proposed penalty level thresholds:



4.2 *Interruptions to Supply*

This measure of success supports the Company's continued commitment to its second outcome, 'secure and reliable supplies now and in the future'. It is considered that beyond a reasonable range of performance in this measure, reputational and regulatory aspects will begin to come into play. The Company has therefore been mindful of setting deadbands and a penalty collar which reflects a reasonable working range for this incentive.

Incentive details:

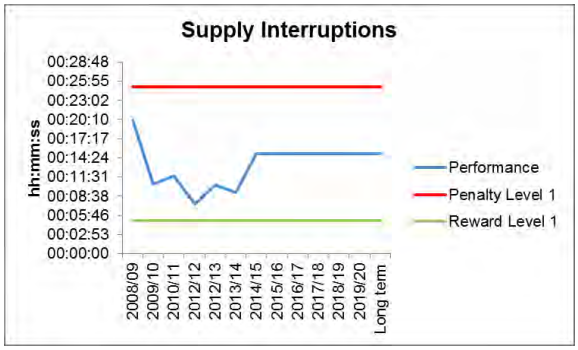
Incentive Name:	**Interruptions to Supply**
Type of Incentive:	Penalty
Measurement Period:	Annual
Split by Region:	Combined SSC
Incentive Parameters:	
Performance Commitment:	15 property minutes
Penalty Deadband:	25 property minutes
Penalty Collar:	n/a
Maximum Incentive Value:	£0.50 per customer
Bands	n/a

This penalty is appropriate as customers value resilient supplies highly, and this measure has been part of regulatory reporting for the past four years. The Company has compared its performance with the rest of the industry and set the penalty level at the upper quartile of industry performance, which is approximately 25 property minutes. If performance deteriorates to this level in any year the Company will commit to making the stated penalty payment. This is a single band payment as it is considered that underperformance beyond 25 property minutes would be increasingly subject to reputational and regulatory impacts.

In the willingness to pay surveys, customers were asked specifically about supply interruptions in terms of properties effected each year in varying duration bands. This data was used to derive the initial rate used for this incentive.

The Company used its actual supply interruptions data to weight the willingness to pay results to arrive at an initial rate of £0.43 per customer. The Board rounded up this value to £0.50 for simplicity and to fit with the rest of the incentive package.

The chart below shows the historical performance for this performance measure, along with the future performance commitment and the proposed penalty level threshold. Please note that this performance measure is also subject to a reward which is also shown on the chart for clarity. Further detail on the reward element for this measure can be found in Section 5.1.



4.3 Asset Serviceability for Infrastructure and Non-Infrastructure

These measures of success support the Company's continued commitment to its second outcome, 'secure and reliable supplies'. Asset serviceability remains a key component of the regulatory process particularly with regard to the Company's statutory obligations to maintain its assets to deliver the required level of service now and into the future. Asset serviceability has been a long standing component of the business planning process and it is considered a valuable tool to gauge how successful the asset stewardship is over the long term.

Consistent with how serviceability is reported in the KPI framework, infrastructure and non-infrastructure have been split into individual measures.

Incentive details:

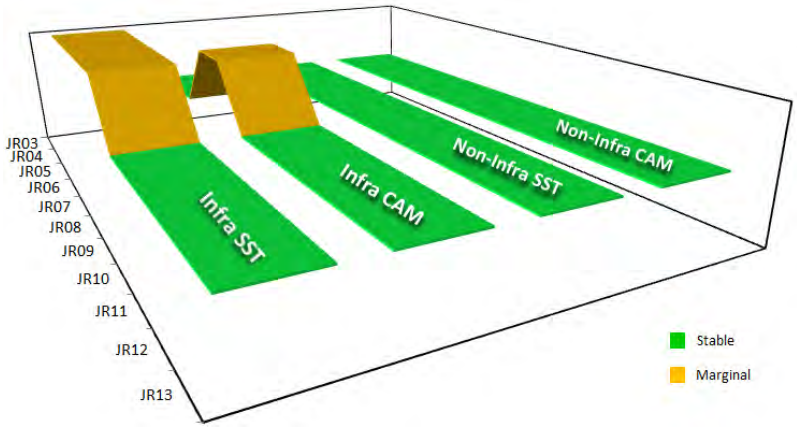
Incentive Name:	Asset Serviceability (Infra)	Asset Serviceability (Non-Infra)
Type of Incentive:	Penalty	Penalty
Measurement Period:	AMP6 (2015 – 2020)	AMP6 (2015 – 2020)
Split by Region:	Combined SSC	Combined SSC
Incentive Parameters:		
Performance Commitment:	Stable serviceability	Stable serviceability
Penalty Deadband:	Marginal	Marginal
Penalty Collar:	n/a	n/a
Maximum Incentive Value:	£0.25 per customer	£0.25 per customer
Bands	n/a	n/a

If at any point in AMP6 a serviceability assessment of marginal or deteriorating for either infrastructure or non-infrastructure is recorded, the penalty of £0.25 per customer per assessment will be incurred.

The Company did not ask a willingness to pay question on serviceability as it would not be an easy concept to put across to customers. The Company has therefore based this incentive on the previously used shortfalling concept. Previously, Ofwat would be able to impose a penalty at each price review if serviceability was not stable, based on a percentage of turnover in the base year. The Company used this approach to derive an initial incentive

value of £0.17 per customer. The Board rounded this up to £0.25 per customer for simplicity and to fit with the rest of the incentive package.

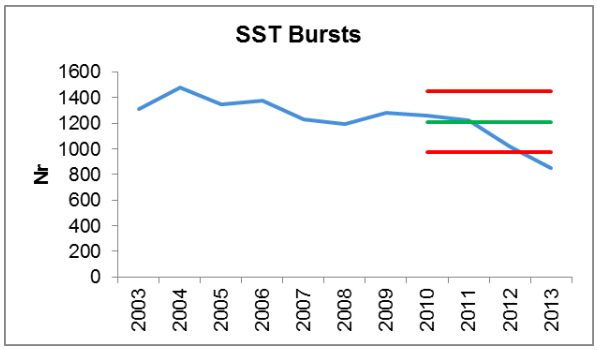
The Company will continue to assess serviceability using the indicators and methodology previously applied by Ofwat prior to handing over the assessment process to companies. The chart below shows that serviceability has been stable for both infrastructure and non-infrastructure, in both regions, for at least the last five years:

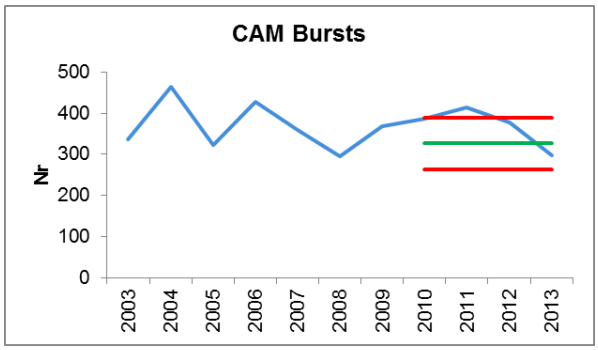


Infrastructure serviceability is measured using a package of six indicators. These are:

- Bursts (nr) – headline indicator
- DG3 Unplanned interruptions to supply greater than 12 hours (nr of properties)
- Iron non-compliance (%)
- Properties below the DG2 reference level for pressure (nr of properties)
- Customer contacts for discolouration per 1000 properties (nr)
- TIM index non-compliance (%)

The headline indicator for infrastructure serviceability is considered to be bursts, although all indicators are given weight in the annual assessment of serviceability appropriate to circumstances which have occurred within the assessment year. Performance on bursts in the two regions is shown below along with the reference and control levels agreed at PR09:

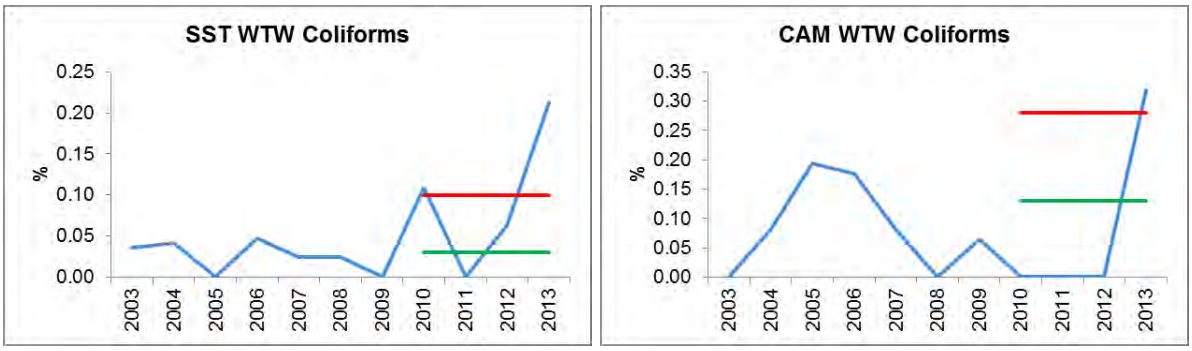




Non-infrastructure serviceability is measured using a package of five indicators. These are:

- Water treatment works coliform samples failing (%) – headline indicator
- Service reservoir coliform samples failing (%)
- Water treatment works turbidity where 95th percentile is greater than 0.5 NTU (nr)
- DWI microbiological enforcements (nr)
- Unplanned maintenance work orders (nr)

The headline indicator for non-infrastructure serviceability is considered to be water treatment works coliforms, although all indicators are given weight in the annual assessment of serviceability appropriate to circumstances which have occurred within the assessment year. Performance on bursts in the two regions is shown below along with the reference levels and control limits agreed at PR09:



Despite the failures in the 2013 reporting year which the Company has explained in its published annual Board Review of Performance, the Company is confident that the treatment processes are operating satisfactorily and that the associated assets have integrity. Following any water quality sample failure the Company undertakes a full review of the risks following a Drinking Water Safety Plan approach.

4.4 Service Incentive Mechanism (SIM)

As in AMP5, the Company is expecting that the SIM penalty incentives will be set by Ofwat as part of the regulatory process.

The Company was ranked 1st in the industry for SIM performance in XXXX and will work hard to ensure that this performance continues in the future.

4.5 Leakage

This measure of success supports the Company's continued commitment to its fourth outcome, 'operations which are environmentally sustainable'. Leakage is by far the most widely publicised performance measure in the industry and customers value leakage highly in all of the customer engagement activity carried out. The Company is fully committed to implementing an incentive penalty which supports this high level of interest which customers nationally, and within the Company's own region, have shown towards this theme.

This measure has been split into two to reflect different values of SELL in the SST region and the CAM region.

Incentive details:

Incentive Name:	Leakage (SST region)	Leakage (CAM region)
Type of Incentive:	Penalty	Penalty
Measurement Period:	3 year rolling average	3 year rolling average
Split by Region:	SST only	CAM only
Incentive Parameters:		
Performance Commitment:	70.54 Ml/d	14 Ml/d
Penalty Deadband:	73.3 Ml/d	14.5 Ml/d
Penalty Collar:	n/a	n/a
Maximum Incentive Value:	£0.50 per customer	£0.50 per customer
Bands	n/a	n/a

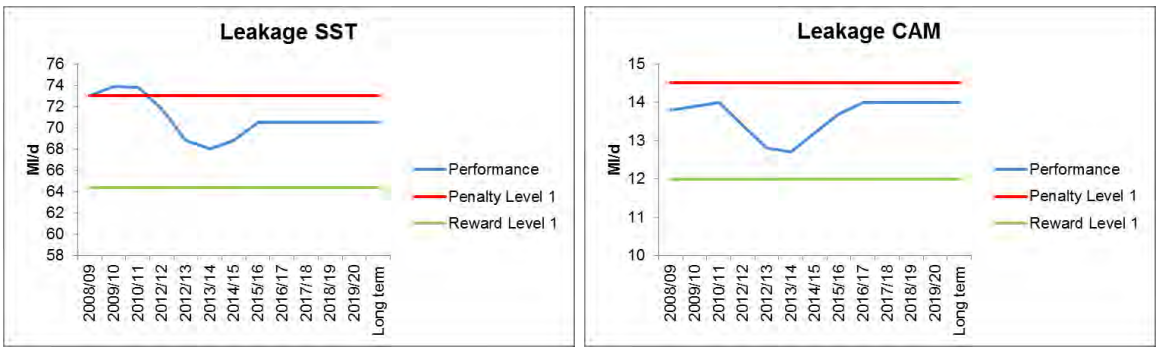
Leakage has been at the forefront of the regulatory process for some time, and there are already extensive processes and audit procedures in place to derive and report on the SELL.

The Company is not proposing a sliding scale of penalties for underperformance levels beyond 73.3 Ml/d for SST and 14.5 Ml/d for CAM, as there would be significant regulatory and reputational impacts of significantly underperforming on leakage. Therefore underperformance beyond the deadbands for each region will result in a single one off penalty.

This is the only penalty where a regional split is appropriate. The stated penalty will be applied only to the customers in the region in which underperformance occurs.

In the willingness to pay survey a specific question was asked on leakage. This has been used to directly derive a value of £0.50 per customer for this incentive.

The chart below shows the historical performance for this performance measure for each region, along with the future performance commitment and the proposed penalty level threshold. Please note that this performance measure is also subject to a reward which is also shown on the chart for clarity. Further detail on the reward element for this measure can be found in Section 5.3.



4.6 Application of Profit Sharing Mechanisms

Each year the Board will review if any external financial windfalls have been experienced and whether to share these with customers through either lower bills or greater investment. Examples are high inflation, low interest rates, taxation changes etc. A 50:50 sharing approach is envisaged.

5. Incentive Details - Rewards

5.1 Interruptions to Supply

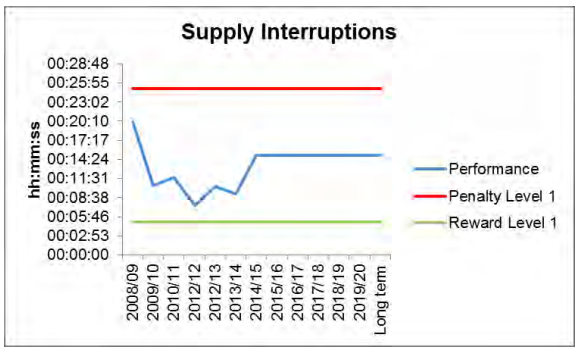
This measure of success supports the Company's continued commitment to its outcome 'secure and reliable supplies now and in the future'. Customers have told us that they value resilient supplies very highly, and this measure is one of the very few measures where there is opportunity to improve on the Company's already high level of service.

Incentive details:

Incentive Name:	Interruptions to Supply
Type of Incentive:	Reward
Measurement Period:	Annual
Split by Region:	Combined SSC
Incentive Parameters:	
Performance Commitment:	15 property minutes
Reward Deadband:	5 property minutes
Reward Collar:	n/a
Maximum Incentive Value:	£0.50 per customer
Bands	n/a

The reward deadband has been set at the 2.5th percentile, a level at which the Company would be 2nd in the industry (based on the 2 year average data from 2011/12 and 2012/13). We have analysed this performance level and it is difficult to attain based on our existing asset performance and therefore innovate approaches would be necessary to improve to this level of performance. The reward, at £0.50 per customer, is symmetrical with the penalty for this measure.

The chart below shows the historical performance for this performance measure, along with the future performance commitment and the proposed reward level threshold. Please note that this performance measure is also subject to a penalty which is also shown on the chart for clarity. Further detail on the penalty element for this measure can be found in Section 4.2.



5.2 Service Incentive Mechanism (SIM)

As in AMP5, the Company is expecting that the SIM reward incentives will be set by Ofwat as part of the regulatory process. The Company was ranked 1st in the industry for SIM performance in the period covering 2011/12 and 2012/13 and will work hard to ensure that this performance continues in the future.

5.3 Leakage

This measure of success supports the Company's continued commitment to its fourth outcome, 'operations which are environmentally sustainable'. Leakage is by far the most widely publicised performance measure in the industry and customers value leakage highly in all of the customer engagement activity carried out. A reward is appropriate as there is a high level of interest from customers nationally and within the Company's own region.

This measure has been split into two to reflect different values of SELL in the SST region and the CAM region.

Incentive details:

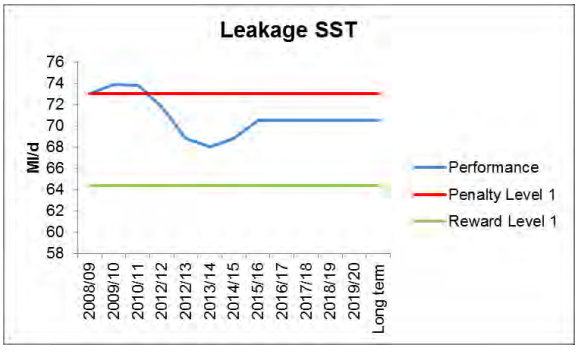
Incentive Name:	Leakage (SST region)	Leakage (CAM region)
Type of Incentive:	Reward	Reward
Measurement Period:	3 year rolling average	3 year rolling average
Split by Region:	SST only	CAM only
Incentive Parameters:		
Performance Commitment:	70.54 Ml/d	14 Ml/d
Reward Deadband:	64.4 Ml/d	12 Ml/d
Reward Collar:	n/a	n/a
Maximum Incentive Value:	£0.50 per customer	£0.50 per customer
Bands	n/a	n/a

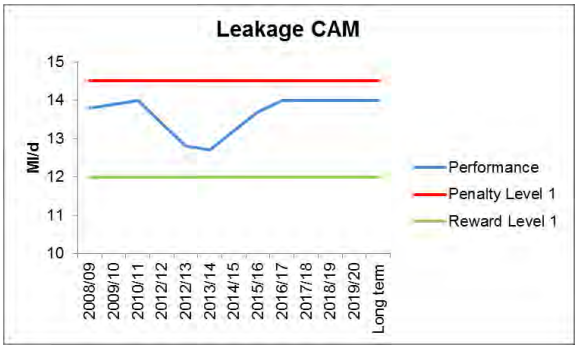
Leakage has been at the forefront of the regulatory process for some time, and there are already extensive processes and audit procedures in place to derive and report on the SELL.

In both the SST and CAM regions rewards and penalties are asymmetrical. This means that the penalty deadband is at a tighter range than the reward deadband. This is appropriate for leakage as a reward should only kick in if improvement is significant and proven, not resulting from benign weather. The bar for a penalty has been set closer to the performance commitment, reflecting strong customer views on the issue. As with the leakage penalty incentive, a regional split appropriate. The stated reward, if achieved, will be applied only to the customers in the region in which outperformance has occurred.

The value of this incentive has been derived from the willingness to pay survey using the same method as for the leakage penalty incentive.

The chart below shows the historical performance for this measure for each region, along with the future performance commitment and the proposed reward threshold. Please note that this performance measure is also subject to a penalty which is also shown on the chart for clarity. Further detail on the penalty element for this measure can be found in Section 4.5.

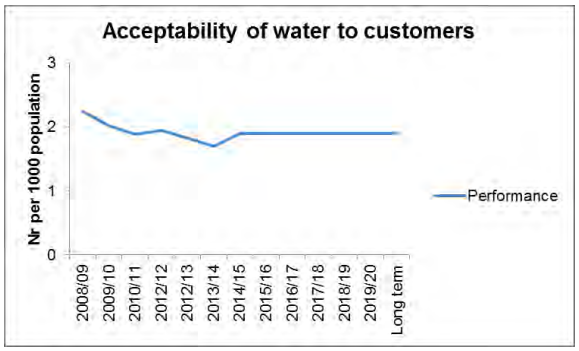




6. Incentive Details – Reputational

6.1 Acceptability of Water to Customers (*water quality complaints per 1000 population*)

The customer research undertaken revealed that high water quality standards are highly valued by customers. One of the ways in which this can be measured is the level of complaints received for odour, taste and appearance. The Company has set itself a target in line with the industry level of 1.9 complaints per 1,000 population. Historical and current performance is broadly in line with this, as shown on the chart below:



6.2 Catchment Management

The Company is proposing to engage in catchment management activities during AMP6. The aim is for catchment management to provide a sustainable alternative to end of pipe solutions using less chemicals and energy for treatment and providing opportunities for additional benefits to be identified.

This activity includes:

- Working with Anglian Water, The Rivers Trust and others in the Cam corridor to establish a Cam and Ely Ouse catchment partnership;
- Continuation and development of the voluntary initiative pilot catchment work for the Blythe by engaging with Tad Brook and Blithe catchment groups;
- Development and lead of catchment partnerships with the Rivers Trust in the Blithfield catchment and the River Severn catchment; and
- Carrying out investigations and modelling on catchment solutions for nitrates to meet the requirements of the NEP phase 5.

Further information on the Company's catchment management activity can be found in the Protection of the Environment business strategy.

The Company commits to delivering this programme of work in AMP6 as one of its reputational incentives.

6.3 Water Re Use in the Cambridge Region

In the CAM region, the Company has been in close collaboration with the University to deliver the largest on site water re-use scheme in the UK. The scheme is focussed on north west Cambridge and is expected to reduce potable water demands in the area.

The project will:

- monitor the water consumption, behaviours and perceptions of water re-use and present the results at sustainability events;
- Encourage close collaboration with local authorities and councils to embed water re-use capability into new housing and industrial developments;
- Actively seek collaborative projects in the region through the Water Partnership to promote and implement water re-use and recycling.

The Company commits to delivering this programme of work in AMP6 as one of its reputational incentives.

6.4 Customer Satisfaction from Independent Surveys (Not SIM)

The CCG are keen on including surveys of customers to assess overall satisfaction. This is something that can be influenced by improved communications, rather than greater investment or improved service levels. The SIM surveys currently only gain the views of customers who have had contact with the Company (billing or operational). This survey will also capture those that have not been in recent direct contact with the Company.

6.5 Written Customer Complaint Levels per 1000 customers

A further measure of satisfaction can be attained from a review of levels of written correspondence. Hence this metric will be monitored and reported upon as a reputational incentive.

6.6 Community Activity and Engagement with Customers

The CCG are keen for the Company to continue with its CSR obligations. This recognises the role that water companies play in their local communities. The Company will work with the CCG to determine ways to measure progress in this area and will seek to be more transparent with its community activities and support.

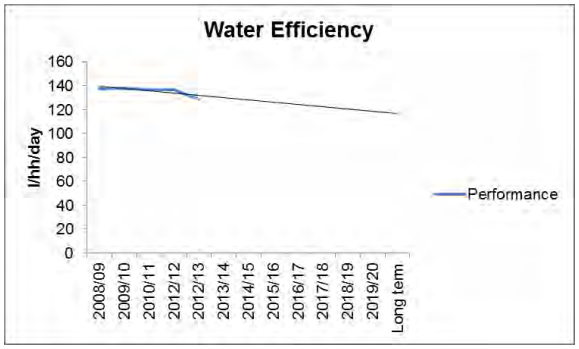
6.7 Water Efficiency Programme (Household PCC)

The Company believes that promotion of water efficiency is very important for a number of reasons:

- It is something that customers value;
- It is part of the Company's strategy for managing its impact on the environment;
- It can help customers with managing bills and affordability; and
- It is part of providing good customer service.

Water efficiency activity provides an opportunity for multiple benefits, and is a key part of reducing per capita consumption in the water resource management plans.

The Company has committed to a downward trend (weather adjusted) in household per capita consumption for this reputational incentive, which is a continuation of the trend over the last five years as shown in the chart below:



The Company is pleased to report that it has over achieved its water efficiency target in each of the past three years.

More information on the Company's plans for water efficiency can be found in the Water Efficiency business strategy document.

6.8 Biodiversity

The Company is committed to biodiversity projects in both the SST and CAM regions and takes its environmental responsibilities very seriously.

In the SST region, the Company is a partner in the Birmingham and Black Country Nature Improvement Area and will work with the Wildlife Trust to develop and implement an improvement and enhancement scheme at Sedgley Beacon. In the CAM region, the Company is working with the Wildlife Trust to implement site sensitive management plans at chalk grassland sites to preserve local features in the Cambridgeshire landscape.

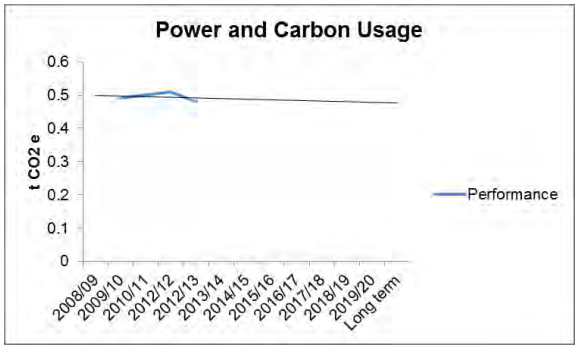
In AMP6, the Company will conduct a survey of land holdings to identify where protection or enhancement of features, habitats and species can contribute to biodiversity.

These activities will be published in the Company's Biodiversity Plan, and the Company commits to delivering this programme of work in AMP6 as one of its reputational incentives.

Further information on biodiversity can be found in the Protection of the Environment business strategy.

6.9 Power and Carbon Use

The Company has committed to a downward trend (weather adjusted) for this reputational incentive, which is a continuation of the trend over the last five years as shown in the chart below:



6.10 Independent Customer Surveys on Value for Money, Affordability and Fairness

The CCG are keen on including surveys of customers to assess value for money, affordability assistance and fairness in charging. By undertaking this independent survey and being transparent with the results, it will be possible to track progress in this area and assess if the Company's communications with customers are effective.

6.11 Support for Customers in Debt

The CCG are keen for debt assistance to be measured and reported transparently. Metrics to determine this will be developed in conjunction with the CCG.

7. Data Tables Supporting Notes

Data tables W1, W2, W2a, R1, R2 and R2a have been completed with the appropriate information about the Company's outcomes, performance measures and incentive rates. The Company has four outcomes which correspond to the wholesale business which have been included in tables W1, W2 and W2a. The one remaining outcome corresponds with the retail business and is therefore included in tables R1, R2 and R2a.

In tables W1 and R1 the Company has provided the required data about its outcomes and performance measures in line with this commentary. The performance commitments for AMP6 have been included. The Company anticipates performance in AMP7 to be in line with AMP6 however each measure will be reviewed at PR19 in consultation with all stakeholders.

In tables W1 and R1 there are no incremental costs for any performance measures. This is because the Company is not proposing to enhance any of the measures within AMP6. The plan is a maintenance plan. The performance commitments have been accepted by the joint CCG. The total wholesale totex for this price review is entered into block Y of the table W1.

In tables W2 and R2 the Company has provided the data on its rewards and penalties where they apply. The penalty package, excluding SIM, is worth a total of £1.64 million (£2.50 per household customer). The reward package, excluding SIM, is worth a total of £0.66 million (£1.00 per household customer). This is substantially lower overall than the proposed penalty package. This is right as the plan is predominantly a maintenance plan and therefore it is appropriate to have more penalties than rewards.

Tables W2a and R2a are designed to derive information on performance step changes. Since the Company is not proposing any performance step changes for its measures within this business plan, the tables have been completed with zero values for each performance measure. However, the Company has looked in detail at how its plan affects service levels using its detailed investment optimisation framework. The investment optimisation process considers a wide range of investment options against a comprehensive set of output performance measures which have been valued using customer willingness to pay data. The overall plan is cost beneficial and optimal using this approach. More information on this process can be found in the Asset Management and Investment Optimisation sections of the main business plan document.

South Staffs Water

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CAMBRIDGE WATER COMPANY

Resilience - Security and Emergency Measures Direction (SEMD)

Business Strategy

December 2013

Resilience – Security and Emergency Measures Direction (SEMD)

The Company is committed to delivering 'secure and reliable supplies now and in the future'.

Typically, interruptions to supply can occur as a result of assets failing, for example a burst on a water main or a breakdown at a key pumping station, and resilience plans are in place to negate the impact of such occurrences.

However, the Company also needs to plan for deliberate, malicious acts of criminal damage; sabotage; theft; extortion and terrorism.

In the event of loss of water supply the Company will ensure 10 litres of water per person per day is available within 24 hours. This will increase to 20 litres per person per day after five days.

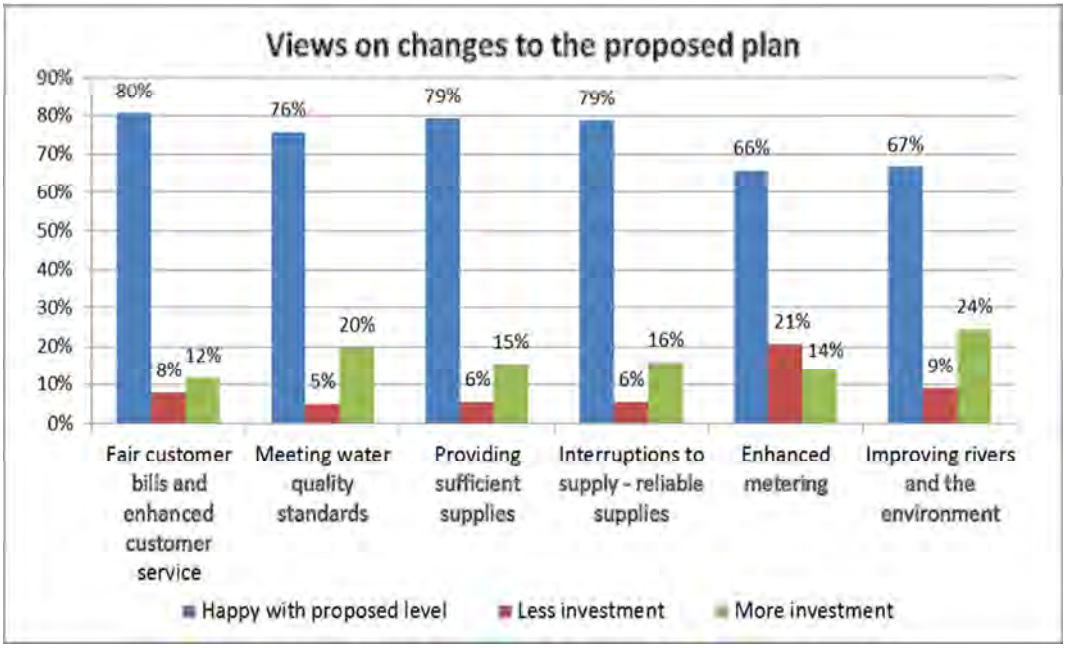
While the probability of any of the above events occurring is relatively low, planning for such occurrences is a statutory requirement under Section 208 of the Water Act.

Customer research

Customer research has confirmed that there is both a high priority and expectation to ensure that there is continuity of water supply to households and non-household customers.

The Company's customer research showed that customers continue to value high quality, reliable water supplies.

The graph below, which was compiled using Acceptability research results, illustrates that 79% of customers agree with plans to provide a reliable water supply.



Source: ICS Consulting - Acceptability research

Willingness to pay research also revealed that overall customers in the South Staffs region were willing to pay £0.84 for improving the reliability of the water supply (leakage £0.36, interruptions to supply £0.27, and internal flooding £0.21).

Focus group research carried out by Community Research also concluded that the Company's management of resources in terms of water resilience and future planning was felt to be a key priority.

The security strategy

The security strategy is a continuation of the enhancements which commenced in the 1990s.

Guidance on security is provided by Defra following an assessment of all of the Company's assets. This in turn establishes the expenditure requirements for the period.

The strategy has been developed with advice from the Company's Counter Terrorist and Security Advisors (CTSAs) and local police forces to ensure the measures applied are both fit for purpose and commensurate with the local risks in the Company's area.

Installation of suitable security measures achieves the following benefits which also compliment the outcomes of the customer engagement process:

The protection of water quality and public health

The protection of operational assets from loss or damage

The maintenance of public confidence in, and the reputation of, the UK Water Industry with respect to security risk

The protection of the environment from contamination

Security surveys have been completed at all of the Company's operational sites by the resilience and security manager and production managers.

Local knowledge of the area, adjacent land use and the remoteness of the site, combined with any history of vandalism are additional risk factors which have been used as part of the assessment.

The level of security enhancements installed is then selected to ensure they comply with the guidance given in the standards and further to ensure their appropriateness.

DEFRA's Security Advisors from the Centre for the Protection of National Infrastructure (CPNI) have attended several sites and confirmed that the recommended enhancements are appropriate.

A pragmatic risk-based approach has been applied on a site by site basis to ensure the security measures used are appropriate for the risk of attack at that site and that any previously installed security measures are incorporated into current solutions rather than replacing old with new.

Costs for required improvements have been gained using competitive framework contract rates from security contractors who successfully installed security solutions for the Company throughout AMP5.

South Staffs Water

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CAMBRIDGE WATER COMPANY

Asset Management Business Strategy

December 2013

Asset Management

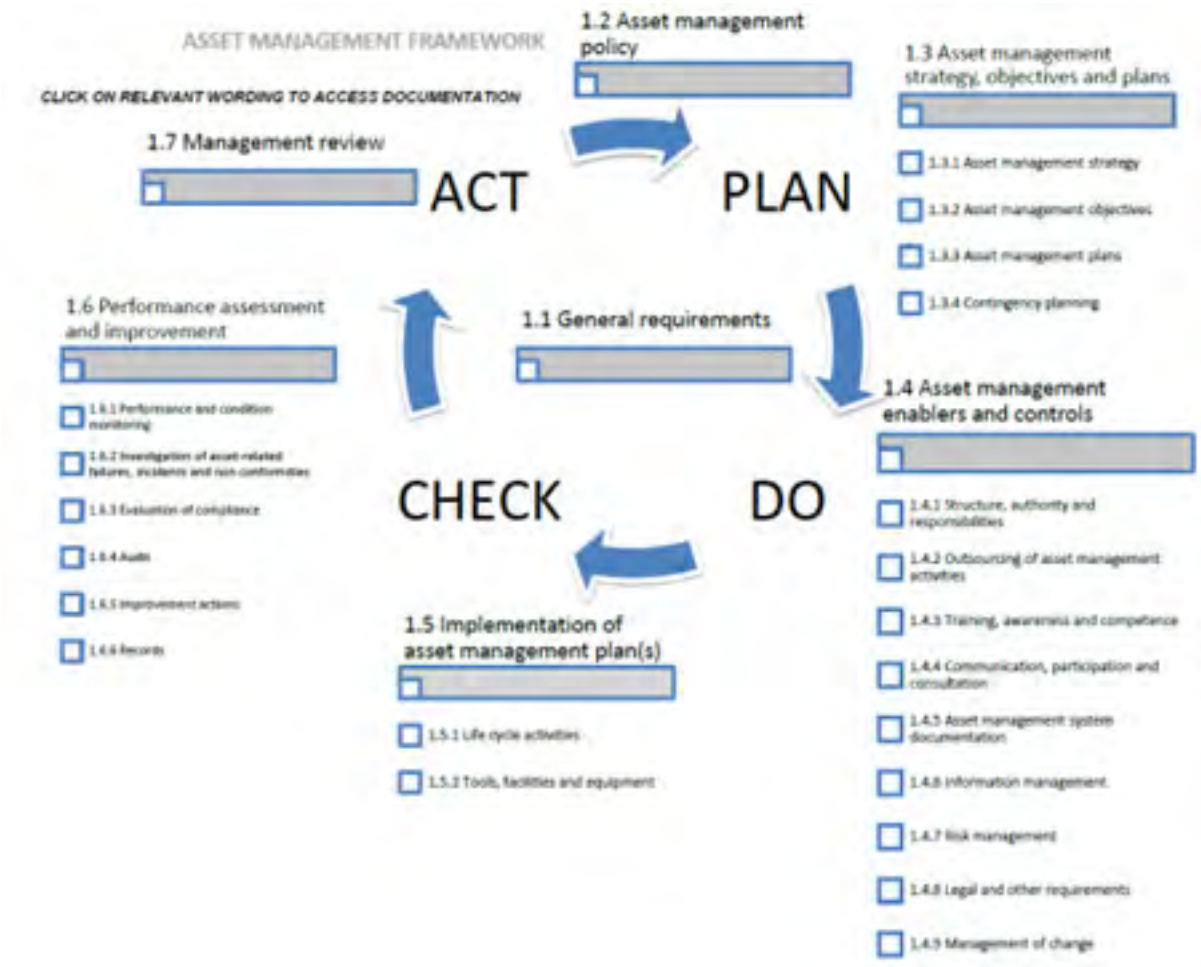
Supporting outcome 1 (Excellent water quality - now and in the future)

Supporting outcome 2 (Secure and reliable supplies - now and in the future)

Supporting outcome 4 (Operations that are environmentally sustainable)

Asset Management underpins all of the Company's five key outcomes. It ensures the business manages its assets to deliver outcomes that customer's value.

The Company has defined a strategy and framework for asset management through AMP5, aligning to the PAS55 asset management specification (moving to ISO 55000) for the optimised management of physical assets. The purpose of managing the asset base this way is to deliver the outcomes in a sustainable approach.

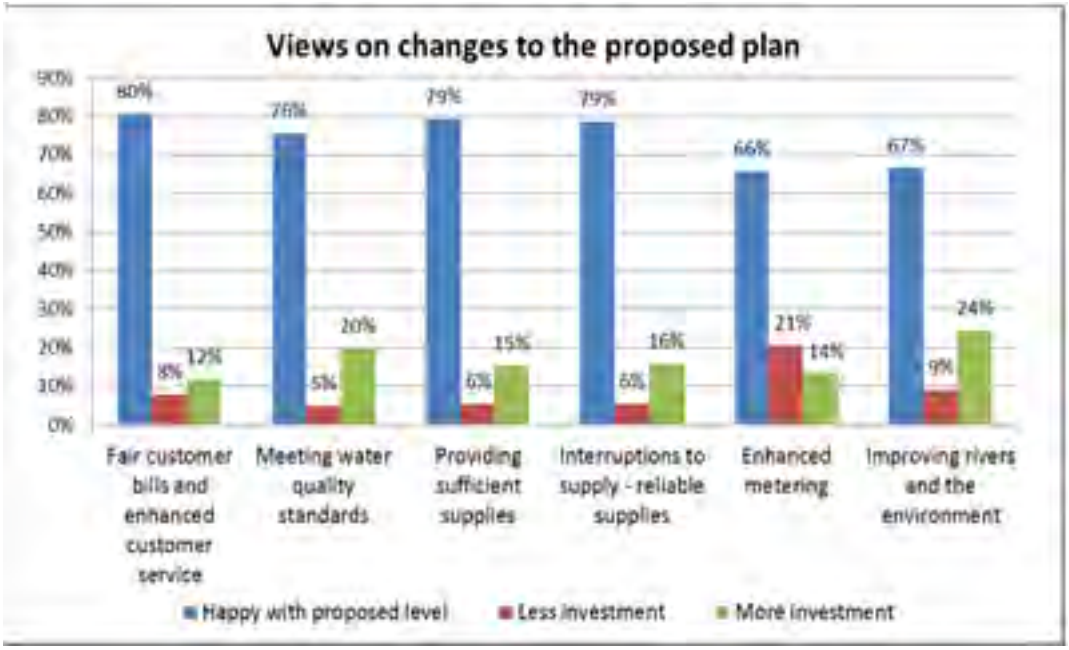


'SSC Asset Management Framework in alignment with PAS55'

Customer Research

The Company's customer research showed that customers continue to value high quality, reliable water supplies.

The graph below, which was compiled using Acceptability research results, illustrates that 76% of customers believe it is important for the Company to continue to meet water quality standards and 79% agree with plans to provide a reliable water supply.



Source: ICS Consulting - Acceptability research

Willingness to Pay research also revealed that overall customers in the South Staffs region were willing to pay £0.84 for improving the reliability of the water supply (leakage £0.36, interruptions to supply £0.27, and internal flooding £0.21). In the Cambridge region customers were prepared to spend up to £6.32 on leakage.

The results also showed that household and non-household customers (68%)[1] place more value on avoiding the deterioration of services as opposed to investing money in improvements.

Focus Group research carried out by Community Research also concluded that the Company's management of resources in terms of water resilience and future planning was felt to be a key priority.

Findings from the willingness to pay research and the acceptability research have been applied to the Investment Optimisation (IO) tool to ensure that customer views are utilised in selecting the final investment proposals.

[1] MVA Willingness to Pay research

Results from this process have been used to underpin the asset management strategies on and focus investment on areas that are considered of greatest value to customers.

Business Strategy

Based on the customer research, the Asset Management business strategy focuses on four key elements:

- Integrate the management and operation of distribution and production assets
- Develop strong risk-adjusted investment performance
- Maintain effective risk and asset management
- Increase asset sustainability and capability

Some of the key AMP6 deliverables within each of these elements are outlined in the following sections.

Integrate the Management and Operation of Distribution and Production Assets

Integration of Asset Management Teams

Asset Management has been providing the Company with an integrated mechanism that that takes account of:

- Organisational functions
- Asset disciplines
- Asset management teams
- Contractors

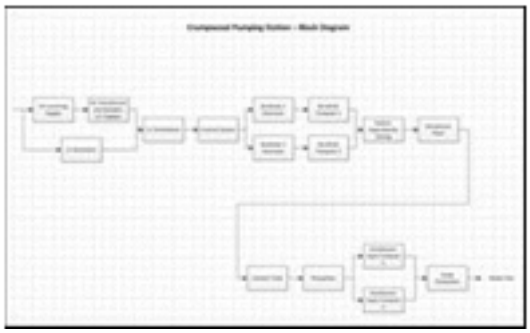
Greater weight is placed on evidence-based decision making, providing expert knowledge of asset performance, degradation and failure, to optimise interventions. Emphasis has been placed on a unified asset management team following the merger of South Staffs Water and Cambridge Water. The focus for asset management has now been brought to one team, one Company and one set of assets.

Combined Asset Management Plans

The Company intends to build on the progress made with the production of asset management plans during AMP5, with an aim in AMP6 to continue to producing management plans and strategies to cover all asset groups. This will assist with full lifecycle management of assets and will identify synergies and risks between asset functions.

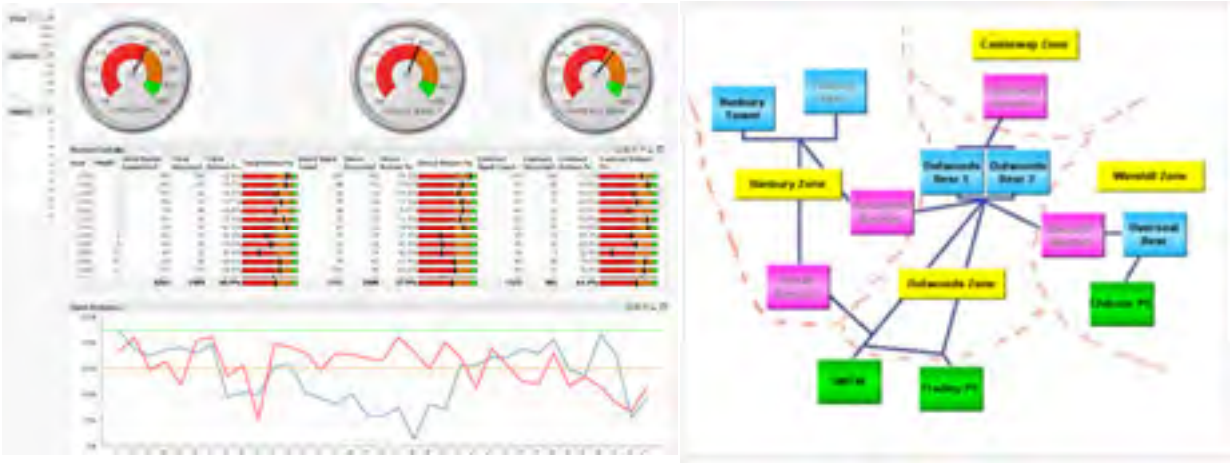
Production of Reliability Trees to Understand Risk from Source to Tap

The Company has a good working knowledge of all of its assets; an advantage of being a smaller utility where experts are 'close to' the assets they operate and maintain. However, there are benefits to be realised by combining all of this asset knowledge, constructing a fuller picture of the risks affecting supplies from source through to tap. This allows for



the full impact of any proposed investment to be quantified; it also stores valuable asset know ledge for future management of the production and netw ork infrastructure.

Water Supply Zone Dashboard

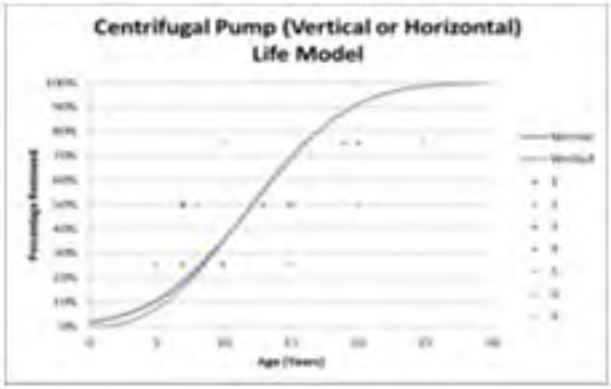


Develop strong risk-adjusted investment performance

Continual Improvement of Deterioration Models

It is impossible to plan long-term investment strategies w ithout an understanding of how assets degrade over time and w hen they are likely to fail. Good deterioration models are therefore a prerequisite for optimal management of production and netw ork assets.

The Company has invested significantly during AMP5 to improve systems for data collection; and this has helped to drive significant improvement in its deterioration models – w ith new curves derived for all production and netw ork asset groups. The intention is to continue to develop these models as more data is collected.



Consequence assessment

Understanding the consequences of asset failures is a prerequisite for assessing risk and using risk to manage assets. The Company draw s on a variety of sources for this information:

- Reliability diagrams for production sites
- Hydraulic models for interruption and w ater quality impacts
- Flooding/inundation modelling for mains failures
- Proximity tests for infrastructure damage caused by failed pipes

Continuing to utilise and maintain the above data sources is part of the strategy, but there are also further gains to be achieved through the introduction and use of 'source to tap' reliability trees – giving visibility and appreciation of the full consequences of asset failures.

Business Impact Scoring System (BISS)

The BISS is a comprehensive list of failure consequences and the associated internal cost of resolution. This allows consistent derivation of cost consequences and potential benefits for use in developing investment plans. The BISS includes all principal costs of asset failure ranging from low level operational costs, to large scale costs such as health and safety, prosecution and environmental clean-up activities. The BISS also includes all principal costs of service failure including customer complaints, failure of standards, GSS payments and impact on reputation and public relations. The values within the BISS are used to provide the private cost element that is required within the IO tool.

Developing Cost Models for Key Interventions

More sophisticated deterioration and consequence models open up other opportunities to rank the assets by their risk scores. In an ideal world, investment would be targeted at the highest ranking assets in order to reduce total risk. However, in reality, investment is limited, and it becomes important to target investment where the best value can be achieved – most risk saved per £ spent. The Company has a good understanding of the cost of interventions at an asset group level, but recognises that there is scope to further develop intervention and cost options for every asset, at the most granular level possible.

Maintain Effective Risk and Asset Management

Development of Skills

The Company continues to recognise its workforce is a critical component for ensuring successful asset management and has expended the expertise available in its asset management team throughout AMP5.

These new skills have brought significant improvements to areas such as statistical modelling, results visualisation, PAS55 understanding and reliability assessment.

This drive to constantly learn, improve and share knowledge is a fundamental part of the asset management strategy and will continue into and beyond AMP6. Several members of the team are also members of professional bodies such as CIWEM, IoW and the IAM.

Implementation of a Company-wide Asset Management Framework

As stated above – the Company has already committed to align its asset management activities with the requirements specified in PAS55/ISO55000. Significant progress has already been made for production asset groups and there are plans to continue this work for the remainder of the organisation before the end of AMP5; providing a solid framework to progress into AMP6.

Utilise IO Tool to Improve Investment Decisions

The Investment Optimisation methodology and software (IO Tool) has been used to determine a final investment plan to meet the needs of the business, and the desires of the customers, all within defined financial and performance constraints.

Building upon the effectiveness of the PR14 optimisation, the Company has decided to continue the methodology into AMP6 and develop the process to become an embedded part of investment decision making at every level of the organisation.

Continue to Support Industry Research

Research is critically important to progress the methodologies, techniques and technologies used within the UK water industry. The Company considers its inclusion within national research programmes managed by UKWIR and WRc particularly beneficial within the quickly evolving sector of asset management and propose to continue contributing to relevant projects throughout AMP6. The Company is also keeping abreast of developments within the Institute of Asset Management (IAM) and plans to complete certified qualifications and get involved with relevant interest groups within the near future.

Increase asset sustainability and capability

Implementation of a Live Network

As outlined in the Company's Innovation strategy, 'Live networks' is one of the key investment areas for AMP6, deploying intelligent monitoring across two supply zones, measuring pressures, flows, water quality, hydraulic surges and property consumption. This will help build understanding of the distribution system, helping to make strategic decisions. However, the live data will also help at a tactical/operational level, identifying network events and operating the assets to maintain service to customers.

A live network is an initiative that is still in its infancy; but the Company is proposing to undertake a large scale implementation for part of the supply area. It is hoped that this should prove the effectiveness of these technologies for improving asset management, allowing the Company to maximise the capability of its assets to provide service to customers.

Continuation and Expansion of Condition Assessment Programmes

The Company undertakes a significant amount of condition assessment on both underground and over ground assets – using both destructive testing and non-destructive techniques such as ultrasound/microwave scanning or energy monitoring. This is used as an input for building deterioration models, predicting when assets will degrade or fail. Condition monitoring is also used to ratify renewal decisions, ensuring that investment is not decided blindly on the basis of model outputs. The overall proposal is to continue with historic levels of spend in this area, but to utilise new technologies and existing teams to deliver the more results.

Continued Commitment to Trial New Technologies and Innovative Techniques

New technology and innovation can deliver benefits across many areas of asset management, from new methods of assessing condition (such as microwave scanning) to innovative ways of getting more from existing assets (such as transmitting live meter reads using television radio masts). The Company will continue to test these new techniques wherever there is a clear benefit and low risk in doing so.

Investment Optimisation at PR14

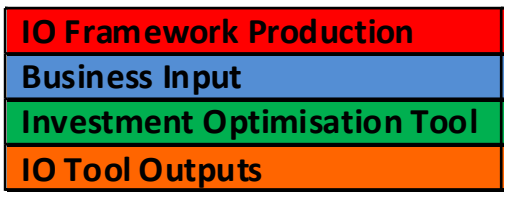
The Investment Optimisation (IO) methodology and strategy adopted by the Company is a key element in enabling the business to demonstrate that it has used a balanced, transparent approach in the formulation and identification of the Final Business Plan. Proposed investment at PR14 has been visibly and consistently linked to both customer and business requirements using an approach which balances service and cost, maximises synergy benefits from investment across the business and ultimately increases the effectiveness of decision-making throughout the process. In aligning serviceability improvements with customers' willingness to pay for them, the process adheres to the UKWIR common framework best practice for capital maintenance planning in justifying funding requirements based upon sound economic principles.

In supporting investment strategy creation and ratification, it is a way of delivering the most cost-effective investment plan to meet the needs of the business and customers, within defined constraints. Outputs from the IO process define the link between investment proposals and their contribution towards the Company Outcomes.

Experience during and since PR09 has shown the importance of being able to produce an Investment Programme to an understood and agreed level of risk to service. The company appointed ICS consulting to support this process with the use of their Investment Optimisation software. The first version of the software was used purely for Cost Benefit Analysis at PR09, and not used to its full capacity as a means of optimising investment within changing scenarios.

An upgraded version of the tool (IO+) has been used at PR14, with full use of the optimisation engine being made, incorporating solutions generated across every investment stream as the primary inputs. The IO+ Tool will continue post-PR14 and become an embedded process within the business, ensuring longer term business strategies and on-going delivery plans are aligned and continue to ensure the Company's compliance with industry and regulatory requirements.

The main components of the Investment Optimisation process are captured in the diagram below, and have been colour coded as follows:



Business Input

An integral part of the IO approach is in the identification of risk and subsequent formulation of potential solutions. The risks identified and evaluated within the business form the basis of the investment required within AMP6.

A thorough approach is used to ensure customer view points are incorporated into investment planning, utilising focus groups, priority surveys and online panels to provide input and consideration for inclusion in investment planning. Such customer preference is allied with detailed appraisals of risk assessment across the Company – from manual assessment at site level through to identifying and evaluating asset failure through deterioration, consequence and reliability modelling.

From here, an 'Identification of Need' is developed. The Company have used a bottom up approach at PR14 that has looked to define a range of proactive solutions for each identified need, from a 'Minimum' spend, which potentially incurs a greater level of risk, through to a 'Premium' spend which defines the greatest improvement in service/saving, but at the highest cost. Fundamental to the application of CBA within the IO Tool is also the generation of a 'Reactive' or 'no-spend' position, the former defined by investment only upon failure, and the latter by no capital spend at all. This 'pre' position of investment is deemed the baseline from which the relative benefit of all proactive solutions can be assessed by.

In developing a range of solutions around a particular need, project managers define the following around each proposed solution:

1. Estimated Costs (Capex, Opex, incurred costs/loss of revenue)
2. Estimated Benefits (OPMs, Opex savings, increased revenue)
3. Phasing
4. Estimated uncertainty around need and costing.

In estimating the benefits of investment, project managers were required to define exactly which OPMs their investment will impact upon – with the predicted change in that service level from a pre to a post investment position being the 'effective quantity' that is valued. As it is this assessment of service risk impact that drives the valuation of schemes in the IO Tool, it has been essential to apply an appropriate level of governance across the process. This was achieved in the following ways:

1. Use of historical levels of service when defining 'pre' positions.
2. Documented assumptions when estimating service impact, for review by internal OPM champions and external audit.
3. Use of company document management system to ensure consistency in data input.
4. Board level review of risk and affordability around investment plans.
5. Customer Challenge Group involvement and acceptability testing.

The Company welcomed the CCG's request for the engineering scrutiny report to be carried out by an independent consultant. Monson were commissioned on behalf of the CCG to undertake a thorough review not only of the proposed capex plan but the approach in its identification and formulation. A specific audit of the generation of the identification of need and associated investment scenarios and the subsequent population of the investment

optimiser was provided by Monson. The approach was signed off as no further challenge was received.

IO Framework Production

The Investment Optimisation framework consists of two core components which are essential in ensuring the robustness of the process:

- Output Performance Measures (OPMs)
- Valuation set

The **OPMs** define the types of service risks that investment may impact upon. Typical OPMs relate to water quality, supply interruption, pressure, customer contact, flooding and HSE parameters, while less tangible measures are also included relating to such things as environmental impacts. It is imperative that these are deemed the most important ones to the business and to the customers – the Company utilised a total of fifteen OPMs in appraising the benefits of investment, which the CCG and the Company Board of Exec discussed and agreed upon to ensure their relevance and transparency in the exact definition and how they would be measured.

The **valuation set** is required to ensure that each OPM is valued in monetary terms, thereby providing a common platform upon which to compare investment. As costs of an investment have already been scoped prior to optimisation (see 'business input' below) it is the benefit of an investment, i.e. the service improvement delivered, which is evaluated against one or many of the OPMs for each solution. Having defined this predicted improvement level from a 'Reactive-only' or 'no spend' position through to a post investment position, the monetary value used by the IO Tool comes from the following:

1. Customer Willingness to pay (WtP) - the value that customers place on that service improvement.
2. Private (cost of failure) values – those costs avoided by the business due to the mitigation of service failures i.e. savings, avoided costs and/or increased revenue.
3. Socio-environmental value – the value to society or to the environment of that service improvement.

As the private and socio-environmental values were able to be sourced internally and via existing academic and government literature respectively, the Company appointed ICS consulting in order to produce the Willingness to Pay values for use within the IO Tool at PR14, drawing on industry best practice techniques to:

1. Estimate the value to customers, in monetary terms, of the impact of changes in service levels.
2. Determine customer priorities for different aspects of service.
3. To ensure that the values are appropriate for use in CBA via the IO Tool; and
4. To build on work from the outputs of recent UKWIR studies concerning the application of WTP studies and CBA.

Results from the WtP study demonstrate the inclusion of customer preference that has directly informed the FBP via the IO Tool and represents the top down aspect of its formulation.

Prior to the final selection of the OPMs and the associated valuation set, a period of challenge (internal and external peer review) has been undertaken to ensure that the OPM selection aligns with the Company Outcomes and that subsequent valuation is robust and valid, reflecting the priorities of customers.

Investment Optimisation Tool

At this stage the IO Tool can now value every investment solution in terms of its impact against the defined OPMs as the framework has monetised all costs and benefits, meaning like-for-like comparison of projects is achievable. This is where the application of CBA within the process occurs, producing a Net Present Value for every solution input.

The IO Tool operates to select combinations of investment solutions, attempting to maximise the benefit associated with a chosen investment programme, subject to meeting constraints and targets of both the business and customers.

Many different scenarios have been analysed by changing constraints and targets set within the IO Tool, both cost and performance related. These constraints define the optimised programme, and were confirmed through discussion and ratification by the PR14 Steering Group and Company Board of Exec to best represent the priorities of both customers and the Company.

IO Tool Outputs

Output investment programmes are analysed to understand how they impact as a whole upon service levels as defined by the OPMs. Prior to finalising a programme, many iterations have been run to understand the impacts of changing scenarios and test the sensitivity of the outputs to variables such as:

1. Scaled Willingness to Pay values
2. Project manager input as regards selection
3. Changed constraints:-financial (eg Capex) and performance (eg number of bursts)

Following the production of an optimised programme, further challenge has been sought from PR14 project managers and the Board of Exec to understand views on its composition and value, together with an assessment of its deliverability. Feedback from this has been used to perform further iterations and define the FBP. Breakdown of all costs and benefits associated with investments within the FBP has given sight of indicative Totex levels associated with the final plan. The Company has also demonstrated an ability to set cost constraints in order to smooth the Capital spend profile across AMP6 within a selected programme.

In assigning each of the fifteen OPMs to each of the Company's five Outcomes, it has also been possible to demonstrate how an output investment programme contributes towards the high level strategy of the Company.

IO Tool Diagram:-

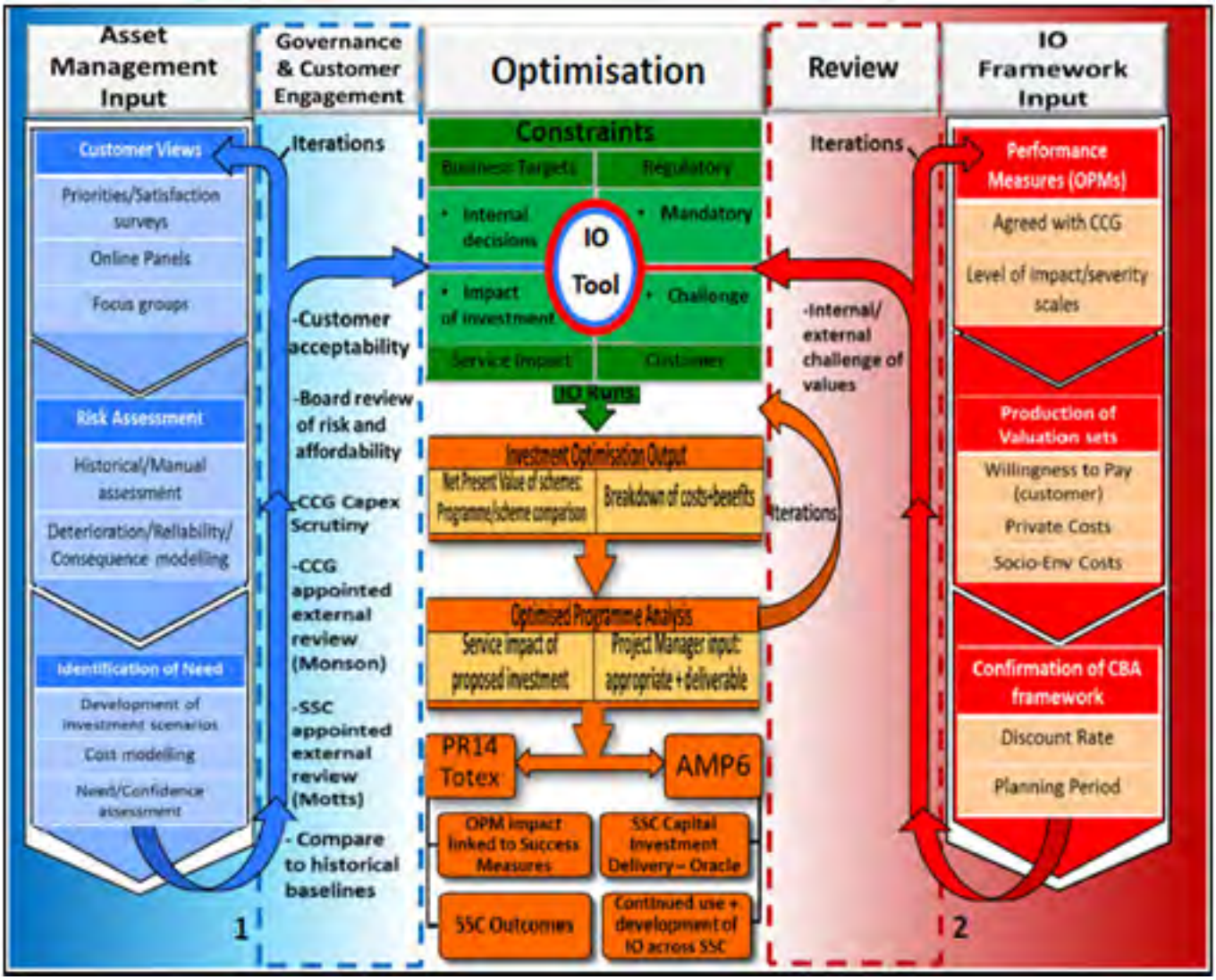
- For clarity, the diagram should be tracked through from the inputs on the far left (Business Inputs) and far right (IO Framework Input). Following these input columns down through their three key stages produces the two elements required by the investment optimisation software:

  1. Investment solutions produced from a bottom up approach that have been subject to analysis of their respective costs and benefits over the long term.
  2. A robust framework defining the Output Performance Measures (OPMs) against which investment solutions can be evaluated using a CBA appraisal.

- Prior to being input into the IO Tool, both **1.** and **2.** are subject to processes of governance and review respectively (columns 2 and 4), with challenge from different areas of the business and from external sources meaning several iterations are run through before being input into the IO Tool software.

- The IO Tool functions to select combinations of investment solutions, attempting to maximise the benefit associated with a chosen investment programme subject to meeting constraints and targets of both the business and customers.

- Output investment programmes are analysed to understand how they impact as a whole upon service levels as defined by the OPMs, and as to their alignment with customer priorities and the Company long-term strategy.



South Staffs Water

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CAMBRIDGE WATER COMPANY

Efficient Delivery Business Strategy

December 2013

Introduction

This document identifies the strategy required for efficient delivery and early engagement with the supply chain for AMP6 requirements. It is accepted that this process is prior to the submission of the business plan in December 2013 and the Final Determination set by Ofwat due to be published in 2014, however, it is necessary to enable the successful efficient delivery of the proposed AMP6 Capital Investment Programme.

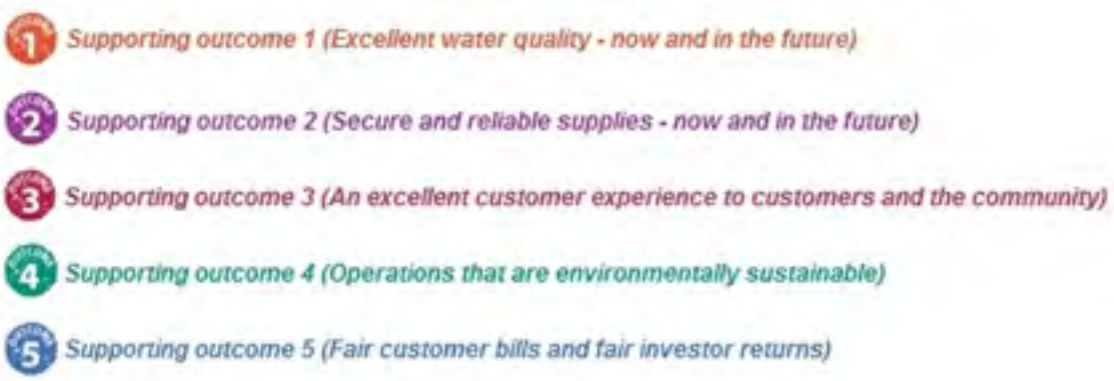
The value of works over AMP6 for both regions will be covered by multiple Framework Agreements. Although these will be split into a number of sub-categories the European Union procurement procedures will be followed. Please note that there would be no commitment to spend any money prior to notification of the Final Determination.

This document also summarises the timeline and tasks required to enable efficient delivery to commence in April 2015. It does not cover the detail surrounding specific tender documentation and award of contract criteria; these will become apparent as each area of the business engages in the process.

The successful, efficient delivery of the programme impacts across all five outcomes covered in the business plan.

Finally, processes to drive competitive pressure and approval of new technologies and innovation will ensure best value is achieved.

Delivery



Previous Approach

Historically, the Company has taken a more reactive approach to the delivery requirements for the investment programme for the next AMP period. The business plan is normally approved before a strategy for delivery is commenced.

This means that there can be a delay in expenditure as frameworks are not in place. In addition, preferential suppliers may have already obtained a capacity of work from other sources, thus less competitive prices or rates may be available. The other consideration is that bottlenecks of work requirements and projects can cause resource issues further down the supply chain, particularly procurement.

Delivery Vehicle

The vehicle for delivery of requirements over £50,000, as per the financial regulations, is for a tender to be launched and a framework contract awarded to the most economically advantageous, based on varying award criteria. This process can take between three and 18 months depending on the value and complexity of requirements. It is important to note that any potential framework contract exceeding a value of £347,000 will also need to follow EU Procurement Legislation rules; with the combination of South Staffs region and Cambridge region the number of these may increase.

Contract Management

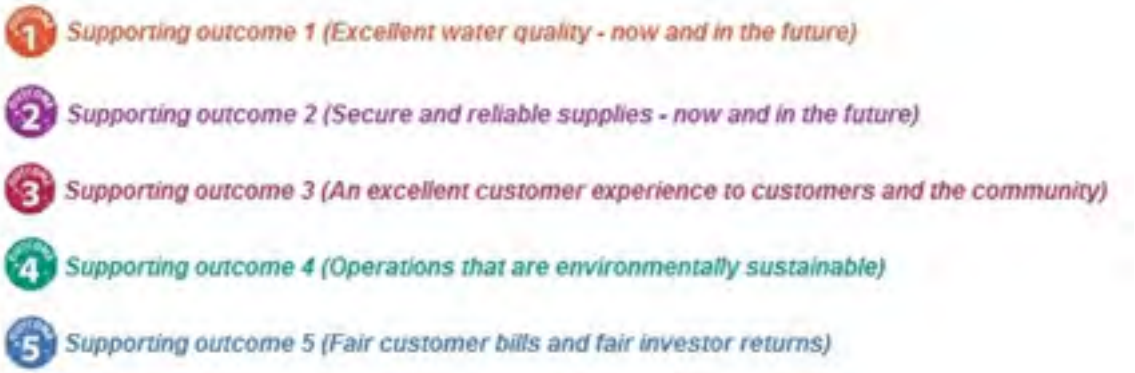
The type of contract framework also varies; the major expenditure contracts in AMP5 were National Engineering Council (NEC) Framework Contracts – Bounty, Vision, Imtech, reservoir refurbishment and borehole drilling. NEC contracts are widely used in the construction industry and are seen as best practice, promoting behaviour in line with the principles of Achieving Excellence in Construction (AEC) and are the only form recommended by the UK Office of Government Commerce. These contracts have been extensively and successfully used in AMP3, 4 and 5 within the South Staffs region.

The NEC Framework Agreements provide the footing of working, based on a collaborative team working ethos, but do not contain any value. The actual value of each Framework Agreement is controlled by the placement of specific works packages, to meet the requirements of the investment programme, and approved through the Company procedures. Authorisation for work will be via the mechanism of works orders, each of which will be authorised through the normal Company procedures prior to placement.

In other commodity areas the standard South Staffs Water framework agreements will be used and, where appropriate, tailored to ensure protection and limitation of risk.

Finally, framework contracts do not commit the business to any value of work; therefore, there would be no risk to starting a tender process or awarding a framework contract prior to the final determination.

Ensuring competitive pressures



The competition introduced through the use of two framework contractors, in like for like work packages, has provided the key elements necessary for the successful outcome of the programme and demonstrated value for money for specific work packages. This has been clearly demonstrated through the bounty frameworks with IWS and Imtech, where NEC3

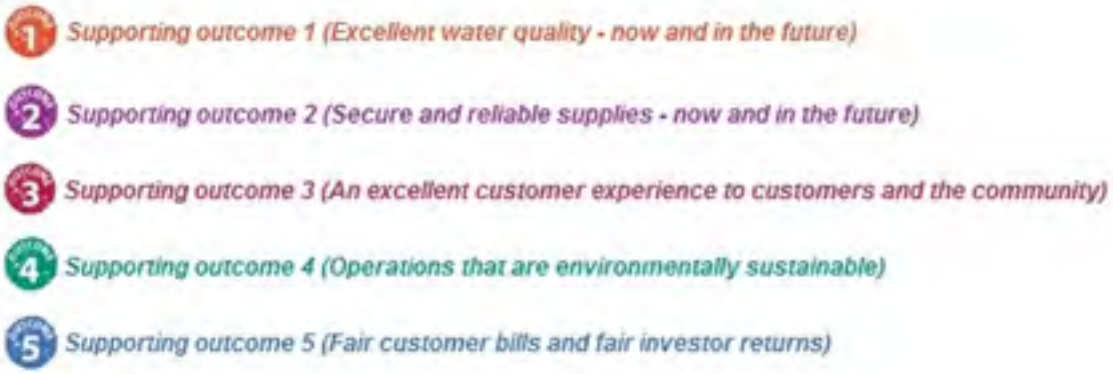
contracts have been awarded and then 'mini' tenders are used to award packages of work to create competitive leverage.

To drive for best value, frameworks will be developed to allow flexibility with various contract options incorporated (re-measureable, lump sum and target cost) together with clearly defined risk registers and full visibility of the contractors cost breakdown. Nominated South Staffs Water project managers will control the appointed contract option that the works are undertaken.

Benchmarking of costs across the various work-streams will continue throughout AMP6 in order to understand cost performance and demonstrate best value. Pre-defined KPIs for monitoring performance are incorporated into frameworks at the tender stage, so all successful contractors (and direct labour operatives) are aware of the management principles. Mechanisms within the KPIs would be based upon incentives for good performance and corrective actions for any poor performance. The South Staffs Water project managers would manage performance. All KPIs are reported to the Board on a monthly basis.

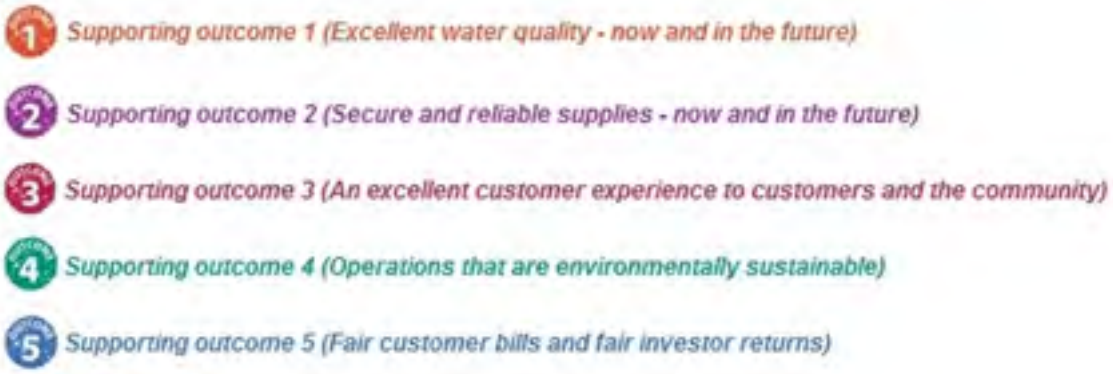
Quality control will be carried out by actively monitoring performance on-site through the pool of site work coordinators, to ensure effective delivery of works to South Staffs Water specifications.

Innovation



South Staffs Water will continue with the investigation of innovative technologies and processes, and maintain the current collaborative working practices with contractors and suppliers. New products, processes and innovations are trialled and approved through the value added/value engineering (VA/VE) team. This cross-functional team was established in 2007 and has cumulatively delivered more than £1 million in cost savings through the approval of new innovation into South Staffs Water. Project teams have been established to trial and implement new technologies and practices such as recycled and cement bound excavation materials, large diameter barrier pipe and plastic boundary boxes. More information can be found within the Innovation strategy.

Strategy



The strategy to deliver AMP6 requirements commenced with the engagement of key stakeholders in August 2013. This included the South Staffs region and Cambridge region working as one, and will lead to a consultation period to identify areas of potential types of expenditure, timing and prioritisation to enable specific resource to be allocated.
This will allow the business to proactively resource and manage the delivery of requirements for AMP6 cost effectively by:

- Engagement of stakeholders well in advance to:
  - Determine more accurately the level of expenditure and requirements
  - Agree the best vehicle for delivery of requirement – tender, contract extension, other; plus contract type where appropriate – NEC3 or standard South Staffs Water framework contracts
  - Agree timelines for delivery
  - Prepare high quality specifications
- Engage preferential suppliers before other utilities and award contracts before market saturation to achieve competitive rates and pricing
- Improve flow of expenditure against the IP and final determination

Timeline

The timeline is:

No.	Activity	Date
1.	Exec approval of AMP6 delivery strategy	June 2013
2.	Identify and engage with key stakeholders/project managers to: • Determine value of requirements • Agree vehicle for delivery • Timing • Type of contract required (if appropriate)	August – November 2013
3.	Produce priority listing of projects and commodity areas	December 2013
4.	Identify resource requirements (procurement & otherwise)	December 2013
5.	Present a detailed implementation plan to the Exec for approval: • Priority listing of projects • Vehicle for delivery • Timescales for approval • Resource • Type of contract	January 2013
6.	Start implementation of the plan (start tender and prepare for AMP6)	February 2014
7.	Commence delivery	April 2015

Risk

Starting the process before the final determination and awarding framework contracts does not mean that South Staffs Water will be committed to any value of work. The risk would be that resource potentially could be wasted if in the final determination approval is not given for those works. However, this can be limited by evaluating each project in terms of the probability that it will be approved and this will then form part of the ranking/priority of projects to be addressed.

Conversely, if the Company is not more proactive, the risk may be greater, certainly in terms of cost and the ability to resource and manage reactive requirements.

There is also an assumption that stakeholders will engage with this process in the period from August to November 2013 while the final business plan is being established.

Summary

Early engagement with key stakeholders and the supply chain will enable a more successful and efficient delivery of projects in the AMP6 capital investment programme.

South Staffs Water will continue to drive best value through competitive pressure and innovation.

South Staffs Water

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CAMBRIDGE WATER COMPANY

Innovation Business Strategy

December 2013

Innovation

South Staffs Water adopts a proactive approach to exploring new technologies that will benefit its customers, and improve its operating efficiencies in the long-term.

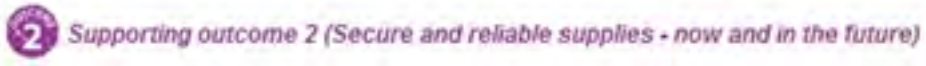
The Company is particularly keen to work in partnership with other companies, research organisations and academic institutions to identify areas for innovation. Such partnerships enable it to share expertise, resources and costs with a view to developing new, more efficient and environmentally sustainable ways of operating.

This is illustrated through its collaboration with the Water Research Centre (WRc) and UK Water Industry Research Ltd (UKWIR). These organisations provide tactical support through collaborative, shared cost research programmes which are tailored to company needs. South Staffs Water, along with other water and sewerage companies in the UK, has been included in a number of projects including those which have investigated technologies for carbon and energy management, water quality and treatment, and metering and flow technology.

Work in this area is supported by customer research carried out by MVA Consultancy, which showed 60% of non-household customers and 40% of household customers want the Company to invest in technology on the assumption that it will lead to efficiencies in the long-term.

Further examples of current innovative projects are given below.

Risk Assessment Models of Trunk Main Failures



The Company's water mains are vital assets. They are responsible for delivering the high quality drinking water to every home and business throughout the Company's supply area. It is therefore vital they are maintained to a high standard.

Carrying out refurbishment or replacement work not only requires significant investment, it is also disruptive for customers and has a knock-on effect on the amount they pay for their water supply.

The Company is therefore keen to ensure such work is prioritised and targeted in the most appropriate way.

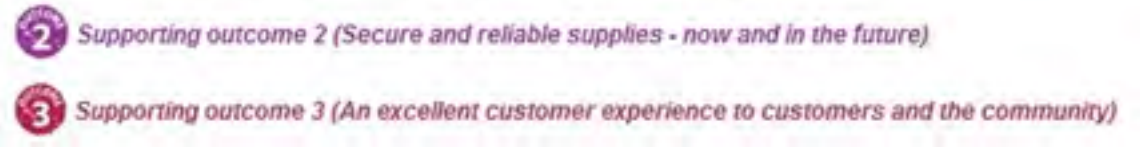
To assist this process, it has developed a specialist risk assessment tool to analyse the probability and consequences of strategic pipes failing and flooding the surrounding area.

The tool works by automatically simulating a catastrophic failure at every 50 metres along its 1482km trunk main network, using maximum flow rates derived from hydraulic models, together with GIS developed algorithms, to ascertain water flow direction and estimated depths.

This project has already proven a direct benefit for customers because the Company is able to mitigate risks of flooding that may have previously been overlooked.

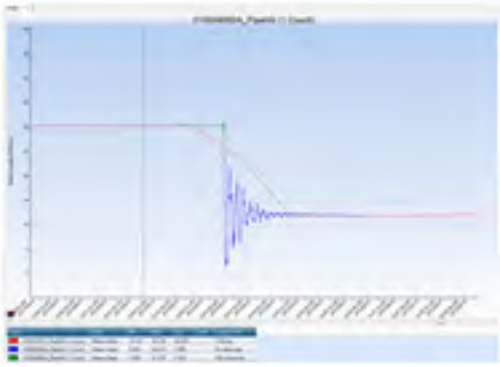
Future work on this project will focus on completing the trunk mains register, with the potential to extend it to cover reservoir breaches and mid-sized mains.

Live Distribution Network Technologies



High levels of customer service rely on the water company stepping in to mitigate problems before they affect customers' supplies, or if this is not possible, informing them about issues that may affect their supply in a timely manner.

Developments in technology are quickly enabling the concept of a fully 'live' network, where data on its performance can be made available in real-time.



This allows the Company to mitigate problems before they affect customer supplies, for example by re-zoning water supplies from elsewhere.

It also ensures that information about incidents can be delivered to customers in a timely manner, through various communication channels, such as its website or via SMS or email messages.

The Company is focusing on several strands of this concept - long range communications, real-time logging, advanced telemetry data storage and office applications for disseminating the data gathered.

While there are many benefits associated with live networks, the Company is proposing a cautious approach for AMP6, which will involve the roll-out of these technologies across one of its larger supply zones in the first instance.

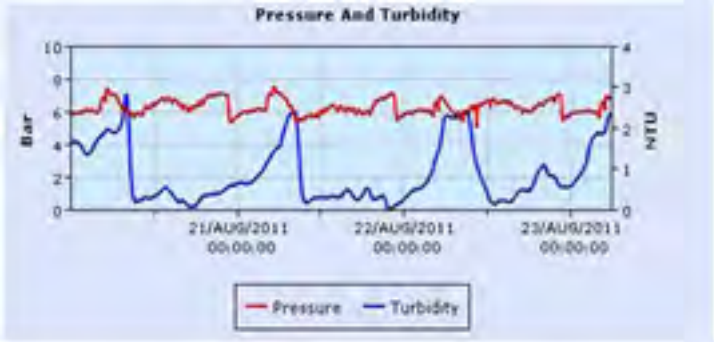
Live Water Quality Monitoring

Supporting outcome 1 (Excellent water quality - now and in the future)

The Company has trialled several water quality monitors during AMP5 and has adopted some of these for day-to-day use, enabling the detection of water quality problems entering the network.

These devices have proven very useful for mitigating the effects of water quality issues in real time and tracking down the causes of failures.

The Company is proposing to extend their use during AMP6, with a view to managing water quality within the distribution system in a more proactive manner.



Example of live monitoring - showing transient problems with water turbidity

This extension will be managed in parallel to the 'live network' rollout.

Identifying Practical Uses for Algae

Supporting outcome 4 (Operations that are environmentally sustainable)

During AMP5 the Company installed its first nitrate removal plant in the Cambridge region.

The waste stream from this plant is high in nitrate, and this is a fertile source from which to grow algae.

Algae absorb carbon dioxide as they grow and can be used to make products that reduce the need for fossil fuel resources.

The Company is supporting collaborative research by the University of East Anglia and the University of Cambridge to explore microalgae growth and the role algae can play in the development of a low carbon economy.

A new research facility opened at the Cambridge University Botanic Garden in September 2013.

Part of the research will also look at using nutrients which have leached into ground water for growing algal biomass, thus helping to find ways of reusing waste.

Pump Optimisation Automation

South Staffs is one of the hilliest areas in England and Wales and, as a result, needs to raise water to a high level in order to be able to distribute it through its network.

This ability to raise water up is known as the pumping head. At 198.74 metres the South Staffs region has the highest pumping head of all the water and sewerage companies.

At the other end of the scale, the Cambridge region with its flatter, fen landscape has a pumping head of 69.10 metres. This is the lowest of any of the water and sewerage companies in England and Wales.

When combined together, the two regions have an average pumping head of 172.42 metres, which ranks the company with the third highest pumping head in England and Wales behind Sutton and East Surrey and Welsh Water.

The higher the pumping head, the more the Company needs to spend on energy to pump the water through its network. At South Staffs Water, energy costs account for around 20% of the overall operating costs, meaning the company is acutely susceptible to changes in energy prices which have doubled in the last seven years.

The Company is keen to reduce customers' exposure to the high energy costs wherever possible. To keep water charges low. In addition to negotiating deals with energy suppliers, which have resulted in a 5% saving on the prices being charged, the Company is also looking at how adopt the most energy efficient pumping regimes.

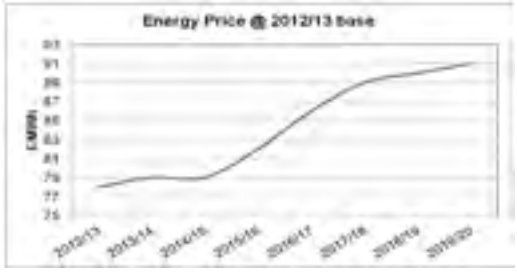
It has developed its own optimisation software, which combines static pump test data and live efficiency data, in order to select the most efficient pumping combinations.

Future developments in this area could exploit these optimisation algorithms even further to completely automate the pump control system. This will enable pump selection (and potentially profiling) to be controlled directly by the software to always deliver the optimum pumping plans for any given demand situation.

Pump Motor Drive Development

Supporting outcome 4 (Operations that are environmentally sustainable)

Pump efficiency is of critical importance across the whole industry and the Company has a good history of maintaining efficient pumps, resulting in industry leading performance of around 4kWh/Ml/m within the South Staffs region and 6kWh/Ml/m within the Cambridge region.



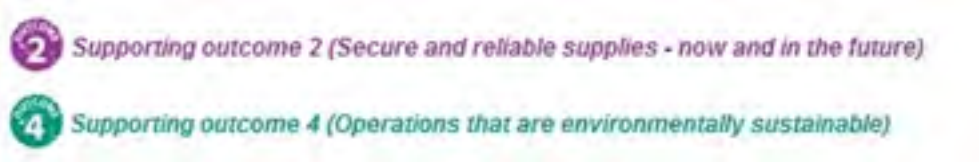
Energy prices are forecast to increase by 20% between 2012/13 and the end of AMP6 in 2019/20 (results of joint study by Bergen Energi/Cornwall Energy/water companies). This has a direct impact on customer bills and is largely outside of the control of water companies.

To maintain its industry leading position, the Company is investigating innovative motor and drive packages and has recently installed an ABB synchronous reluctance motor and drive on a borehole at Somerford Pumping Station.

This setup has delivered a 6% reduction in energy use, and also delivers improved reliability and lower maintenance costs, despite replacing what was already considered to be an efficient motor.

As a result of this successful implementation, the Company is now actively searching for other potential sites where similar technology could be installed. If older, less efficient, boreholes are targeted, then energy savings of 10-15% are considered achievable. This strategy is long-term, but every improvement will help to manage the impact of increasing energy prices upon customers.

Water Recycling in New Housing



The average person uses 150 litres of drinking water every day. The Company is working with several organisations within the Cambridge region to develop an effective method of reducing this consumption to more sustainable levels.

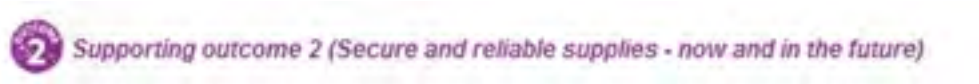
Greywater recycling allows waste water from showers, baths and wash basins to be treated and reused for flushing toilets, watering gardens and washing cars; typical claims estimate that this could reduce water usage by 20-35% depending on the type of property.

However, despite the apparent environmental and financial benefits, such systems are seldom installed in new or existing properties because of high setup costs and poor public perception.

The Company believes that supporting water efficiency projects is important to meet future consumption targets and to ensure that water resources are sufficient for future generations. A collaborative project has already been undertaken with Cambridge City Council to install a communal greywater system at a council property that was recently refurbished to high standards of sustainability. This will help to evaluate the effectiveness of such installations in reducing water consumption, and to understand any technical issues arising. Another project is also being planned for a major new housing scheme in Cambridge.

Further details on the Company's strategic approach to efficient delivery can be found within the efficient delivery strategy.

Development of Infrastructure Models



A high percentage of the capital investment programme is spent on renewing infrastructure assets. It is therefore critically important that investment decisions in this area are based upon reliable models and that optimum assets are flagged for renewal, achieving the best value possible for customers.

The Company has overhauled the infrastructure models ensuring that the asset deterioration curves are up-to-date and accurate. These deterioration curves are then used to drive some innovative automated selection software, developed in-house, which autonomously selects optimal renewal schemes rather than just selecting individual assets. This enables users to test long-term modelled effects of simulated renewal interventions, assisting the Company to refine the longer-term strategy and choose the optimum amount of renewal activity required to deliver stable service. It also gives confidence to users that the proposed annual renewal programme is optimised as far as possible.

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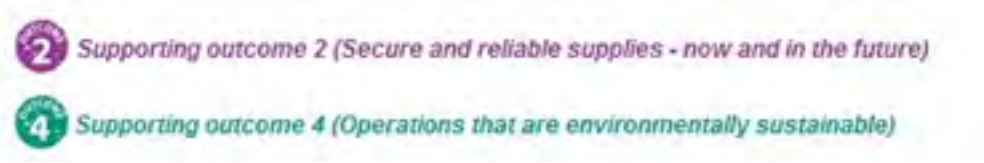
CAMBRIDGE WATER COMPANY

Water Efficiency Business Strategy

December 2013

Water Efficiency



The Company believes that the promotion of water efficiency is very important for a number of reasons; it is something that customers value, it is part of the Company's strategy for managing its impact on the environment, it can help with managing bills and affordability and it is part of providing good customer service. Water efficiency activity provides an opportunity for multiple benefits, and is a key part of reducing per capita consumption in the Water Resource Management Plan. The Company also has a duty to embrace water efficiency under the Water Industry Act to promote the efficient use of water. This Act provides the authority for the Company to enter a property where there are signs of mis-use.

Traditionally the driver for investing in water efficiency has been based on the need to manage the supply demand balance and deliver obligations to promote water efficiency. South Staffs Water has a healthy surplus in its supply demand balance in both regions of operation and on that basis is required only to continue with current levels of water efficiency activity. However, the Company has reflected on the strong messages received from customer consultation and engagement which indicate a clear desire for greater recognition of impacts on the environment and better communications around water efficiency.

The research carried out by MVA Consultancy suggested customers felt that water efficiency should be practiced by both customers and the Company. Non-household customers said they would also value having efficiency audits (41%). It was also felt the Company should do more to promote water efficiency information to its customers.

Accordingly, the Company proposes to revise its current approach and move some water efficiency focus onto behavioural change. This will be aimed towards an outcome of maintaining sustained reduction in water use over the longer term.

Plug in
Saving water & energy in the Midlands

A significant change in approach is needed and the Company is working towards this through involvement in collaborative projects such as Plug-in, and in supporting higher levels of the Code for Sustainable Homes in new properties. The business plan includes continued levels of expenditure on water efficiency activity but this will no longer be spent solely on the provision of water saving devices and will be refocused on a mixture of more

sustainable water efficiency projects and initiatives working with key partners in the wider community.

Supporting both quality and quantity, the Company works with the Water Regulations Advisory Service (WRAS) by promoting the use of efficient water appliance and fittings.

The future water efficiency strategy will comprise a number of streams of activity such as:

- Providing advice and information to non-household customers which will be targeted at specific customer groups to offer bespoke water efficiency advice and support. The target groups will include non-household customers such as public services, schools, colleges, universities, hotels and hospitals, small users on multiple sites, ie supermarket chains and shopping centres, and water audits of industry types common within the Company's area of supply

- The Company will develop a water audit pack for business, and offer advice on reducing water consumption
- The Company will improve its customer facing support by delivering water efficiency education to the Company's customer liaison officers, meter readers, water regulation inspectors and water samplers. This will increase the occasions where the water efficiency message can be cascaded to the public at the most appropriate time and in a cost effective way
- Continuation of communications with all customers on the availability of help and advice to save water, through billing mail inserts and the Company's websites
- Education of future customers through the education programme, delivered through Blithfield Education Centre, and local school visits
- An outreach programme to provide help and advice to schools and groups of customers
- Participation in collaborative projects such as Plug-in
- Promoting and supporting greywater recycling, and water reuse projects in the Cambridge region
- Continuing to explore partnering arrangements with third party stakeholders such as through the Green Deal, Registered Social Landlords (RSLs) and charities
- Developing stronger messages

around the dual benefits from reducing hot water waste and energy cost through the promotion and supply of devices and behavioural change messages.
- Linking into the fuel poverty agenda highlighting the benefits of water and energy efficiency initiatives with local authorities and RSLs.

Proposals are subject to review depending on which ones prove to be successful and well received by customers. For example, some of the above activities may not appeal to customers and therefore the Company would review the benefit in continuing with that particular part of water efficiency activity.

Customer Research

The Company has undertaken extensive research relating to water efficiency. Many participants wanted the Company to do more to encourage customers to use less water, and to do its part by reducing leaks.

The Company is also aware of the response that its customers have to changing weather conditions and how this can impact on water supply. It actively encourages changing customer behaviour in times of extreme weather, both in the winter and summer. The Company uses its communications channels to educate households and non-households on water saving strategies at times when the supply is under pressure from environmental conditions.

Although customers were very satisfied with the Company's responsiveness when contacted, many felt that general communication could be improved particularly in relation to the current metering policy, free water efficiency devices, leaks on supply pipes and pressure from new housing developments.

Water efficiency was highlighted as a key area for improvement among non-household customers. In the customer research carried out by MVA Consultancy one in four businesses wanted to see more water efficiency measures introduced; and one in five wanted to see reductions in risk for short term interruptions in supply and environmental pollution.

Around two in every five non-household customers would also like to have a central, dedicated point of contact at South Staffs Water who would provide advice on water efficiency audits and onsite leakage detection. Customers mentioned the provision of free water butts as one way of encouraging customers to use less.

Businesses also saw this as a key priority for them in the Cambridge region. Three of the six businesses interviewed indicated spontaneously that they would like Cambridge Water to offer a 'water audit' (consultancy support to review their processes and systems and help them identify how they could save water).

As awareness of water efficiency gains greater momentum, the Company is committed via its business plan to support the reduction in water usage, not just in the short term but through behavioural change that will deliver long term benefits.

South Staffs Water

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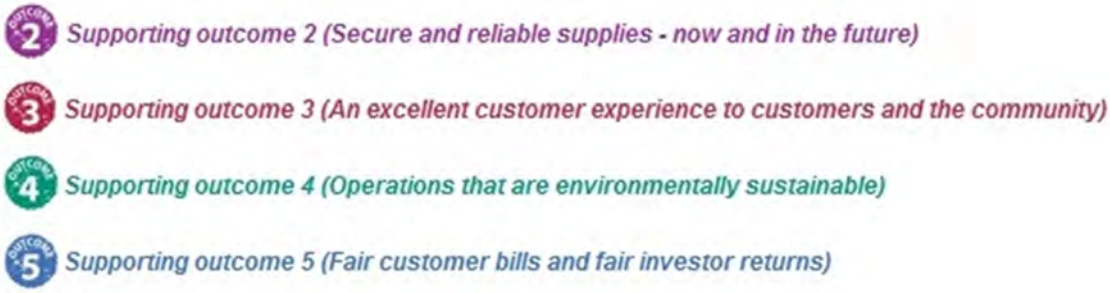
CAMBRIDGE WATER COMPANY

Metering Business Strategy

December 2013

Executive Summary



The Company plans to continue with existing policies introduced at PR09 and shall consider alignment across both regions. By reviewing the different approaches the potential to transfer best practise will be explored and implemented where appropriate.

Meter Penetration

Current household meter penetration across the regions identifies distinctly different positions.

Region	Domestic Meter Penetration (including voids)	
	2012/13	End of AMP6
South Staffs	29%	41%
Cambridge	66%	73%
Combined weighted	36%	47%

The Company believes that metering strategies form an important part of helping customers understand their water use and provide them with opportunities on how they can manage/change their water using habits.

Why Meter?

- Research shows customers generally agree metering is fair
- Environment agency are supportive
- Encourages conservation and rewards efficiency
- Can help customers with budgeting
- Supports energy and carbon reduction for the Company and the Customer
- Demand management tool
- Enhanced supply pipe leakage identification

The Company is committed to aligning metering strategy and policy appropriate to the needs and benefits of the customers in each region. It is intended to manage this in a transitional way using the opportunity of having different technologies, approaches and experiences to determine optimised solutions.

In many cases meters can also help customers control their bills more effectively by providing more accurate data on water consumption thus helping with affordability.

For non-household customers, meters provide a valuable source of information that helps to support improved environmental efficiencies and utility portfolio management. As non-household customers become more water aware, the need to evidence water saving strategies via metering will become more apparent as the industry moves towards Market Reform

Meter Strategy

In both regions Meter Optants and New Property developments form the majority of metering growth with SST deploying the Change of Occupier Metering strategy to help address the low meter penetration position.

In consultation on long term strategy CCW have endorsed the decision to continue with Change of Occupier Metering - *"We believe that the company's proposed plans represent a sensible and steady progression of metering. We also support the proposal for metering on change of occupier in the South Staffs region as customers in the region clearly think this is the fairest way of charging."*[1]

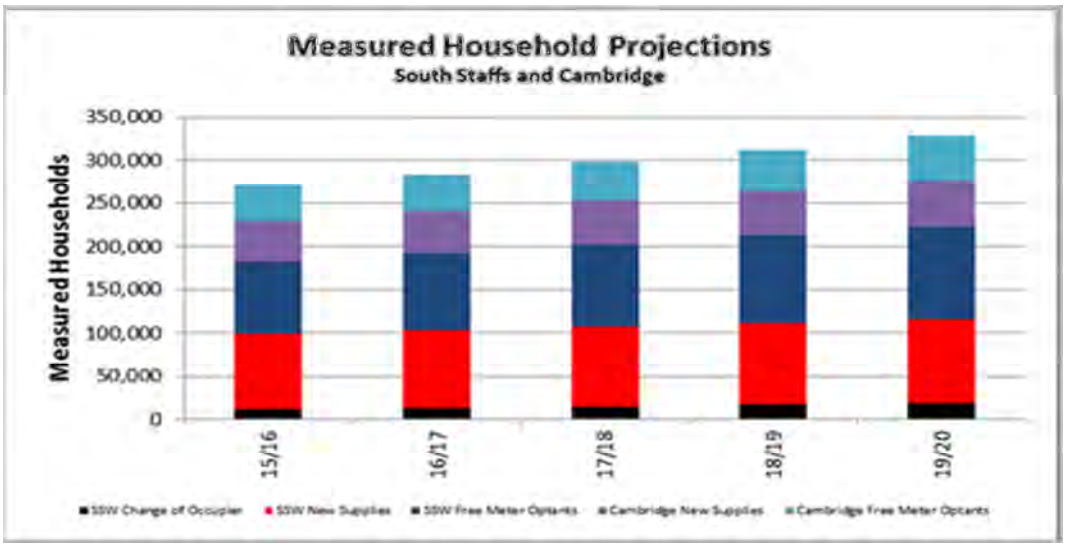
The Environment Agency has also given support to the continuation of the Change of Occupier metering policy which features in the Company's Water Resources Management Plan.

The following tables represent the levels of selective meters forecast in AMP5 and AMP6.

Activity	Selective Meters	
	AMP5 Nr / Forecast	AMP6 Nr / Forecast
Meter Optants	34.7k / £8.43m	33.1k / £7.98m
Change of Occupier Metering	9.0 k / £2.18m	9.8k / £2.69m

Metering growth through these strategies is summarised in the following table.

[1] Extract from Consumer Council for Water response to 'Our long-term strategy – A South Staffs and Cambridge Water Consultation ' 6 September 2013



Meter Replacement

Meter replacement activity in both regions progresses from AMP5 to AMP6 with historic periods of increased meter growth (1995 -2000) starting to impact. In Cambridge this doubles the number of replacements in AMP5. The replacement of battery powered meters with a more finite life also impacts in AMP6.

The following tables represent the levels of meter replacement forecast in AMP5 and AMP6.

	Meter Replacements	
	AMP5 Nr / Forecast	AMP 6 Nr / Forecast
Total	33.5k / £ 5.00m	49.9k / £7.00m

Meter Reading / Automated Meter Read (AMR) Metering

With a commitment to adopting new technologies, across both regions the Company is installing AMR meters on new supplies and household meter replacements supporting efficiency and customer service drivers. More information on innovation and new technologies can be found within the Innovation strategy.

The installation of AMR meters is considered a wider opportunity, not only to replace the facility to capture consumption but to improve potential customer experience through enhanced data capture.

In South Staffs region the clustering of replacements has enabled delivery efficiencies in scale for the physical activity. For SST with the higher organic meter growth forecast this mitigates against the impact on meter reading resources.

The potential for AMR meters to link into a live network is a tangible goal that will be explored through pilot schemes in both regions commencing in AMP5 and running through AMP6.

Engineering Scrutiny

The Monson audit in September 2013 reviewed the meter replacement strategy in the South Staffs region and concurred with the Company's view that any short term savings resulting from a move to a reactive only replacement strategy would be quickly outweighed by a larger reduction in Company income.

The report summarised that the work planned for AMP6 could not be delayed past 2020 without reducing annual income to the Company and increasing still further the cost of the replacement programme in future years.

No challenges were raised by the auditor.

Further detail of the Company's Metering Investment strategy can be found within the next section.

South Staffs Water

incorporating

CAMBRIDGE WATER COMPANY

Retail Strategy

December 2013

Retail Strategy

Introduction

The Retail Strategy covers activities which involve interaction between the Company and its household and non-household customers. These are:

- Customer Services
  - Customer contact
  - billing
  - payment handling
  - remittance cash handling
  - vulnerable customer schemes
  - network and non-network customer enquiries and complaints
- Debt Management
- Meter reading
- Development services
- Other operating costs
  - demand side water efficiency initiatives
  - Customer-side leaks

The Retail part of the business is at the forefront of the Company's customer service delivery change programme. With a focus on both household and non-household customers, it provides a broad range of activities aimed at meeting the outcomes for the Company and its customers.

The Company has a robust focus on delivery of excellent customer service by ensuring:

- Customers have a positive experience when interacting with the Company.
- Customer feedback is embedded in processes and procedures to ensure that change is driven by the needs and desires of customers and not based on the Company's assumptions.
- The Company's Retail operating model is cost effective.

These strategic priorities seek to ensure customer service becomes an integral part of the day to day activities of all company representatives.

What makes 2011-2013 remarkable is that at the same time as the Company was improving its customer service and related SIM position, it was also implementing its AMP5 mandate, conducting major customer impacting meter reading and billing process reviews and embarking on a two year digital transformation programme.

The Company's overall retail strategy is based on knowing and understanding its customers: what they want and how they would like it to be provided. The distinction between household and non-household customer service expectations is also addressed through a differentiated service for Non-Household customers.

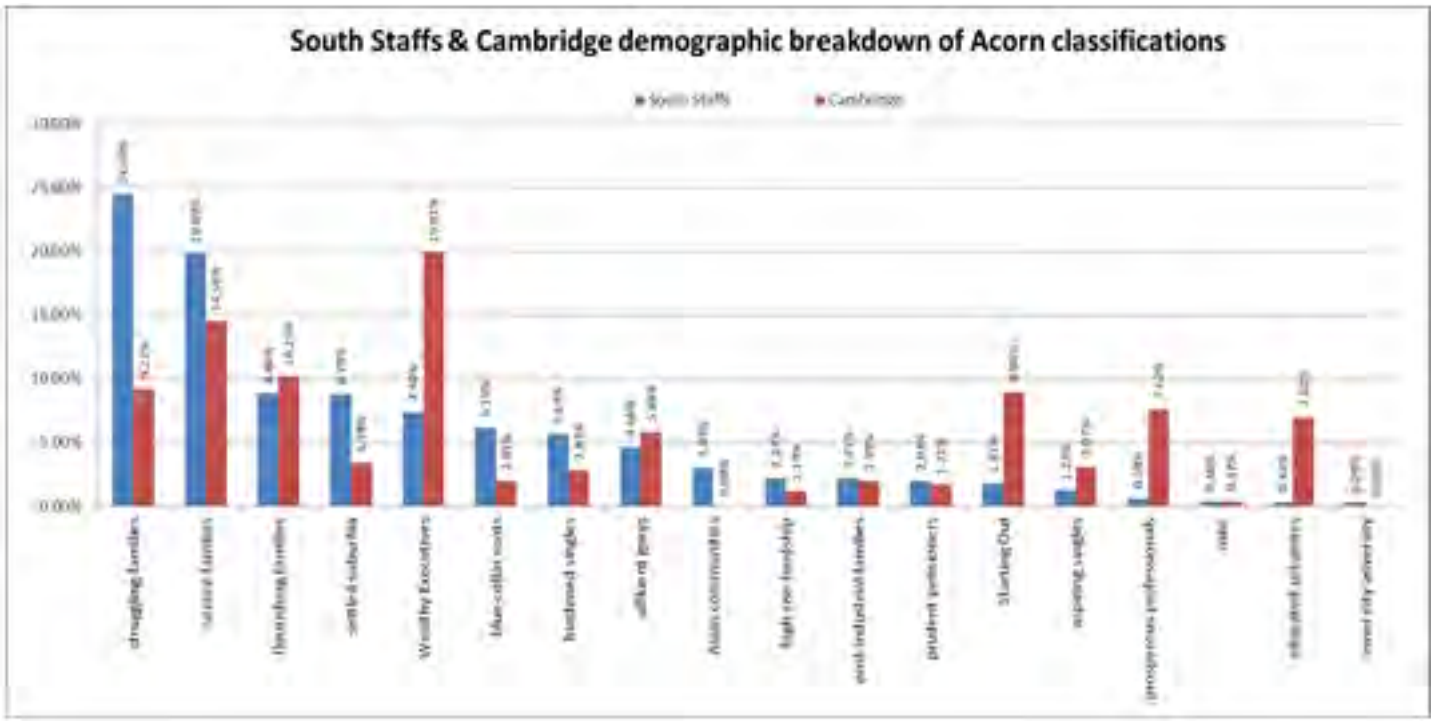
The Retail Delivery Plan aligns the 2015-2020 retail objectives and investment plans with the Company's overall strategy that is focused on delivering high service levels while retaining low customer bills and the Company's commitment to delivering the outcomes as determined by its customers and stakeholders. Each investment plan for 2015-2020 is a contributor to the outcome: Delivering an excellent customer experience to customers and the community.

Customer Profile

For household customers, the Company uses ACORN (A Classification of Residential Neighbourhoods used extensively for market research purposes) to characterise the socioeconomic status of people living in its catchment area. There are a range of ACORN classifications that are based on postcode data. These classifications comprise 56 types, clustered into 17 groups and 5 categories. The groups and categories are defined as follows:

Wealthy Achievers	Urban Prosperity	Comfortably Off	Moderate Means	Hard-pressed
Wealthy Executives	Prosperous Professionals	Starting Out	Asian Communities	Struggling Families
Affluent Greys	Educated Urbanites	Secure Families	Post-industrial Families	Burdened Singles
Flourishing Families	Aspiring Singles	Settled Suburbia	Blue-collar Roots	High-rise Hardship
		Prudent Pensioners		Inner-city Adversity

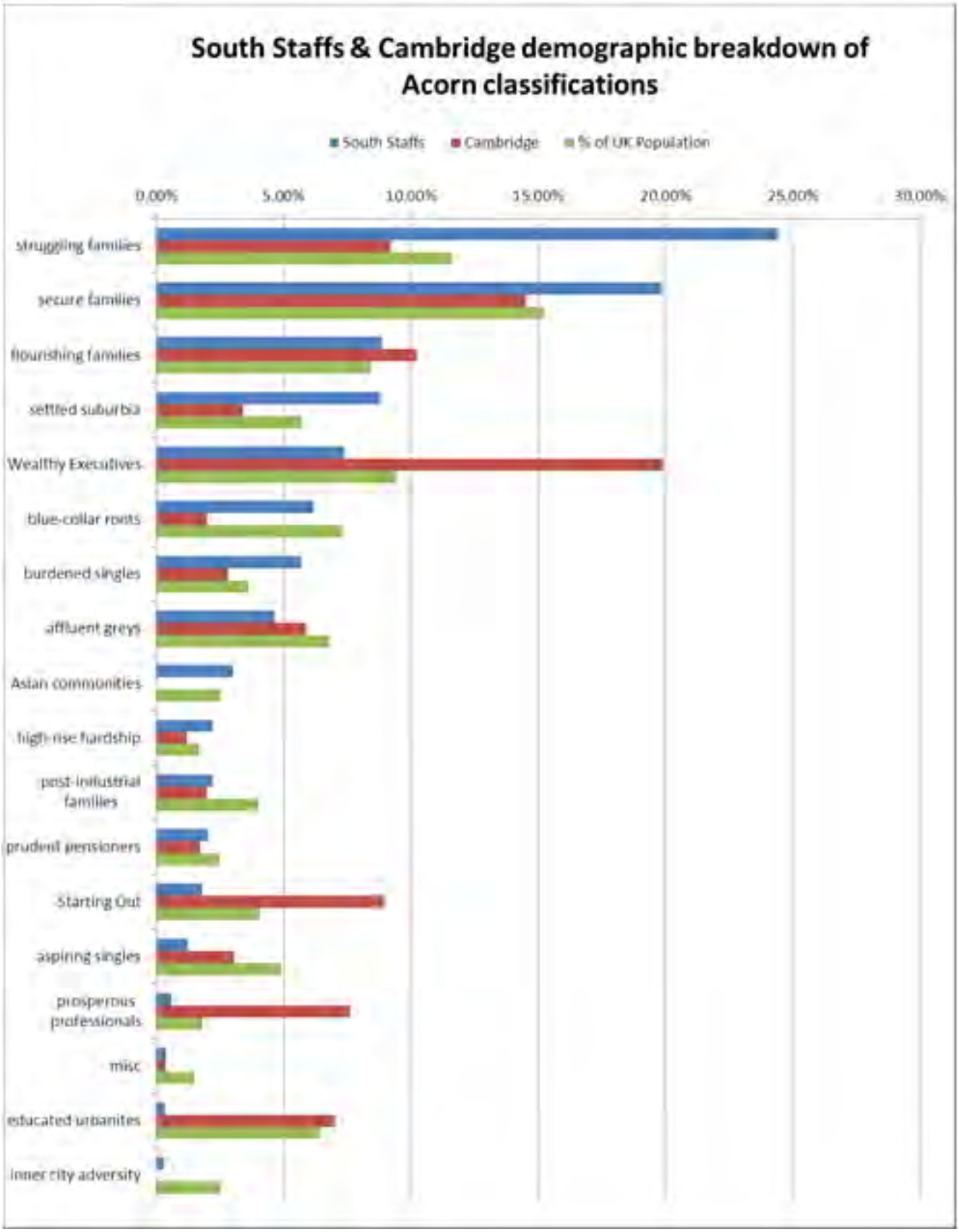
The below graph shows the breakdown of the South Staffs and Cambridge regions: and the UK as a whole in percentage terms:



The graph below shows the breakdown of the South Staffs and Cambridge regions and the UK as a whole in percentage terms:

In the South Staffs region, between them, Struggling Families and Secure Families make up nearly half of the South Staffs area (about 44%). Whilst these two groups are also the most common across the UK, they are disproportionately highly represented in this region.

For the Cambridge region, Wealthy Executives make up 20% of the Cambridge area.



Vulnerable Customers

The Company wants to be sure that all customers can use its services, so offers a range of extra facilities to assist those who need them. These include:

Dialysis Register - Households including a dialysis patient receive priority notification of any planned interruptions to the water supply along with extra support during any emergency cuts to the supply. The register is also open to other customers who would have difficulties getting to alternative water supplies in the event of an emergency.

Help with Communications - Any correspondence or bills can be sent in large print or in Braille, or read out over the phone if preferred. The Company also has a Minicom Textphone for hard of hearing customers.

Nominee Service - Customers may appoint a nominee to speak to the Company about their account and to receive bills on their behalf.

Password Scheme - Any customer may register for the Company's password scheme, which is designed to help reduce the number of bogus caller incidents.

Assistance with Water Meters - Meters may be installed at more suitable locations for those customers with mobility difficulties. The Company can also read meters for customers unable to do so for themselves.

WaterSure Scheme - Fixed charges to metered customers who meet criteria on receipt of certain benefits along with either the number of children in the household or having a resident who uses more than a usual amount of water due to a medical condition.

Meters - The Company offers a free meter options scheme, along with advice on water efficiency and a number of free water saving devices.

Advice - The Company is also able to signpost vulnerable customers to other organisations which can give more specific advice to assist them.

At the end of 2012-13, there were 13,939 customers registered for a vulnerable customer scheme, an increase of 38% compared to the previous year. The Company advertises availability of the service through its website, on the reverse of billing literature and through telephone customer contact.

Non-household Customers

The Company's non-household customer base encompasses a wide range of organisations. The profile of the business customer base is extremely diverse, from heavy engineering and fast moving consumer businesses in the South Staffs region to the colleges that make up Cambridge University.

Over 600 business customers use 5 million litres of water (at a single site) a year.

Customer Contact

The majority of all customer contacts are related to billing – payments, changes to address details, querying bills and the basis of charges, meter readings and so on. The Company handles ten times as many calls related to billing as it does to water operations. Water operations related contact mainly consists of calls relating to discolouration, no water, low pressure, defective stop tap, and reporting of leaks.

The following chart demonstrates the channels customers currently use to interact with the Company and the percentage split of contact for each channel:

February 2013 saw the launch of South Staffs region's Online Account Management Service, giving customers greater control of their accounts. As part of the Company's commitment to develop and improve the services, customers have the option to pay bills online (previously only available through a third party provider), view their account and previous bills, change contact details and receive paperless bills.

The new self-service portal is the first step in an overall digital transformation programme, which includes implementation of IVR, remodelled website, mobile app and social media.

Customer Voice

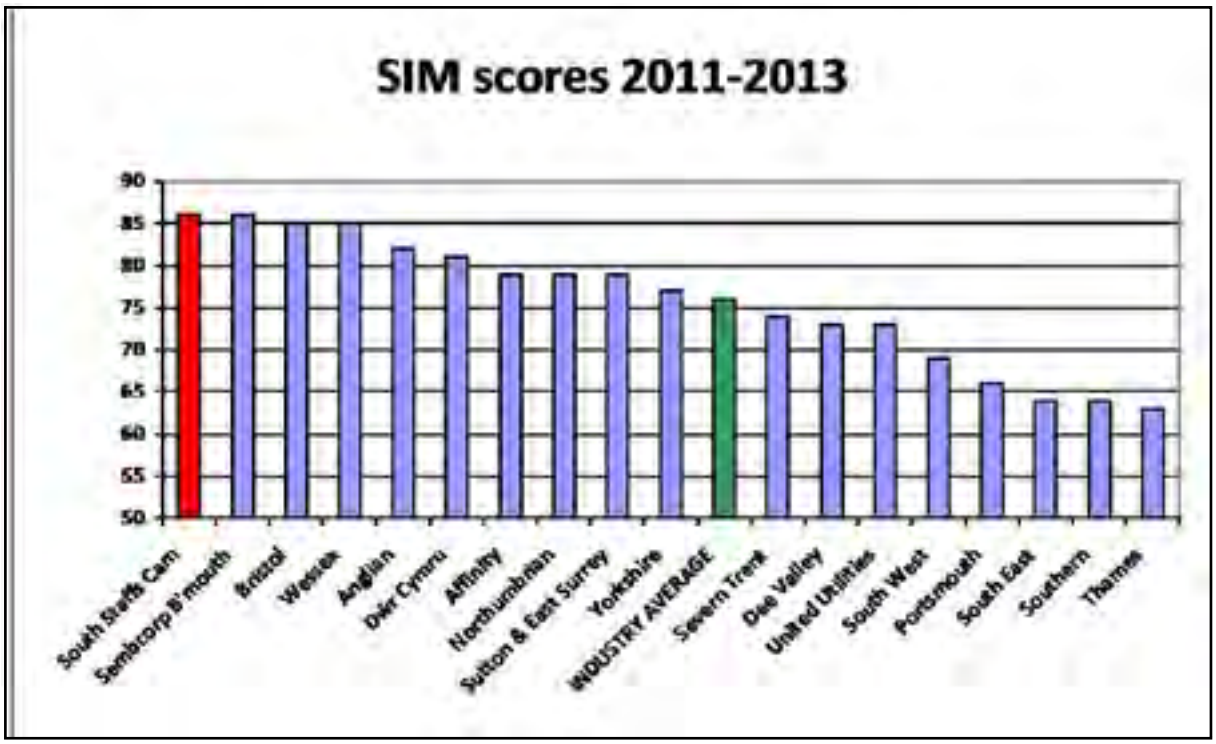
Supporting outcome 3 (An excellent customer experience to customers and the community)

With the growing desire to develop and maintain channels and approaches to ensure its customers are listened to the Company's Customer Voice (CV) team was created in 2011. The CV team provides an enhanced customer interface, with a focus on customer service delivery improvement and a detailed understanding of customers' requirements, a common language for the Company going forward and a key input for new policies or services; any significant changes we make to processes are tested with customers in advance of making the change.

Customer Voice survey activity is conducted daily to understand the interaction with customers and how it can be improved. This is done using customer surveys, dealing directly with customers and feeding back to Retail and Wholesale employees.

The Company responds to feedback on an on-going basis. An example of this is the establishment of the Keep the Customer Informed (KCI) process to deal with that particular issue which had become apparent through customer insight. In addition to customer feedback, stakeholders continue to provide clear feedback on the level of customer service given to customers.

The Company's average SIM score for the two years 2011-13 of 86 and ranking of first among all water companies shows that customers think we are delivering excellent customer service and reflects the significant effort and progress the Company is making in this area.



In addition to the SIM measurement, regular customer service surveys are conducted. The results from these surveys give a clear indication of how satisfied customers are with the Retail and Wholesale activities and the service they receive. The Company's performance has improved over the last two years in a number of key areas of customer contact – including leaks, bill payment and moving home.

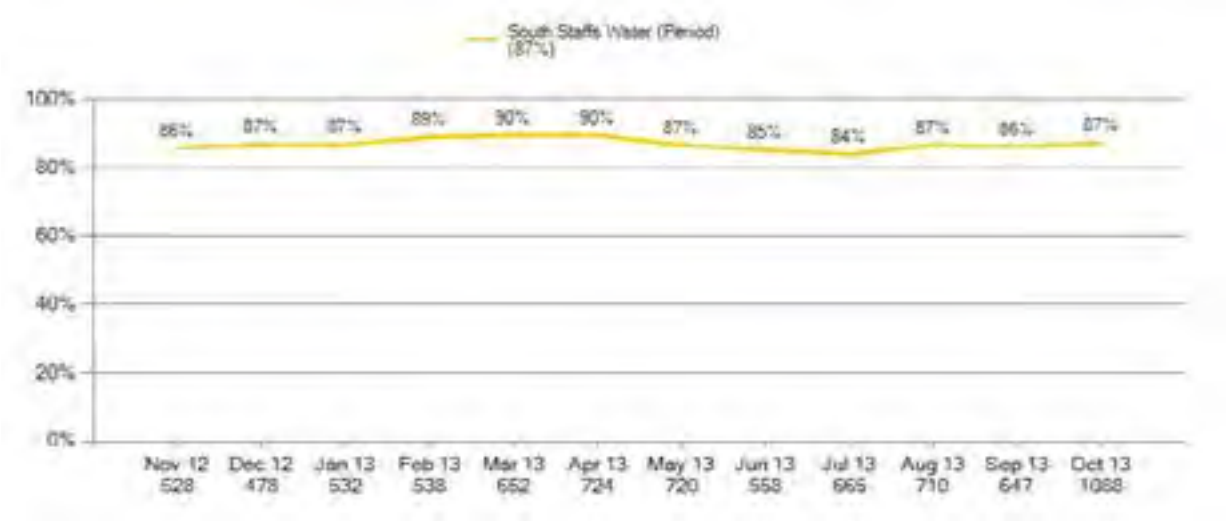
The Company's suite of customer feedback mechanisms includes the use of:

- Automated customer surveys – Bright
- Net Promoter Score (NPS)
- Customer Satisfaction (CSAT)
- Online Customer Panel

Automated Surveys - Bright

In August 2012 the Company introduced a new automated method of capturing customer feedback based on individual interactions with contact centre and field representatives.

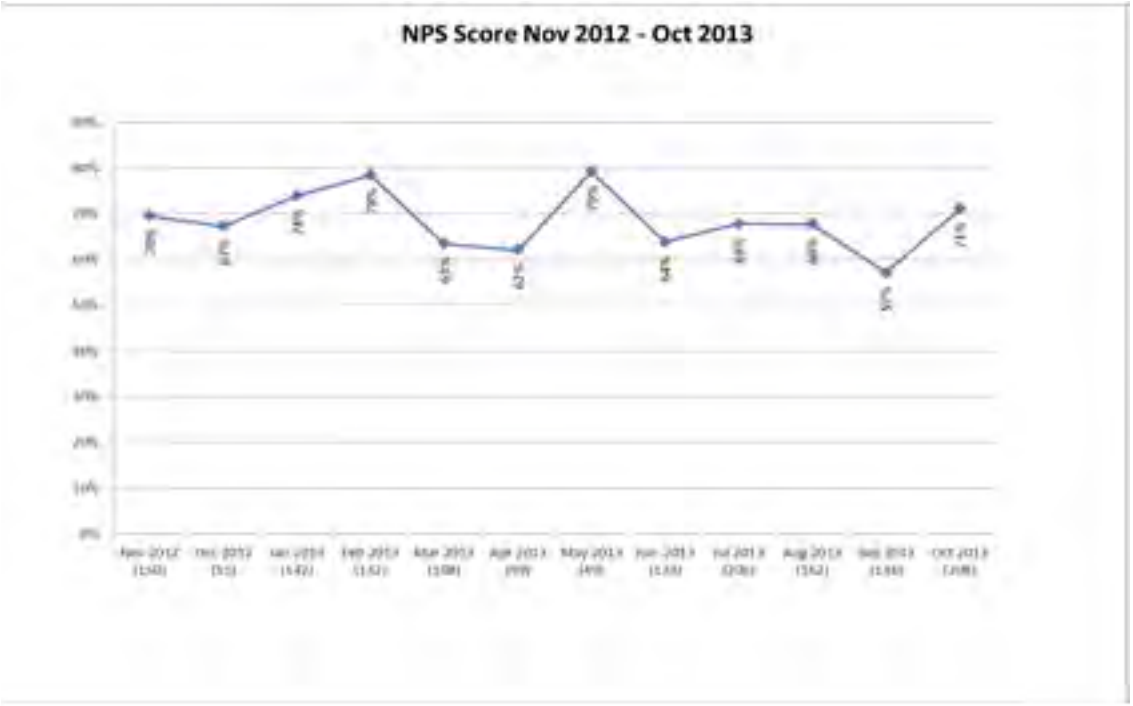
The table below shows the monthly score from November 2012 to October 2013 and the overall score of 87% over a twelve month period, derived from a total of 7840 surveys.



The Company also uses Bright to compare its customer satisfaction results against other utility and contact centre industry benchmarks.

Net Promoter Score (NPS)

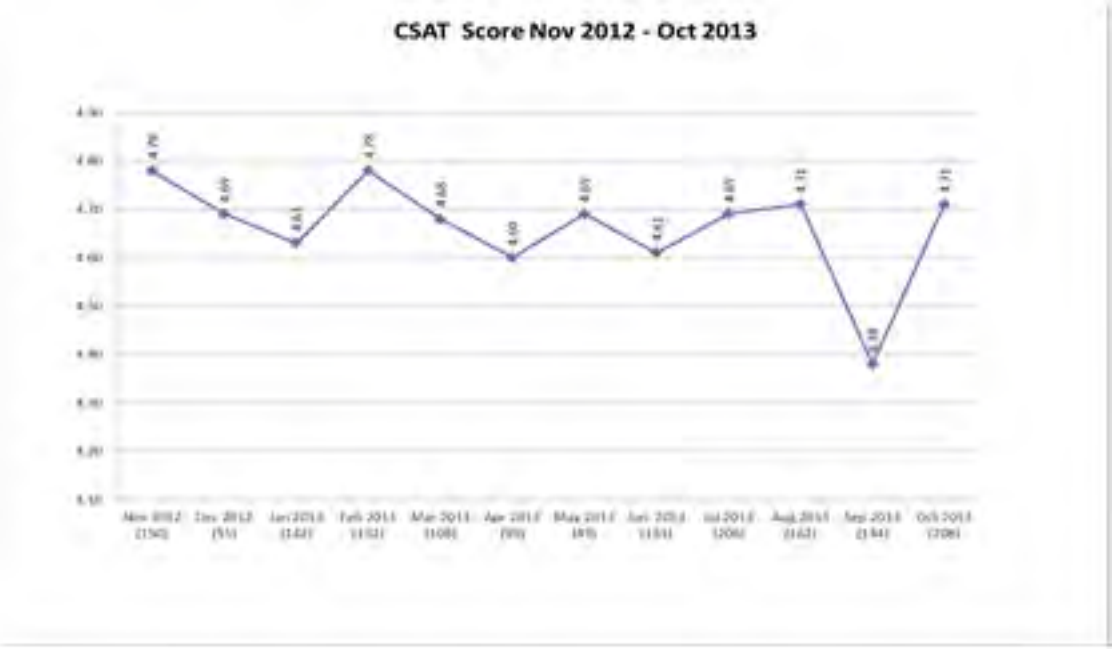
The Net Promoter Score (NPS) measures customer satisfaction with one single question, how likely is it that you will recommend the Company to a friend or colleague?" The following table shows the NPS ratings from November 2012 to October 2013:



Satmetrix (a customer feedback solutions company) undertook research in 2011 to identify NPS for a range of UK consumer companies in several different sectors. The graph below shows the headline figures released for this research. Although, the Company was not included in this survey, its internally generated NPS is included for comparison which shows the Company in the top three of the benchmarked group of companies from various industries.

Internal Customer Satisfaction (CSAT)

CSAT - is a measure of the degree to which service meets the customer's expectations and is measured on a scale of 1 to 5 (very satisfied to very dissatisfied). The graph below shows that customers' overall satisfaction has been consistent, generally above 4.68.



The Company considers that traditional customer satisfaction (CSAT) and Net Promoter Score (NPS) benchmarking and tracking would be greatly enhanced with measurement and tracking of its own Customer Effort Score (CES), so going forward, the Company will add the CES (the work customers must do to get their problem solved) measurement to its suite of customer satisfaction indicators.

Online Customer Panel

The Company has developed its approach to customer engagement which includes the establishment of an online customer panel. This panel enables the Company to better meet its commitment to continuous customer engagement, as part of its business plan preparations and beyond. The panel is used in a flexible way to provide a ready resource of engaged customers, representative of the entire customer base. Consultation and engagement with the online panel has covered:

- A full day's deliberative workshop held. Objectives of the workshop were to:
  - Understand customers' informed and uninformed views about various aspects of the WRMP.
  - Gather direct feedback from an informed group of customers regarding South Staffs Water's current thinking on the following issues:
    - Water metering
    - Leakage
    - Customer restrictions (hosepipe bans)
    - Water efficiency (encouraging customers to conserve water)
    - The environment

- **Correspondence Service Levels-** They were asked how quickly they would expect South Staffs Water to reply if they a) sent a letter and b) sent an email. They were then asked the same sequence of questions relating to a hypothetical complaint.

- **Communication Preference-** Customers were asked how South Staffs Water should communicate to customers in future about general issues, for example about the Company's policy on metering, the environment, or its help for customers who are struggling to afford payments.

- **Assisted Repair/Customer Supply Pipes-** Customers were shown a diagram illustrating where responsibility lies in terms of different supply pipes and asked if the current policy relating to assisted repairs/replacement of customer supply pipes should be changed.

- **Customer Credit -** Customers were given two scenarios (the transfer over to a meter and customer over-payment) and asked if it was acceptable for South Staffs Water to keep a customer's money on credit, or if it should be repaid immediately to the customer, in full.

- **Metered Customers' Billing Preferences -** Metered customers were asked their views on some possible changes to billing frequency.

Extensive customer research was also undertaken in the Cambridge region prior to and after the revised bill design, which has help reduce unwanted contact and aid customer satisfaction.

The Company has (based on the extensive research conducted over the last three years) a strong understanding of the expectations and priorities of its customers. Certain trends, such as the need to keep customers informed, have been evident from a number of research projects and are being addressed.

In addition to the extensive 'business as usual' surveys, the good customer service practices within the Company are supported by the excellent feedback received from customers taking part in the business plan preparations surveys.

Business Plan Research Findings

As part of the business plan preparations customer research also shows that customers want to see:

- Contact with the Company made easier
- Increased communication about environmental issues to help customers understand what the Company does around environmental activities, water hardness awareness, lead and water efficiency
- Communication channels to keep customers informed of disruption, leakage or planned outages
- Enquiries that are managed across a range of channels, convenient to customers
- Support for customers in debt, through early identification and development of initiatives (for example social tariffs) for customers who have difficulty paying

- Expect to be able to complete transactions outside of office hours such as automation and online

For non-household customers:

- A dedicated point of contact
- Improved communication about service interruptions – especially planned outages
- Support in planning and forecasting their water usage and bills
- Proactive water efficiency information and items

There has been strong feedback in the customer research findings that communications with customers could be more effective. Customers have expressed a desire for advice and education on saving water, on water hardness and on how to reduce their bill, as examples. Customers also have a desire for more information on the Company's performance and how bills finance its investment activities so they can see where their money goes.

So whilst SIM performance is strong and customer satisfaction levels are high, there is more that can be done for customers and the Company will work hard to improve its customer communications following this feedback.

Customer Communication

Communicating effectively with customers is vital to any customer service strategy and the Company takes the view that effective communication is not just a one-way process but also a vital conduit for constructive customer engagement. It is also central to shaping customer expectation, reducing complaints and improving satisfaction.

Objectives

The high-level approach adopted by the Company is to fulfil the following objectives for both household and non-household customers:

- Meet regulatory requirements regarding information provision and also meet the requirements of the Information Provision guidelines published by Ofwat
- Take advantage of developing communications channels, such as social media, in order reach customers more efficiently
- Be proactive in informing customers about relevant services and giving timely advice, reducing the need for customers to contact the Company and simplifying the customer journey where possible
- Deliver useful information to the right customers more effectively by using demographic information, feedback and customer research as part of communication planning
- Provide best value for money to both the Company and, ultimately, customers by measuring, where possible, the effectiveness of the communication approach and adjusting it as necessary

Research and Feedback

The approach represents a development of previous communications and recognises the input of the Customer Challenge Group and wider customer research carried out as part of the Business Plan preparations. For example, it was recognised that the differences in

attitudes towards key issues, in particular leakage, were significantly more supportive of the Company position when the customers and also Customer Challenge Group members were better informed about the issues surrounding it, suggesting that customers would benefit from understanding more about the economic level of leakage.

The first online panel survey, carried out by Community Research in May 2013 also included some specific questions about correspondence and communication. Four in five customers selected 'insertion of leaflets into the annual bill' as one of the methods that should be used, with 68% indicating that this is the one that they would be most likely to notice. The Company already uses billing inserts as a primary method of communicating with customers and, based upon this evidence, will continue to do so.

Information Provision requirements

The Company will, as a minimum, comply with its information provision obligations set out in its license conditions and it will also follow the principles set out by Ofwat, which are that information provided to customers should be:

- **Accurate:** The Company should make sure the information it provides is correct by regularly reviewing it – for example, to make sure it is consistent with its charges scheme. Any updates should be shared with customers directly and with advice providers.
- **Transparent:** Information should not be misleading. It needs to be unbiased and enable individual customers to make informed decisions.
- **Clear:** Information should highlight key messages and direct customers to more detailed information.
- **Accessible:** The Company should provide different information and use different communication channels to meet the needs and preferences of particular customer groups ('customer segmentation').
- **Timely:** The Company should design and deliver information in a way that makes sure customers get the right information at the right time – for example, when a customer moves home.
- **Customer-led:** The Company should actively seek its customers' and their representatives' views and feedback on the information it provides and how it provides it. It should respond to customer and customer representatives' information needs.

In order to embed these principles into its communication, the Company has taken the following steps:

- Regular auditing of communication channels. The audits and results will be shared with CCWater annually;
- Ensuring that key communications and campaigns are shared, for comment, with CCWater prior to publication;
- Recognising the principles at high level in any communication strategy, and also by creating a Company policy supporting them.

Developing Communications Channels

The communication channels that customers use in their private lives are constantly changing. Smartphones have revolutionised the average person's access to the internet and social media has become more immediate than ever before. In addition, this is making customers more sophisticated in the way that they receive and process information and the Company needs to investigate, and if appropriate, embrace this new technology because:

- A growing group of customers expect companies to provide information using mobile web and social media, as a minimum. These technologies are no longer ahead of the curve, but expected and normal. Failure to have a presence in these spaces, (i.e., provide a website that works on mobile devices) is, therefore, failing customer expectations;
- Channels such as SMS, email and social media are efficient, direct and quick ways to communicate, allowing personalised communication that can be targeted for those customer groups who are receptive to them;
- Online channels can simplify the customer journey, especially as a reactive communication channel, with simple enquiries able to be served with the minimum of fuss and effort on the part of both the customer and the Company.

twitter

The Company has already started to use twitter, and has seen some success in answering simple enquiries as well as spotting dissatisfaction and offering information in order to better serve that customer – even if they were not directly questioning the Company.

The following is an example of how value can be added to the customer experience using social media as a communication channel:

As outlined in the section describing the Digital strategy, the Company has plans in place to develop online services to enable customers to better self-serve. This development will also open up, or improve, communication channels such as SMS, mobile web, and web chat and social media over the next few years.

Timely and Proactive Information that either informs customers or simplifies the customer journey

Proactive communication is a key part of the Company's approach. Delivering that information directly, rather than delivering it reactively in response to a customer enquiry means that:

- The customer journey is simpler and easier;
- Customers are well informed about issues that affect them and services available to them.

Some examples of the types of information that benefit from being delivered proactively are:

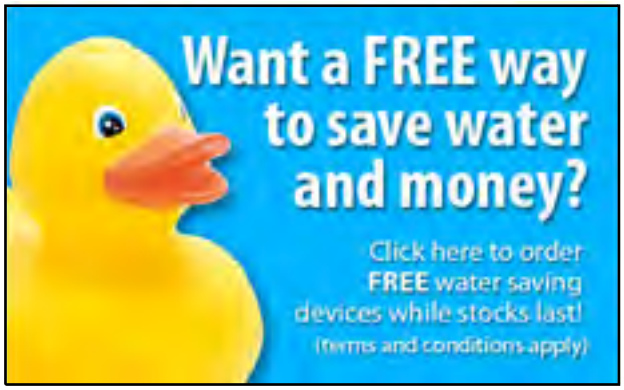
- What to do in the event of a leak?
- Ways the Company can help if they are struggling to pay
- Services available to customers, such as braille bills or WaterSure
- Planned works/interruptions to supply/road disruption

This sort of information is currently delivered by a number of methods, ie, cards through letterboxes, advertising in local newspapers and press releases, as well as promoted actively through specific campaigns using a variety of methods such as mailing, paid advertising and website banners and tweets.

(Bus side advertising)

(Poster)

(Website banner)



The Company will continue to try different methods of delivery as well as develop and trial new ones as appropriate, for example developing an online portal allowing customers to look at planned works and traffic disruption, or using SMS messaging to remind customers about bills.

Feedback from customers is important in shaping what information should be delivered more proactively and is the only way to ensure that customers are being told about the things that matter to them. This is highlighted in the example below:

As part of the customer engagement leading up to the business plan, a number of issues, such as environmental activity, were raised in which customers did not feel well informed. While these were not considered to be vital to the Company, they were by customers and so in the absence of information the assumption was that no activity was carried out, creating a negative impression of South Staffs Water on this issue.

For this reason communications planning will cover more than just the traditional areas of customer service, as it has previously.

Right information to the Right Customers

The Company's customers are diverse, with different issues and concerns, different levels of understanding, education, and also access and preferences for communication channels. In addition, commercial customers have their own goals and concerns.

In order to ensure all customers have access to the information they need, in a way that they understand, it is vital to more effectively understand, and segment, customers into groups whose behaviour can be more easily predicted and whose preferences are better understood.

Typically, an example customer group might include the following info:

- **Goals**: What users are trying to achieve, such as tasks they want to perform
- **Behaviour**: Behaviour patterns, helping to identify users' goals and what tasks they might typically carry out
- **Attitudes**: Relevant attitudes, for example towards water saving or towards online self-service, that predict how users will behave
- **Motivations**: Why users want to achieve these goals
- **Preferred communication channels**: How these customers prefer to receive information and what channels customers are most responsive to. This can include language barriers.

This information will take time and effort to compile and will require more data than is currently available from the records used by the Company. This data will need to be acquired through further research and/or purchasing data from a third party.

The advantages of building up better data are beneficial to both customers and the Company. For example, if the Company is successful in this activity it will be able to:

- More effectively and efficiently target customer groups who would benefit the most from a service, such as the password scheme, water efficiency, meter installation, Direct Debit or help with affordability.
- Better understand the needs of customers, identifying either gaps in communication – for example, groups for whom English may not be the first language, or a group of customers who would benefit from a service that has not been communicated to them in a way that they would respond to, or using a channel that is not available to them.
- Reduce wasted money and effort, by cutting down on the 'scattergun' approach to communications i.e. blanket mailings to all customers and enabling smaller but more effective campaigns.

Testing effectiveness though Measurement and Engagement

Because customer preferences change, it is no longer adequate to carry out the same activities over and over and expect them to have the same effect. Customer feedback and engagement should be used to test the effectiveness of communication. Customer feedback is vital to ensuring that communication is fit for purpose.

For example, newspaper circulation is a fraction of what it was ten years ago, and so this limits the effectiveness of newspapers as a communication channel. In contrast, the number of customers visiting the Company web site has increased by an around 20% every year, for three years running, increasing its importance as a communication channel.

Wherever possible, communications planning will be evidence based, and will include metrics determining effectiveness. This will then inform future communications, creating a virtuous circle of review and improvement.

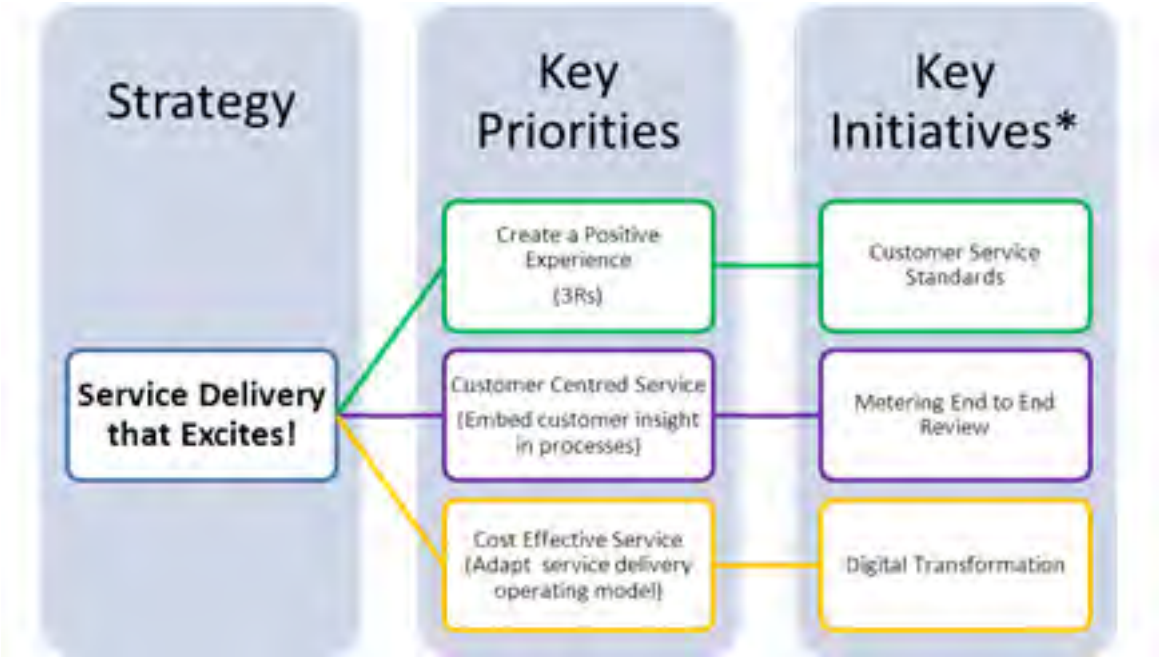
Customer Service Strategy – Service Delivery that Excites

Supporting outcome 3 (An excellent customer experience to customers and the community)

Supporting outcome 5 (Fair customer bills and fair investor returns)

Customer expectations drive our business objectives – we are responsive, straightforward and committed in all dealings with our customers. We go above and beyond what is required to ensure satisfaction for all our customers. We deliver what we promise and build on our successes to improve our services. (The Company's customer value).

The Company has taken practical steps to develop and embed an ethos of excellent customer service among all its employees. All employees have customer service objectives; 'customer expectations drive our business objectives' is one of the Company's key values and SIM performance is subject to the annual bonus award.



**key initiatives only - not an exhaustive list*

As the Company enters 2015, it continues to focus on the newly developed strategy 'Service Delivery that Excites' to improve the ways in which services are delivered. This new customer service strategy is designed to improve customers' experience of interacting with the Company and remains appropriate for now and the future. The Strategic priorities are:

- **Create a Positive Experience** - acting in a way which is Responsive, Reliable and Respectful.
- **Customer Centred Service** - customer insight is embedded in processes and procedures to ensure that change is driven by the needs and desires of customers and not based on the Company's assumptions and perceptions.
- **Cost effectiveness/Reduce the cost to serve -** adaption of the Company's operating model to improve cost efficiency, targeting inefficient processes.

Create a Positive Experience

In 2012, following extensive customer research, customer service standards were introduced as integral part of business as usual activities. The service standards explain the standard of service customers can expect to receive when they interact with the Company and goes above and beyond the Guaranteed Standards of Service (GSS), which are defined by the regulators and extended by the Company.

The Customer Service Standards are summed-up by 3Rs (always acting in a way which is Responsive, Reliable and Respectful) and were developed after extensive customer consultation to ensure they reflect customers' priorities:

- **Responsive:** the Company seeks to understand customers' requirements and expectations and responds quickly to their needs and expectations.
- **Reliable:** the Company is consistently good at delivering high-class customer service. Getting it right first time.
- **Respectful:** the Company treats all customers with politeness, patience and consideration.

The table below shows an example of the **Reliable** standard together with the associated promise and individual's responsibility for meeting this standard:

RELIABLE	
Seeing us in person	
Standard	My promise
Respond to urgent incidents as fast as we can.	I'll make sure that when working on a burst causing no water I'll aim to restore the supplies within 6 hours. I'll provide my manager with all the relevant updates.
Be on time for arranged appointments and let you know within 24 hours if we need to change or cancel an arranged appointment.	I'll prioritise promised dates where possible unless urgent works are passed my way. If I can't attend on a promised date I'll let my manager know.
Undertake work on the day that we said we would and let you know as soon as possible if we need to change or cancel the original day proposed for scheduled works.	
Be appropriately dressed in company uniform, introduce ourselves to customers and carry and display proof of identity.	I'll make sure I give a good impression when representing the company. I'll introduce myself to my customer as soon as possible and show them my ID badge. I'll always be as clean and tidy as possible in line with PPS 650 and 038.
Be courteous, friendly, helpful and professional. Treat customers, members of their household or business and their property fairly, with respect and according to individual needs.	I'll always be courteous, friendly, helpful and professional. I'll treat my customers fairly, with respect and according to their individual needs.
Take ownership of customer needs, take responsibility for the problem and look for positive solutions.	I'll make sure that I understand what the customer needs and take responsibility for helping them to resolve the matter. I'll make sure before I leave that I've done everything possible and my customer is happy with the work I've done.
Ensure that all employees are knowledgeable and trained to help or give advice, take the appropriate action to pass on your enquiry or put you in touch with the right person to answer your query.	If I'm unsure how to respond to customer issues that fall within my job role I'll speak to my manager about this to increase my knowledge. If I can't resolve an issue for any reason I'll complete a customer contact form, action it in the appropriate way and tell my customer what to expect next.

Customer Centred Service

The Company has exploited customer contact data, customer feedback and complaints data to identify emerging trends and opportunities for process redesign. Streamlining customer service processes has created several opportunities to improve customer service and reduce costs. One such example is the metering end to end review project.

Metering End to End Review Project

For the South Staffs region, metering has been an area of moderate growth during AMP5 to date with a 2015 meter penetration level of 34% currently forecast. With approximately 10,000 new metered accounts being added to the billing file each year the Company is steadily increasing meter penetration levels. AMP6 sees a continuation of Change of Occupier and Free Meter Options strategies along with low levels of new development growth giving a projected meter penetration rise to 42% by 2020.

This level of meter penetration increase will affect the Company's retail costs as associated meter reading activity and customer service costs will also increase. To mitigate against this expected rise and in response to customer intelligence which showed that there was improvements to be made in this area, the Company conducted an extensive review of all metering related processes – from meter installation through to billing. The outcome of the review was a series of recommendations including process improvements, policy changes and capital investment.

The complex metering project, specifically in relation to the meter readings and billing frequency, delivers significant improvements to service and operating costs. The key customer benefits are:

- Earlier detection of leaks
- Improved billing accuracy – no more estimated bills
- More certainty over budgeting

Cost Effective Service

Digital Transformation

Customer contact data is reviewed and analysed on a monthly basis and includes measures critical to SIM and our understanding of why customers are calling and how we are performing against their expectations.

The majority of contacts are related to billing and its associated activities e.g. payments, changes to address details, meter readings etc.

The strategy recognises the changing trends in customer channels as identified in the above chart. This is a steadily increasing trend in line with the pace of technology, the move to a 24/7 society, development and increased access to the internet.

South Staffs Water customers already have a range of channels available with a varying degree of functionality within each channel. The predominant current channel for activity is live voice within the contact centre. A key challenge is ensuring that each channel currently available or added can offer a consistent level of function, content and service to customers. Additionally each channel, new or existing, needs to deliver benefits to both customers and the Company.

It is recognises that:

- Traditional channels of contact are rapidly being supplanted by the growth and adoption of digital channels.
- The advent of the web application market has created an opportunity for increasing the delivery of information as well as delivering value-added services to its customers.
- Its reputation for offering excellent service is greatly enhanced by offering services that are digital by default.

Major investment will be made to ensure the Company has the appropriate digital capability as determined by its customers. The primary channels which will be offered to are:

- IVR
- Website & mobile web (including web chat)
- Mobile App
- SMS

IVR - Using DTMF and natural language, Interactive Voice Recognition (IVR) allows complex transactions and processes to be completed in an automated environment.

- Enhance simple call routing to ensure customers get to the right person or service.
- Provide self-serve opportunities (change of details, set up and amend DD, meter readings, pay bill).
- Automate customer identification and verification to save 20-40 seconds per call.
- Link the IVR to agent 'screen popping' so, if required an agent can continue an automated transaction.
- Announce appropriate messages to callers e.g. payment received, payment due or relevant incident messages.
- Integrate with SMS to confirm actions completed in the automated channel to provide reassurance to the customer.

Website & mobile web (including web chat) - Access to full 'my account' functionality (manage info, pay/view bill, book/change appointment, update/compare readings, track meter installation). Make website available across various devices e.g. tablet, mobile, Android and Apple operating systems

Investment in web, mobile web and web chat technology will:

- Provide 'my account' functionality to include: submitting a meter reading, balance checking, paperless billing, view multiple accounts, change of address/ change of details, additional commercial services, book appointments, track my repair/request.
- Drive more online payments.
- Provide customers with detailed calculation of likely meter charges based on consumption.
- Promote relevant services and tailored content to customers e.g. mobile web.
- Offer self-service query resolution and sharing on news, water usage hints and tips, live incidents, and links to GIS mapping for customers to view or report new water related incidents.
- Offer a PayPoint location finder.
- Solicit feedback on website, services, business plans and prioritisation plus online sharing of results (relevant to SIM)

Mobile App - Enable use for reporting leaks via GPS & photos etc.

- Provide easy access to 'my account' and functionality within this area. Including; manage my details & account status, track my repair/ request, enable appointment booking, support paperless billing and PayPoint location finder (location based).
- Encourage more contact for reporting incidents/events via mobile (e.g. leaks via GPS photos).
- Sharing leakage targets to show how are we doing in the customer's area.
- Provide GIS maps of live incidents.

SMS - Activity confirmation of account changes, payment reminder and payment confirmations once paid by other services – supporting IVR

- Provide payment reminders, e.g. '*payment due tomorrow don't forget'.*
- Offer confirmation following payment via IVR which provides reassurance to customers.
- Confirm appointment time/date with customers.
- Extend keeping customers informed to all affected customers for local supply issues.
- Provide updates on incidents for affected customers.
- Solicit feedback by sending CSAT survey following contact.
- Offer pay by text service.

Digital Transformation Benefits

Through the implementation and further development of the digital delivery model, the Company anticipates a shift in customer demand from contact centre agents to self-service which include automated phone line through Interactive Voice Recognition (IVR) and the website.

In summary the digital transformation programme provides the following customer benefits:

- Enhancing the ways by which customers can contact and interact with the Company: phone, text, email, website, Twitter, Facebook or post.
- Simplifying customer journeys to encourage self-service for those who choose to do so, whilst not excluded those who are unable to self-serve.
- Providing quick, accurate and convenient (24/7) responses to customers' queries.
- Convenient and proactive alerts about bill due dates/payment reminders/meter reading.
- Easier, faster and more comprehensive information and regular updates available to customers across a variety of channels.
- Keeping customers updated on supply issues and the resolution status.

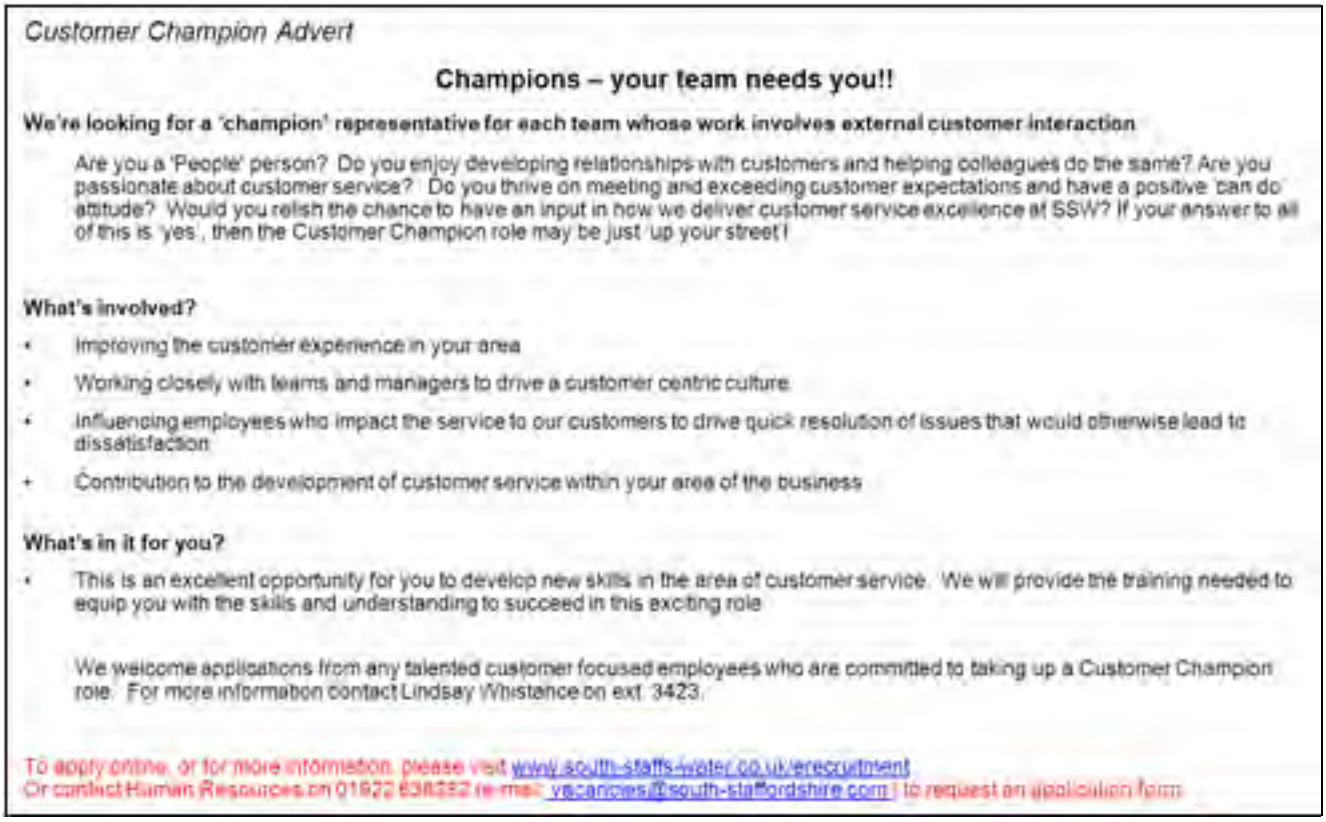
This will provide significant benefits to the customer. In the majority of cases the customer will be contacting the Company in a way that suits their needs, saving them time and money (reduction in phone bills). It will also benefit the Company as self-service channels are significantly cheaper than the contact centre agent equivalent. The Company expects to see a shift from agent to self-service over the next five years. The quantified business benefits include a 55% reduction in annual call volumes through digital channels, and a 21.9% reduction in back office demand over a 5 year period.

People

The Company recognises its reliance on its employees to deliver service results. Ensuring employees are well motivated and equipped with the right skills and knowledge is therefore an integral element of this customer service strategy. People plans (right people, right time and right skills) for each customer facing team have been developed with the aim of improving customer service standards through tailored training and coaching in procedures, systems and the core competencies of excellent customer services. Performance is regularly audited through call monitoring, automated feedback systems, quality audits and the use of speech and text analytics.

Customer Champions

In 2012, the Company established a Customer Champions to assist the delivery of excellent customer service at grassroots level.



Customer Champion Advert

Champions – your team needs you!!

We're looking for a 'champion' representative for each team whose work involves external customer interaction

Are you a 'People' person? Do you enjoy developing relationships with customers and helping colleagues do the same? Are you passionate about customer service? Do you thrive on meeting and exceeding customer expectations and have a positive 'can do' attitude? Would you relish the chance to have an input in how we deliver customer service excellence at SSW? If your answer to all of this is 'yes', then the Customer Champion role may be just 'up your street'!

What's involved?

- Improving the customer experience in your area
- Working closely with teams and managers to drive a customer centric culture
- Influencing employees who impact the service to our customers to drive quick resolution of issues that would otherwise lead to dissatisfaction
- Contribution to the development of customer service within your area of the business

What's in it for you?

- This is an excellent opportunity for you to develop new skills in the area of customer service. We will provide the training needed to equip you with the skills and understanding to succeed in this exciting role

We welcome applications from any talented customer focused employees who are committed to taking up a Customer Champion role. For more information contact Lindsay Whitstance on ext 3423.

To apply online, or for more information, please visit www.south-staffs-water.co.uk/erecruitment
Or contact Human Resources on 01922 638332 (e-mail: vacancies@south-staffordshire.com) to request an application form

Customer Champions are in a prime position to be able to recognise from their own experiences or those of their colleagues what issues, if any, are preventing them and members of their team from giving great customer service. This insight is invaluable to help determine what needs to be done to keep service high or put things right if necessary.

The Company will continue to invest in the development of employees and use their expertise and enthusiasm to develop and improve quality in customer service.

Customer Service Principles

Supporting outcome 3 (An excellent customer experience to customers and the community)

In support of the customer service strategy, the Company has introduced four principles which are service standards; communicate these standards to customers; ask customers for feedback; and use feedback to review performance and improve service delivery.

- Service Standards - The service standards explain the standard of service customers can expect to receive when they interact with the Company and goes above and beyond the Guaranteed Standards of Service (GSS), which are defined by the Regulations.

- Communicate to customers - Service standards are well publicised, ensuring that if a customer feels the Company has not delivered against the standards, that they can hold the Company to account.

- Obtain customer feedback – In addition to the SIM measurement, regular customer service surveys are conducted. The results from these surveys give a clear indication of how satisfied customers are with the service they receive.

- Review performance – the measurement of customer satisfaction through CSAT, NPS and customer effort benchmarks, promotes an increased focus on customer expectations and has stimulated improvements in the Company's work practices and processes.

By adopting these principles to underpin our strategy, the Company ensures it delivers the improvements that customers want to see.

Differentiated Service for Non-Household Customers

Supporting outcome 3 (An excellent customer experience to customers and the community)

With the opening of the retail market to competition, particularly from 2017, it is the intention of the Company to retain all of its non-household customers and pursue opportunities with its customers with sites outside of our area, if the commercial environment is attractive. This will be achieved through the continued provision of high levels of service underpinned by the Guaranteed Standards of Service coupled with low charges. The Company is also reviewing its organisational structure at present to support this. In particular, the Company will ensure that customers will not be disadvantaged at any point throughout the market transition. One example of this is to take a pragmatic and practical approach to default tariffs (for any

customer not switching provider at 1st April 2017). Default tariffs should therefore be based on existing tariffs subject to any pre-determined annual change.

The Company's non-household customer base encompasses a wide range of organisations. As a business with a geographical spread covering South Staffordshire and Cambridge, the profile of the business customer base is extremely diverse. From heavy engineering and fast moving consumer goods businesses in the Midlands to the esteemed colleges that make up Cambridge University, the needs of this customer base requires a careful and considered strategic approach.

Feedback from Non-Household shows that when compared to household customers, non-household customers are less satisfied with the current level of service provided by the Company. Research has highlighted that there are additional services that would be valued by many customers:

- 41% want a dedicated point of contact
- 41% want water efficiency audits
- 37% want leak detection on site
- 18% want billing/consolidated accounts

In 2013 the Company created a Business Team to develop services which address the specific needs of Non-Household customers where there is a corresponding impact on customer satisfaction or value added service for the customer.

The Company recognises that whilst still in the grips of one of the worst economic downturns recorded, business customers are not only extremely price sensitive, they are also brand aware and customer centric. Customers, regardless of what they purchase, now expect a great deal more. Not content to simply respond to supplier demands, customers are now well informed. They use multiple sources of information to research solutions before making buying decisions.

With the Water industry about to embark on a major shift towards open market competition, the need for water companies to become customer centric will play a major factor on future success. Placing the business customer at the heart of service delivery will require a change in focus, a new approach to customer service and the ability to respond quickly to customer demands.

A customer Centric Approach

As the industry adopts and adapts to competition, water companies will need to become more efficient and more customer centric. Non- customers will be able to negotiate a better targeted, more efficient and cost effective service. The outcome being a more seamless customer experience where utility portfolios can be managed to gain greatest cost saving with improved service delivery.

Knowing the Customer Base

As with any industry, the need to know the nuances and purchasing behaviours of customers is vital. Over the last 12 months extensive research has been conducted amongst household and non-household customers. Whilst there are significant differences, current research highlights a number of similar trends between domestic customers and business customers.

- 64% of non-household customers surveyed are either very or fairly satisfied with the Company's service. 73% quoted that they were most satisfied with the taste, appearance and smell of their tap water. They also quoted how quickly leaks were identified and repaired (61%)
- Business customers wanted to see greater emphasis on competitive pricing structures, comprehensive water resilience plans and water conservation measures.
- Water leakage was noted as a waste of resource
- Satisfaction levels where dictated by past experiences, particularly where poor customer service or issues with regards to supply had been evident.

Overall, non-household customers were less satisfied with current levels of customer service. Proactive, value added services such as water audits, leakage detection and consolidated billing (from the South Staffs region)_were cited as missing from current service offering. Add to this, customers are now looking to interact with one company with dedicated account managers providing simplified bills and charges.

Business customers are also seeking greater innovation, especially in regards to energy and resource efficiency to help support environmental obligations.

Other areas of focus include being consulted before major works are carried out, a greater understanding of the needs of the business customer and the impact that loss of water supply can have on their operations and a well-documented complaints procedure.

Finally, business customers, whilst eager for incentives, also expect water companies to pay penalties for under performance as it true in other competitive sectors.

Improving Outcomes

The Company's approach to open competition is clear. Its places the customer at the centre, giving them greater control, more focused attention and improved process and procedures that not only improve efficiencies, will help to drive down costs and encourage greater levels of competition.

Dedicated Account Management

The Company is committed to offering a dedicated account management service, providing business customers with a single point of contact for all aspects of the business. Acting as the conduit for all Group services, the Key Account Manager's (KAM) role is to fully understand the business and operational needs of its customers, offering effective solutions and improving the customer journey

Meter Reading and AMR

As the Company moves towards a more fully integrated digital communications environment, the ability to provide business customers with real time data on water usage will be a key deliverable.

More than 200 of the Company's business customers have logging meters on site that provide accurate and up to date readings on water use and volume. Particularly useful for customers to assess peak times and review operational processes and procedures to support cost savings and improved efficiencies.

The use of Automatic Meter Reading (AMR), will improve the process of capturing readings, enabling direct and Bluetooth recordings to be captured thus driving down the costs of data capture and improving the Company's carbon footprint. Work is in progress to look at creating a self-serve environment where business customers can access information via a secure online interface.

Improved Communication

For non-household customers, the need to have immediate access is a vital part of any business critical service. The Company is committed to reviewing and, where appropriate, implementing new communications channels.

Industry news and advice and guidance will become more frequent with content driving communications through the Company's website, blog and social platforms.

Data will become a core component of the Company's digital strategy. For example online water consumption data, GIS mapping service, bill verification and property searches. Ultimately delivering tailor made business account services for all business customers.

Consolidated billing in the Cambridge region has proven to be a success and it is intended to extend this into the South Staffs region.

Measuring Performance

As non-household customers' expectations heighten in the light of impending competition, water companies will be required to demonstrate performance and levels of customer service.

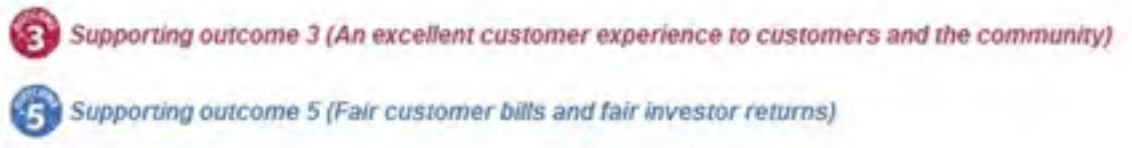
Speed of resolution, levels of customer satisfaction will be as important as the average water bill itself with customers requiring more than just a price incentive to "switch" supplier.

Social media will play a significant role in shaping aptitudes and managing brand reputation as business customers follow consumer behaviour, listening to conversations online and heeding sentiment and feedback with little or no interface with the supplier.

In short, competition will drive performance improvements, will help stabilise process and place the customer at the very heart.

The Company has made great strides in preparing for OpenWater and is committed to delivering the very best service it can to its business customers. As the frameworks unfold and the extent to which competition will open up opportunity, the Company's strategy will remain flexible to adapt to new market forces.

Debt Management



The Company, through internal communications and training materials ensure that all staff can undertake comprehensive reviews of customer accounts to ensure that we are recognising and addressing affordability issues whilst offering the best service.

The Company ensures that access to information through customer literature and Company website is constantly available and reflected in our Charges Scheme and relevant Code of Practice.

Tackling affordability issues is a function delivered by both the Customer Services and Debt & Collections teams and often begins at the first point of contact with a customer. The Company, through internal communications and training materials ensure that all staff can undertake comprehensive reviews of customer accounts to ensure that we are offering the best service.

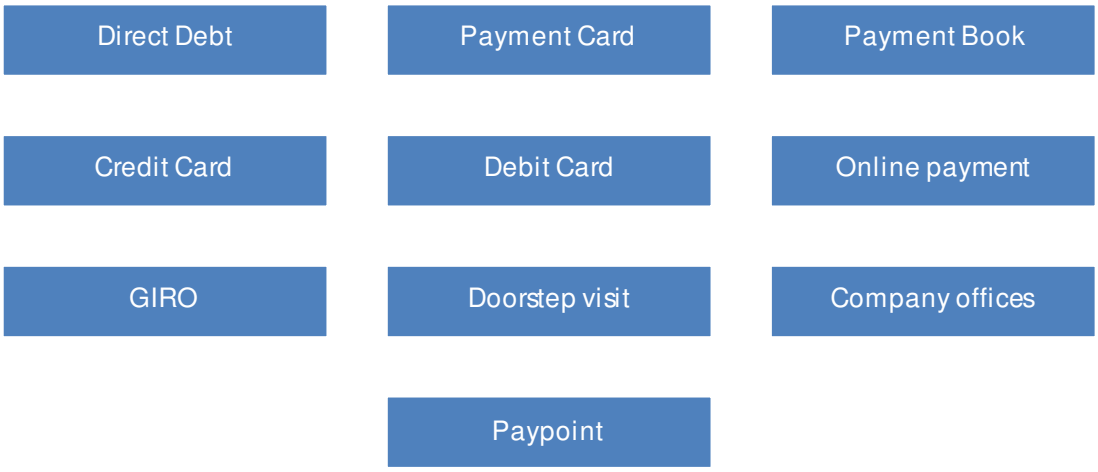
- **Metering/Billing**
  Customers may be recommended to have a meter installed to lower their bills as they will be billed only for actual consumption. Billing processes enable the Company to respond to unusual consumption patterns to minimise the impact on customer bills, alerting them to potential issues and carry out investigations, The frequency of billing may be altered to better assist the customer

- **Tariffs**
  The industry scheme WaterSure is used in both regions with approximately 1,000 customers on this tariff as at 31 March 2013. Information on WaterSure is available to all customers via websites and customer literature and is an integral part of customer communication within call centres and collection departments enabling review of customer consumption and therefore suitability to the tariff. The Company is committed to continuing support of this or a solution of a similar nature regardless of the future of WaterSure

  The Solow Tariff is a low user tariff available to measured customers who use under 75m3 of water per year. The SoLow tariff can be applied to all domestic accounts but must be the customers' sole residence. Customers who pay according to the SoLow tariff will pay a higher wastewater volume charge but will not pay a sewerage service charge. 4,731 customers are on this tariff in the CAM region

- **Payment Methods**
  Customers in receipt of qualifying benefits may opt to have their payments deducted at source via the Third Party Deductions Scheme under Department of Work and Pensions (DWP). Despite challenges presented by several of DWPs changes in the administration of the scheme, approximately 4,800 customers per year continue to pay in this manner

The Company offers many payment methods, as shown in the diagram below:



- In a changing economic climate it is important to take advantage of innovative low cost payment technologies. In this arena investigation is underway to introducing easy and widely useable payment methods such as PINGIT with the inclusion of QR codes on all customer bills, recognising that many new payment methods may not assist those with affordability issues.

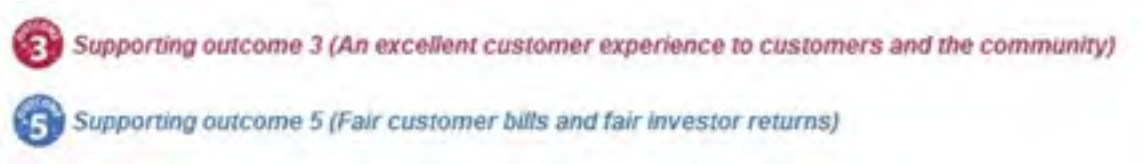
- **Payment schemes**
  A Charitable Trust is operated by the Company currently assisting in the region of 800 customers per year in the South Staffs region. The Trust is wholly funded from outside the regulated business by the South Staffordshire Group and is cost neutral to the Company. Additional funding has been secured from the Group to extend this to the Cambridge region in 2014 where a further 100 customers per year could benefit

  A payment matching facility, New Start is available, introduced as an alternative to a Trust Fund. The Company plans to continue this alongside the Trust Fund to further assist customers struggling to pay. This is a valuable tool to encourage customers to re-establish payments to the Company presenting the customer with a manageable debt solution

- **Payment frequencies and amounts**
  The Company extends flexible payment arrangements to meet customers' requirements to encourage sustainable payments, including short term payment plans for temporary difficulties and longer term payment plans to reduce monthly amounts. Payment plan dates will be agreed to best suit customer's income to allow prompt payment. Across the Company low value plans which will not collect charges in the current financial year total 9,243, this is representative of 6.9% of the total customer base

Where customers do fall into debt, as well as contact by letter and telephone, both regions regularly use text messaging and employ doorstep collectors, visiting customers at the

earliest opportunity in the arrears process, thus preventing further indebtedness with the Company.



The effectiveness of recovery strategies is supported by customer segmentation. This is predominantly determined by customer / property type and customer payment history. Further segmentation is taken on type of debt; discontinued or current customer. Customers with repeated payment plan defaults may also determine a different strategy, escalating through the recovery process to minimise accumulated debt.

In addition external data is used to identify income/wealth characteristics based on the customer postcode which can be used to predict the effectiveness of further action such as litigation or placement with a third party collection agents. This data can also be used to explore the probability of other factors, such as low income that may help inform more suitable paths of recovery, offering more suitable aforementioned payment schemes.
Recognising the importance of external agencies, and the assistance they can provide to customers, the Company is actively involved with many organisations that assist customers in financial difficulty such as CAB and StepChange Debt Charity, shown in the diagram below.

Referrals from these organisations are dealt with in accordance with OFWAT debt chasing guidelines to reach the best outcomes for the customer and Company.

The Company will continue to monitor the impact of Welfare Reform, evaluate the basis of an affordability tariff and engage with stakeholders with reference to the impact this may have on Third Party Deductions and WaterSure. The Company has already taken steps to inform customers of potential changes that may affect them and will continue to monitor this.

Meter Reading

The meter reading strategy focuses on the following key elements:

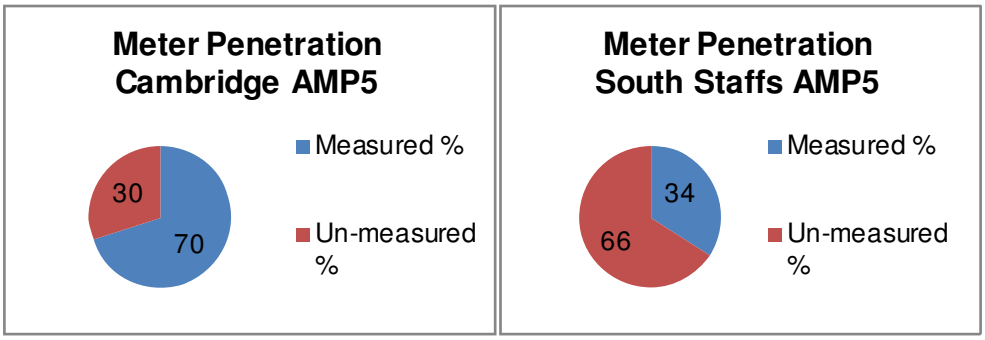
- Management of metering growth through optimisation of meter technology to enable efficient delivery of customer meter reading activities
- Enablement of enhanced services for measured customers to improve customer experience
- Evaluation and development of live network capability
- Integrated evaluation and alignment of metering activities

Meter Penetration

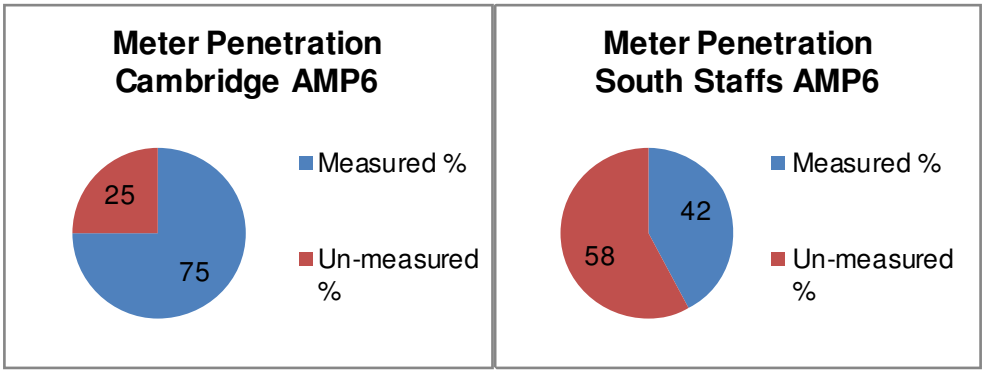
Meter reading is a core customer service activity and for both regions current and future strategy is focused on reading every meter when due to be read whether the customer is monthly, six monthly or quarterly billed. There are distinct differences between the regions with Cambridge in a high end meter penetration position compared to the South Staffs region.

The Company is committed to aligning metering strategy and policy appropriate to the needs and benefits of the customers in each region. It is intended to manage this in a transitional way using the opportunity of having different meter technologies to determine the optimum solution.

AMP5 Forecast Position (end)



AMP6 Forecast Position (end)



Meter Growth

In the South Staffs region the strategy of Metering on Change of Occupation was deployed from AMP5 and is proposed to continue to supplement the number of selective Free Meter Optant installations in AMP6. It has not been necessary to deploy this strategy in the Cambridge region during AMP5 due to the high meter penetration levels with no compulsory metering proposed for next AMP.

Meter Replacement

For both regions managing a range of legacy meter stock poses challenges to maintain meter reading equipment and support efficient reading operations. The range of meter types in both regions includes:

- Dumb – Internal / External
- Remote Read – Internal / External
- SMART / AMR – Internal / External

Delivery Mechanism

Automated Meter Reading (AMR)

Supporting outcome 3 (An excellent customer experience to customers and the community)

To support measured growth a key AMP5 strategy was the switch to Automatic Meter Reading (AMR) for all new and replacement installations of domestic size meters. Development of AMR technology:

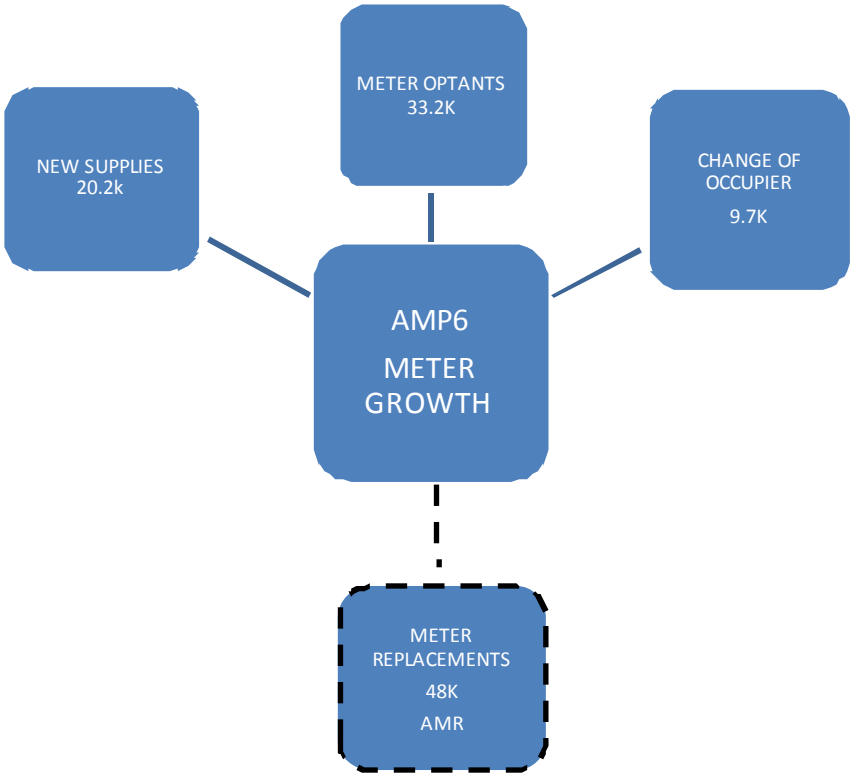
- Enables the capture of enhanced customer data with the potential to share with customers their consumption history details, leakage and backflow alarms. AMR also facilitates development of SMART technologies with customer expectations growing in line with gas and electricity SMART meter roll-out.
- Supports improved meter reading performance mitigating the need to increase meter reader resource, vehicle fleet and associated fuel costs.
- Improves the process of capturing meter readings enabling direct and Bluetooth capture of meter readings releasing efficiencies.

In both regions AMR meters are now installed in new installations, Itron in South Staffs and Elster in Cambridge, there is no immediate appetite to quickly move to a single meter supplier. There is a significant opportunity to monitor and review the performance of both meters and reading systems to identify which offers the best solution.

AMR meters are now being deployed in both regions enabling:

- Quicker and multiple readings
- Recorded frequency of readings
- Substantial reading ranges
- Indications of potential leakage
- Alerts – Backflow, battery, tampers

The benefits AMR meters offer are not only significant to mitigate against meter reading costs but are also necessary as the relatively efficient outgoing touch-pad metering becomes obsolete and reversion to dumb meters and eyeball reading would be a regressive step. AMR meters do require batteries and so will drive replacement based on a battery life of 10-15 years. This also coincides with the aim of having no household meter older than 15 years.



Company Wide Meter Growth & AMR

Live Network / Automated Meter Reading (AMR)

Supporting outcome 3 (An excellent customer experience to customers and the community)

Supporting outcome 4 (Operations that are environmentally sustainable)

Whilst efficient meter reading to bill customers is the primary deliverable expected from AMR meters, the digital transformation strategy will enable progressive development of enhanced customer services.

The clustering ability of meter replacement programmes and new developments also offer the potential to develop Live Networks. Evaluation of this will commence in AMP5 with a series of small scale trials that will seek to deliver business benefits in relation to metering; asset management; leakage and customer service.

The transition to a Live network will be a gradual evolution rather than a sudden step change but AMR meters will be a key element that could offer benefit to customer and company either as a 'drive to' or 'fixed network' site.

Change to Meter Reading and Billing Frequency

Supporting outcome 3 (An excellent customer experience to customers and the community)

An end to end review of the metering process was conducted by the Company. The result of this review was a series of policy changes, process improvements and improved billing accuracy through the elimination of estimated bills and introduction of twice per year meter reads.

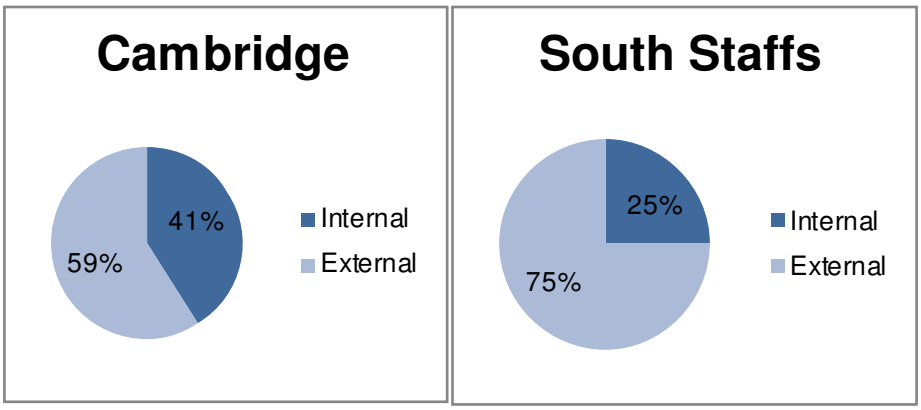
This is a considerable business change that has improved customer experience at its core with the aim of increasing actual reads and reducing estimated reads. The benefits of this change include:

- Efficiencies generated by reduced billing processing costs.
- More frequent reads reduces potential for bill consumption and billing queries.

The shift to twice yearly reading is a substantial project requiring a comprehensive review of meter books and routes in conjunction with a re–evaluation of the Company's meter reading resources. Optimisation of resources will be supported by the introduction of field systems and the continuing development of AMR meter technologies.

Meter Location and Supply Pipe Adoption

Meter locations vary between the regions due to the differing policy historically adopted.



In both regions meters continue to be installed primarily externally in boundary boxes, South Staffs in the public footpath, Cambridge on customer premises. Internal meters are installed in new multi-occupancy developments and selective Meter Optants in South Staffs region. The majority of Meter Optants in Cambridge have internal meter fits.

The impact of supply pipe adoption has not been fully evaluated to determine whether this would drive change in meter location strategy or the manner in which new supply connections are made. This will be fully evaluated to determine implications for customer and Company. The potential for innovation to develop alternative meter position such as wall-mounted solutions will be considered along with traditional location options.

Developer Services

Companywide Developer Services provides the conduit for Developers and other applicants to enable access to new water mains and service connections. The provision of these services requires extensive delivery support from wholesale business elements with Developer Services the central hub of the activities.

The Company maintains effective working relationships with Developers by encouraging early liaison on new schemes and projects. Further development of systems / customer interfaces will be based on consultation with these key stakeholders. Delivering operational efficiency and improved customer service are the on-going challenges alongside the progressive with continuing development of Self Lay and associated legislation.

The introduction of permit schemes, working restrictions and associated costs for working on public highways will also be new impacts to manage effectively with internal and external stakeholders.

The ultimate output of the Developer Services Retail responsibilities culminates in the creation of new customer accounts on the billing system. On-going development and review of all related systems and processes is focused on streamlining the customer journey from application to account creation.

Customer Side Leaks

Customer side leaks Wholesale activity is concerned with the customer side leakage strategy and identification of leaks. The Retail activity covers administration of the Company's policy and performing 400 repairs each year.

The Company's policy is summed up as:

- **First repair per property only**
- **External underground leaks only (internal or those under buildings or permanent structures are excluded)**
- **Private domestic customers only (excludes Local Authorities, Housing Associations etc)**

Customers can opt for a supply pipe replacement, and the Company will subsidise the cost of replacement to the value of the average cost of a supply pipe repair. The Company also promotes home insurance provision that covers supply pipes.

Assisted Repair/Replacement of Customer Supply Pipes Survey Summary

An assisted repair/replacement of customer supply pipes online survey of domestic customers was conducted in 2013. This was the first survey conducted using the Company's newly established online panel of customers.

Customers were shown a diagram illustrating where responsibility lies in terms of different supply pipes. They were asked if they were aware which pipes customers are responsible for, prior to participating in the survey. Two-thirds of customers (66%) indicate that they were previously aware of their responsibilities.

Assisted Repair Policy

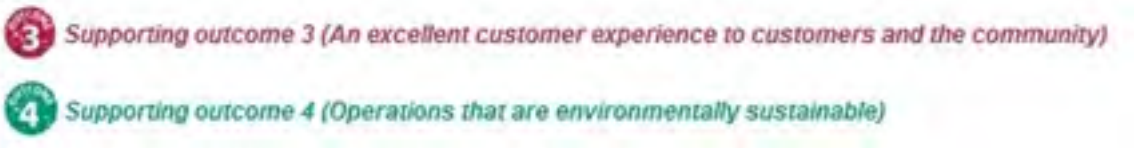
Customers were asked if South Staffs region should change their current assisted repair policy. The majority of customers (80%) believe that South Staffs Water should carry on repairing customers' supply pipes, as is the case at the moment. There were no significant differences in terms of property type, but some differences are apparent relating to property ownership (with 17% of those owning their property outright and 17% of those in private rented accommodation believing that South Staffs Water should stop providing the service, compared with 7% of those with a mortgage).

Customers were told that if there is a leak and the customer does not arrange for their supply pipe to be fixed, the Company has the right to take legal action to force the customer to fix the leak. They were also told that this does not happen very often at the moment and customers were asked for their views on what should happen in future.

Again, most customers are happy with the current policy. Three-quarters (75%) feel that legal action should be a last resort and should continue to be used very rarely, with 17% indicating that they feel the Company should take legal action against customers whenever it is necessary. Just less than 1 in 10 (8%) of customers are undecided.

The policy will shortly be reviewed to ensure it balances the service and its effectiveness to customers and the Company.

Water Efficiency



The Company believes that promotion of water efficiency is very important for a number of reasons; it is something that customers value, it is part of the Company's strategy for managing its impact on the environment, it can help with managing bills and affordability and it is part of providing good customer service. Water efficiency activity provides an opportunity for multiple benefits, and is a key part of reducing per capita consumption in our water resource management plans.

Traditionally the driver for investing in water efficiency has been based on the need to manage the supply demand balance and deliver obligations to promote water efficiency. South Staffs Water has a healthy surplus in its supply demand balance in both regions of operation and on that basis is required only to continue with current levels of water efficiency activity. However, South Staffs Water has reflected on the strong messages received from customer consultation and engagement which indicate a clear desire for greater recognition of impacts on the environment and better communications around water efficiency. Accordingly, we propose to revise the current approach and move some water efficiency focus onto behavioural change. This will be aimed towards an outcome of maintaining sustained reduction in water use over the longer term.

This will require a significant change in approach and the Company is currently working towards this through involvement in collaborative projects such as the Plug-in project, and in supporting higher levels of the Code for sustainable Homes in new dwellings. The Company's AMP6 Business Plan includes continued levels of expenditure on water efficiency activity but this will no longer be spent solely on the provision of water saving devices and will be refocused on a mixture of more sustainable water efficiency projects and initiatives working with key partners in the wider community.

The future water efficiency strategy will comprise a number of streams of activity likely to include:

- Provision of advice and information to non-household customers. This will be targeted at specific customer groups to offer bespoke water efficiency

advice and support. This will include non-household customers such as public services, schools, colleges, universities, hotels and hospitals, small users on multiple sites i.e. supermarket chains and shopping centres and water audits of industry types common within the company's area of supply.

- The Company will develop a water audit pack for business, and offer advice on reducing water consumption.
- The Company will improve its customer facing support by delivering water efficiency education to the Company's Customer Liaison Officers, Meter Readers, Water Regulation Inspectors and Water Samplers. This will increase the occasions where the water efficiency message can be cascaded to the wider public at the most appropriate time and in a cost effective way.
- Continuation of communications with all customers on the availability of help and advice to save water, through billing mail inserts and the website
- Education of future customers through the Education Programme delivered through Blithfield Education Centre, and local school visits
- Outreach programme to provide help and advice to schools and groups of customers

- Participation in collaborative projects such as Plug-in
- Promoting and supporting grey water recycling, and water reuse projects in the Cambridge region
- Continue to explore partnering arrangements with third party stakeholders such as through the Green Deal, Registered Social Landlords (RSLs) and charities.
- Develop stronger messages around the dual benefits from reducing hot water waste and the reduced energy cost through the promotion and supply of devices and behavioural change messages.
- Link into the fuel poverty agenda highlighting the benefits of water and energy efficiency initiatives with local authorities and RSLs.

Proposals are subject to review depending on which ones prove to be successful and well received by customers. For example some of the above activities may not appeal to customers and therefore the Company would review the benefit in continuing with that particular part of water efficiency activity.

DELIVERY PLAN

The Retail Business Delivery Plan aligns the 2015-2020 retail objectives and investment plans with the Company's overall strategy that is focused on delivering high service levels while retaining low customer bills and the Company's commitment to delivering the outcomes as determined by its customers and stakeholders. Each investment plan for 2015-2020 is a contributor to the outcome: Delivering an excellent customer experience to customers and the community.

The Company intends to consolidate the excellent improvements in the retail activities to better respond to its household and non-household customer needs. An ambitious plan which includes delivering critical technology capability has been developed in four key areas. These are:

- Contact and Account Management
- Workforce Optimisation
- Debt Management
- Business to Business Solutions

Contact and Account Management

This scheme incorporates the methods and processes that control incoming and outgoing customer contact. Contact management encompasses the applications and processes that allow agents to provide or capture information resulting from customer contacts, whether online, written or telephone. Customer account management involves the provision of a holistic and up to date view of customer information and processes to enable customer facing employees to make quick, informed decisions from offering value-add information to effective issue resolution.

Delivery Plan 1		
Customer Feedback	**Capability**	**Outcome and Benefits**
• they wished to see contact with the Company made easier • increased communication about environmental issues to help customers understand what the Company does around environmental activities, water hardness awareness, lead and water efficiency • communication channels to keep customers informed of disruption, leakage or planned outages • enquiries that are managed across a range of channels, convenient to customers	• self-service functionality • enhancement of all existing contact and access channels to add new • customer contact channels in line with technology developments • proactive communication regarding issue resolution progress updates • personal, quality interactions with customers based on intelligent customer profiling and segmentation • drive customer behaviour • target services to specific customer groups	• reduced customer effort • first contact resolution • 24/7 access to services/information • personalised service based on customers' wants and needs • faster transactions

Workforce Optimisation

The Workforce Optimisation scheme encompasses workforce management, workflow management and workforce development. Workforce management is organising human resource to handle inbound customer contacts and ensure that regulatory requirements are achieved. Workflow management is the internal and external distribution of work generated by customer contacts. Workforce development is ensuring that employees have the required skills, knowledge and training to undertake duties.

Delivery Plan 2		
Customer Feedback	**Capability**	**Outcome and Benefits**
Whilst customers would be willing to accept reductions in service by traditional channels (letter and telephone), they would nevertheless expect to be able to contact the Company in other ways such as automation and online outside of office hours to complete transactions. Customers expect telephone and letter to be slow but they would expect a quicker more cost effective alternative.	• enhancement of Business Process Management (BPM)- business processes supported by automated decision making technology • workforce is optimised to support the move towards to multi-channel contact, including multi-skilled agents, and cross channel workflow management • E-Learning for contact centre, collections and back office agents to support enhanced customer service delivery • Genie based training agents (keeping track of knowledge delivered, measuring performance and adjusting individual training plan) • Knowledge management (desktop based interface providing call handlers with information to support calls)	• maximised productivity, improved operational decision-making and increased company agility to meet customer demand • proactive detection and response to breaches in service standard/levels – a prerequisite to achieving high customer satisfaction levels • faster service through better workforce management and quicker responses from appropriately trained agents • better quality of information delivered faster through a range of channels • provision of information in real-time and reduced waiting times as a result of flexing resource according to demand • increase operational efficiencies

Debt Management

Debt management is a combination of all the activities and improvements specifically relating to the collections process. This includes debt collections systems, collections agents, back office processes in relation to chasing and processing of debt and the customer contact channels to pay arrears and obtain debt advice.

To ensure the Collections Strategy is fit for purpose; this will include a review of how we engage customers to ensure processes are clear and accessible; either directly with the Company or via any third party organisations.

Delivery Plan 3		
Customer Feedback	**Capability**	**Outcome and Benefits**
• There is an appetite to support customers in debt through early identification and support for customers in debt and development of initiatives (for example social tariffs) for customers who have difficulty paying. • Provide discounts for people experiencing affordability issues • Ensure early identification and support for customers in debt	• upgrade of the existing collection system to ensure full functionality of system is utilised for collections activity • automation of early recovery processes • development of self-service service channels and proactive communication channels for debt • AVR technology (automated outbound debt collections telephone dialler). • predictive data to analyse information to postcode and household level	• optimised debt recovery process, reducing cost to serve • improved customer access to debt information and payment options • smarter and intelligence based approaches to collecting bad debt • advice and guidance for customers experiencing payment difficulties to prevent debt occurring

Business to Business Solutions

Business to Business Solutions incorporates methods and processes that control incoming and outgoing transactions between the Company and its non-household customers. Non-household customers will be able to choose from a wide range of services – from a low-cost self-service option to a dedicated account managed service.

Delivery Plan 4		
Customer Feedback	**Capability**	**Outcome and Benefits**
• A dedicated point of contact • Improve communication about service interruptions – especially planned outages • Support businesses in planning and forecasting their water usage and bills • 27% of business customers identified as a priority to provide proactive information/items in regards to water efficiency. 6% of business customers would be willing to pay for this service.	• contact channels specifically tailored for 'business' account management (for example, online, IVR, business account) • specialist services and information for business account customers (for example, online water consumption data, GIS mapping service, bill verification, utility mapping and property searches) • specialist billing and tariff structures, PIN number access to services • dedicated 'Business Centre'	• personalised service for non-household customers, focussing on quality of contact and account management • provision of additional services that would be of benefit e.g. early warning of exceptions, water efficiency advice • end to end account management of all business enquiries and proactive information and advice on products and services for businesses

Outcome 3 Measurement Framework

Below is the outcome and measures for delivering an excellent customer experience to customers and the community:

An excellent customer experience to customers and the community	**Customer satisfaction from independent surveys (not SIM)**	**Annual**	**SSC**	**A score of 4.5 out of 5 when averaged over both SST and CAM regions**
	Customer written complaint levels per 1000 customers	Annual	SSC	2.8 written complaints per thousand customers when averaged over SST and CAM regions
	Community activity and engagement with customers	End of Amp 6	SSC	Completion of the agreed programme of community activity and the customer engagement

Performance against the 'Delivering an excellent customer experience to customer and the community' outcome will be very closely managed through a comprehensive measurement framework. This will ensure that the Company is able to make informed decisions that will drive service improvement and ensure this outcome is delivered.

Outcome 3 Measurement Framework		
Title	Description	Expected Outcome
Stakeholder Engagement Programme	A new format for stakeholder and regulatory stakeholder engagement will be developed	Engagement with a range of public and voluntary organisation to inform the Company's strategic planning process
Household Survey	General Survey to measure customers' satisfaction (including VFM) with the Company.	The survey will gauge customers' responses to a range of questions including levels of satisfaction with
Customer Satisfaction	Engage with customers to assess their satisfaction with Customer Contact Channels	Customer satisfaction measure across IVR, contact centre and website. To also allow measurement of value for money, affordability and fairness for outcome 5
Communication		Establish a framework for communications activity to include measurement of customer awareness, satisfaction and perception of key elements of communications activity.

This Retail strategy summarises a range of initiatives to improve its retail activities and interaction with household and non-household customers. These range from continuing to fully exploit customer feedback to a clear customer service strategy with the strategic priorities to create a positive experience; offer a customer centred service; improve cost efficiency. The Company is also committed to improving its customer communications and offering a differentiated service to its non-household customers. Despite a robust debt management strategy the Company remains committed to developing an affordability strategy for its customers.

AMP6 will be challenging but the Company has a reputation for its customer service and commitment and it has a very clear strategy to enable priorities and outcomes to be achieved.

South Staffs Water

incorporating

CAMBRIDGE WATER COMPANY

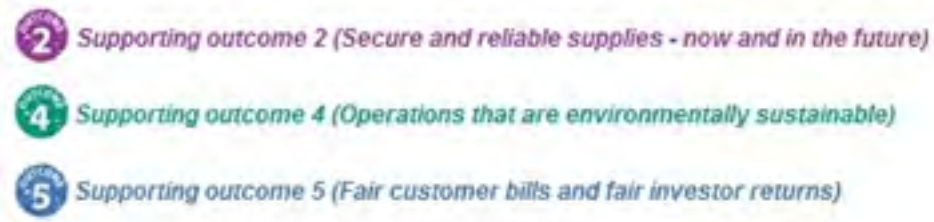
Network Optimisation and Energy Management

Business Strategy

December 2013

Contents

Network Optimisation and Energy Management



Both regions of South Staffs Water operate their supply systems as efficiently as possible whilst balancing operational risks and risk to supplies. The Company places great importance on minimising power use as part of ensuring operations are efficient and this provides some mitigation to the pressures of rising power costs.

In the South Staffs region the Company has the highest pumping head of any water company in England and Wales but is the most efficient in terms of the amount of energy used to lift a megalitre of water by one metre. The Company has achieved this through a number of integrated strategies including investing in pumping plant, developing an integrated supply network, improving management information to monitor and control performance and developing tools for optimisation.

Energy used to pump water is much less per megalitre in the Cambridge region due to the flatter topography. Improvements in pumping efficiency in both regions are continuously reviewed, and the integration of the regions will provide opportunities to adapt successful approaches across the whole Company

Managing energy use and carbon emissions is also vital to protecting the natural environment and keeping bills affordable. The Company has included proposals for renewable energy schemes in AMP6 to assist mitigation of future carbon emissions. As a water supply only company the opportunities to generate electricity are limited to wind and solar.

The following sections provide background on the supply network, management processes, management information, budget management, power minimisation activities and operational strategy to give context to the responses to the Network Management Questions in Appendix 4 and to demonstrate the Company's commitment to driving efficiency in its operations.

The Long-Term Planning Framework

Efficient network management relies on having sufficient water available for use to meet demand and an integrated and flexible supply network. Every five years both regions of the Company prepare their 25 year plan for resources through the Water Resources Management Plan (WRMP) process. The WRMPs set out water resources and demand projections for each region's area of supply for the next 25 years and establish part of the over-arching framework within which the Company operates its supply networks.

Drought Plans are reviewed every three years and provide a framework for operating sources within drought periods.

The Supply System

Both regions of the Company have a highly integrated supply network and are classified as a single resource zone (in accordance with the Environment Agency definition) with the risk of shortages of water being equal across the whole area of supply.

The South Staffs Region

The South Staffs region has two surface water treatment works and 26 sandstone groundwater sources, which are mainly situated in the southern and central areas. All these sources are linked by an integrated supply system.

The supply area has varying topography and the supply system has been developed over time to provide security of supply to all customers. This has been achieved by the linking of the Company's strategic service reservoir supply areas with large diameter mains, booster stations and remotely controllable valves to enable the transfer of water throughout the Company's supply area.

The South Staffs region has 20 supply zones with potable water storage provided by 35 service reservoirs and water towers. Water sources feed directly into some supply zones and zonal transfer

boosters move water to zones with no direct resource input and between supply zones at times of peak demand or asset maintenance. Strategic control valves operate in a similar way to zonal transfer boosters but transfer water under gravity. The transfer of cheaper water either through boosters or control valves to areas that have sources with high operating costs can be undertaken to reduce overall energy and chemical costs.

In addition to permanent booster sites the Company also maintains a number of mobile boosters that can be used in emergencies to support permanent sites.

As an example of zonal flexibility and integration, the South Staffs region has the ability to transfer water from the far south-west of its supply system to the northern and eastern supply zones. This is achieved by transferring water through the strategic reservoir system.

The Company operates a shared resource with Severn Trent Water. Severn Trent Water is entitled to up to one third of the original joint licence from the Hampton Loade Treatment Works. The entitlement is abstracted by South Staffs Water and transferred to Severn Trent Water to meet demand in Wolverhampton. Details of existing bulk supplies and potential water trading opportunities are described in the Water Trading Business Strategy document.

Potable water storage in the form of service reservoirs and water towers provides around 26 hours storage for average day conditions in the South Staffs region. In a resource shortage situation, the highly interconnected supply system allows the Company to transfer water between service reservoirs such that supplies can be maintained to all customers through balancing the fall in all water storage reservoirs.

The Cambridge Region

The Cambridge region has a total of 26 chalk groundwater sources and source treatment works, which are mainly situated in the south eastern quadrant of the supply area. All these sources are linked by a highly integrated trunk main, storage and network system of assets.

The supply area is predominantly flat in relief, particularly to the north and north east of the City of Cambridge in the Fenland approaches. The majority of customers are supplied under static head directly from storage consisting of a single main reservoir complex at Cherry Hinton supplying the Cambridge (City) supply zone. 85% of the water produced is either consumed in or transferred through the Cambridge supply zone to the north and west supply zones via

a potable service reservoir and booster complex at Coton to the north-west of Cambridge City.

The Cambridge region has 7 supply zones in total with potable water storage provided by 20 service reservoirs and 12 water towers. Almost 2 days of whole supply region storage is available under average day demand conditions. There is sufficient source water and in-zone storage capacity to accommodate peak demand conditions without the need to transfer water between supply zones.

Network Management Processes

The Company operates two central Control Rooms; one based in Walsall and one in Cambridge. Both are manned 24 hours a day. The primary purpose of both is to monitor and manage the supply system on a day to day basis. All zonal transfer boosters and control valves can be operated remotely from the Control Rooms. Borehole production sites can also be remotely stopped and restarted in some cases from the Control Rooms.

The two surface water treatment works in the South Staffs region are also manned on a twenty-four hour basis; any changes in flows that are required to meet operational needs are made by site staff at the treatment works.

South Staffs Region

In the South Staffs region the Company operates a rota of Supply Duty Officers who are responsible for the overall control of the supply system including service reservoir storage levels and source outputs.

To ensure the system is fully optimised a weekly Supply Strategy meeting is held with representatives of Water Strategy, Production, Networks and Water Quality departments to discuss and agree the weekly strategy The strategy will consider production capacity and availability together with costs, availability of storage, forecast demand and any network operations that could impact on transfer capability.

The strategy will conclude the volumes required from the main surface water treatment works for the week together with the acceptable level of storage for that week reflecting the operational conditions at that time.

Cambridge Region

In the Cambridge region, the Company operates a rota of Duty Managers who are responsible for the overall control of the water supply system including service reservoir storage levels, source outputs and network supplies to customers. A weekly Water Supply Planning meeting is held with representatives of Production, Network Delivery, Capital Projects, Water Quality and Asset Maintenance departments to identify planned activities across all water supply functions that may present a risk to the normal water supply operations.

Production planning and optimisation is carried out on a daily basis. This is due to the highly integrated configuration of the supply and storage assets and the nature of the need for short term balancing of storage and customer demands.

Network Management Information

The Company has instrumentation and telemetry in place at source stations, boosters and throughout the supply networks across both regions to provide data on water supply, quality performance and costs to inform the monitoring, management and optimisation of the water supply network.

Energy meters at sources and in-process provide data which is used to track the cost of producing a megalitre of water from each source. Water meters identify abstraction volumes and volumes into supply.

Water Quality information provided by the Company's compliance team on the quality of water leaving treatment works, in potable storage and at customer's taps informs planned and reactive maintenance programmes undertaken by production and network maintenance teams.

Pumping Efficiency and Alternative Technologies

A programme of pump testing is undertaken in both the South Staffs and Cambridge regions and the results are reviewed to identify potential candidates for efficiency improvement under the Pumping Efficiency Programme (PEP). This is a 5 year programme of pumping and pump control asset refurbishment and/or replacement based on energy efficiency testing data and return periods.

The average efficiency decay of pumps in the South Staffs region is 0.56% which, if left unchecked, would result in an extra 0.86GWh of electricty consumption per year. In the South Staffs region a rolling programme of pump tests identifies those units in most need of refurbishment. These are then removed from site and taken to a workshop where the pump is dismantled and cleaned; worn parts are replaced and original clearances restored.

South Staffs region is proposing to install 1125kWp of solar panels at various sites. By displacing grid electricty consumption and receiving feed in tariffs this investment will payback in under 6 years and reduce emissions by 453tCO_2 per year.

More details of the Company's proposals for pump refurbishment and solar panels is provided in the Investment Strategy – Maintaining Servicability of Non-Infrastructure assets.

Production Budget Management

South Staffs Region

The Company developed a comprehensive budget modelling tool in 2010 (Quantrix) for the South Staffs region which uses detailed energy tariff information and chemical dosing and treatment requirements. The annual Production Budget (energy and chemical costs totalling

around £9m for 2013/14) sets out the forecast volumes of water supply and the associated costs taking into account known constraints such as planned outages.

The budget is reviewed on a monthly basis and reforecast where changes in demand are anticipated (usually weather dependent and based on whether it is drier than anticipated or the winter is harsher). The monthly reforecast then is the baseline for the weekly management of the supply network.

Costs of water production (measured energy use and estimated chemical use) are produced each day. Costs for the week ended are also reviewed on a weekly basis within the Supply Strategy meeting.

A number of bespoke Company pump optimisation models have been developed that have identified optimum pump combinations for each of the surface water treatment works. These allow a daily required volume of water to be selected and the model will identify the optimised flow profile and preferred pump selection. The model takes into account both daily tariff and pump efficiency. Live data is continually fed back into the model on a daily basis to ensure on-going calibration is maintained.

Cambridge Region

In the Cambridge region, detailed demand forecasts and energy tariff information together with chemical dosing and treatment requirements is used to set the annual budget totalling some £1m in 2013/14. Other factors such as planned maintenance, capital work programs, the general water resource position, local borehole/aquifer status and spend to save efficiency programmes also inform the budget setting process.

Real time energy and chemical cost data is used in the optimisation of production sources and treatment works on a daily basis and is aggregated monthly for the purpose of budget management and re-forecasting.

The budget is reviewed on a monthly basis and reforecast where changes in demand (usually prevailing weather dependent and based on whether it is drier than anticipated or the winter is harsher) and groundwater conditions are observed and/or anticipated.

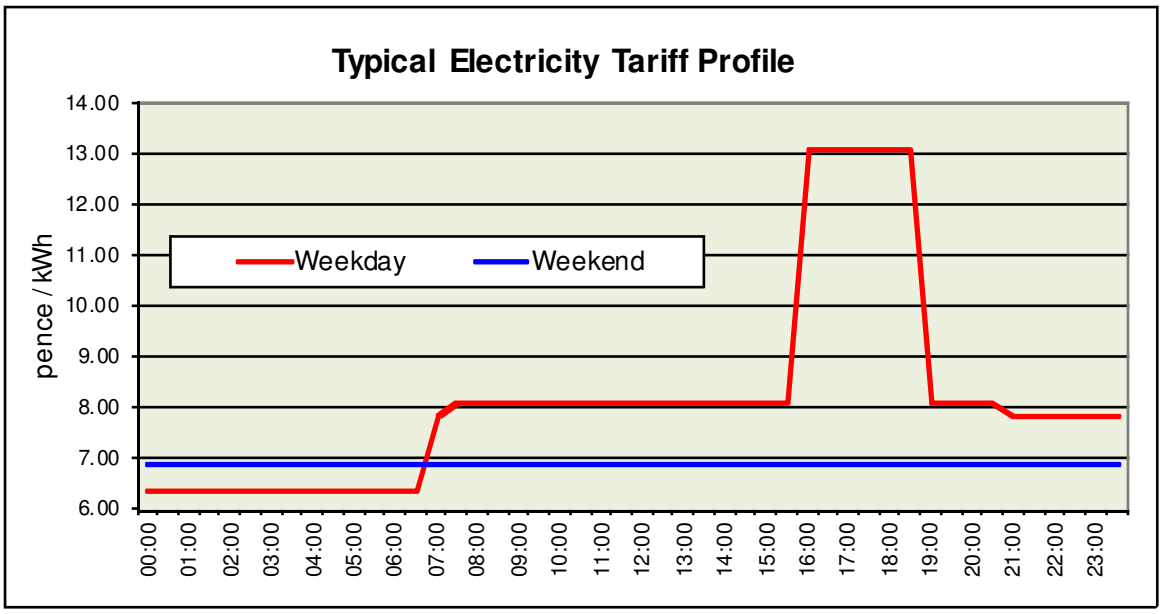
Costs of water production (measured energy use and estimated chemical use) are produced each day and reported to those involved in water supply operations.

The Cambridge Region does not currently operate a pump optimisation model.

Operational Strategy

Tariff Management

By far the largest proportion of the cost of producing water comes from energy usage. In order to minimise energy costs the Company operates its production sites and storage as efficiently and effectively as possible. This means that pumping during lower energy tariff periods is maximised and minimised during periods of higher cost. The graph below shows a typical energy tariff profile.



National Grid (NGT), the District Network Operator (DNO) and energy supplier each vary their charges to give price incentives to large commercial and industrial consumers to reduce their demand for electricity when domestic consumption is at its peak. This is generally between 4pm and 7pm on weekdays.

NGT imposes a Transmission Use of System (TUoS) charge, the DNO a Distribution Use of System (DUoS) charge and the energy supplier has a higher tariff in the winter peak (4pm to 7pm) period.

The TUoS or, as it is also known, Triad Charge is levied on the average electricity demand during three one hour periods on weekdays from November to February, dates of which NGT only publish in March. To mitigate this cost the Company receives from its energy supplier daily alerts advising at what time there is a low, medium or high risk of there being a Triad. For medium and high warnings avoidance action is taken which involves either switching sites off or running embedded diesel generation to displace grid electricity consumption during the alert period. Any loss of water resulting from Triad avoidance has to be made up during the remainder of that week from the surface water treatment works. Failure to avoid Triads will result in significant financial penalty and it is estimated that taking these avoidance measures save the South Staffs region £150,000 per annum.

The DNO levies the DUoS charge at three rates. The green rate is lowest and is applied from 21:00 to 07:30 weekdays and all weekend; the amber rate applies for the rest of the time apart from 16:00 to 19:00 on weekdays when the highest red rate applies. Generation plant is not run during the red period as additional cost of DUoS, even when it is combined with the supplier's winter peak tariff, is lower than the cost of running engines. However, where possible, demand reduction measures are taken during the red period.

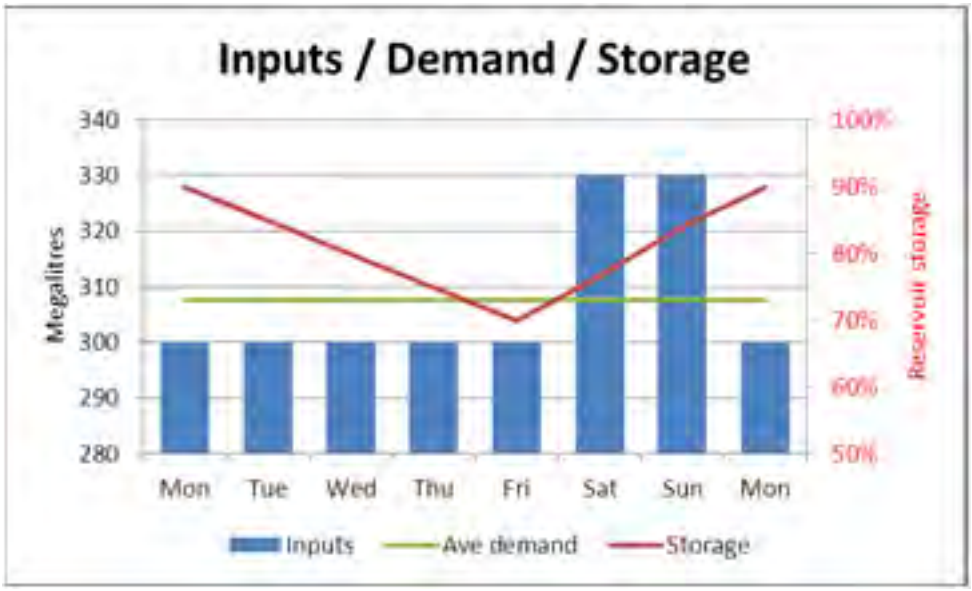
The South Staffs region has an agreement with NGT to reduce its energy take from the electricity grid at twelve minutes' notice. STOR calls are similar to Triads in that financial penalties are incurred if energy consumption is not reduced over the period of the call.

Therefore STOR calls, like Triads, involve similar demand reduction measures: however, a STOR call can be received on any day (in a predefined window) and can last for up to two hours.

More detail on the Company's predicted energy costs for AMP6 is provided in the main Business Plan.

Storage Optimisation

As a general rule in the South Staffs region overnight tariffs and tariffs at weekends tend to be lower than those seen on weekdays. This leads to greater volumes being pumped overnight and at weekends. As a result of optimising these tariffs storage levels generally fall from a Monday morning to a Friday evening and over Saturday and Sunday any storage shortfall is recovered by increased pumping using lower cost energy as illustrated in the following chart.



The minimum target storage level on a Friday evening will be based on a number of factors including resource availability, storage availability and total demand. As an example, in periods of increased demand the level of storage would be maintained at a higher level compared to periods of low demand. The chosen level will form part of the operating strategy for that week. Ultimately energy savings must be balanced against operational risk on a weekly basis.

In the Cambridge region, production sites are configured as either 'base-load' sites (operating 24/7) or 'switchable' sites (selected and deselected at planned times each day) prioritised on their base efficiency (as cost per Ml). The production strategy is to achieve a minimum target volume of water in Cherry Hinton Reservoirs at 08.00am each day, taking into account daily demand prediction, prevailing weather, gain/loss from previous day, site availability (due to planned maintenance or reactive failure) and the balance of base-load and switchable sites.

The output is a daily production plan of switchable sites with operating times in order of site efficiency taking into account time of day tariffs. The 3 shift controllers covering each 24

hour period follow the plan. Updates are made to the plan by the shift controller in real time in response to site failures. The production strategy is to allow Cherry Hinton Reservoir levels to fall during the day and reduce the operation of the switchable sites during the more expense day time period.

Resource Optimisation

In the South Staffs region the Company operates its lowest cost borehole stations as base load sources, with the balance in supply made up from its surface water treatment works. The balance between these two works is dependent on a number of factors but is normally based on the relative unit cost of production i.e. the cost of energy and chemicals per megalitre produced.

There are times when cost is not the primary consideration for the operational strategy. For example, low levels in Blithfield Reservoir may result in a reduction in the volume pumped from Seedy Mill Treatment Works with the use of more expensive sources to conserve the reservoir. The Wem pollution event (1990's) on the River Severn also led to a reduction in the output of Hampton Loade Treatment Works.

As noted above borehole stations tend to be used as base load sources that are operated on a constant basis. The exceptions to this regime are borehole sites where there are nitrate removal plants with associated high operating costs. These sources are only usually operated during periods of high demand such as summer peaks or cold winters with high leakage levels or in extended dry periods. It should be noted that whilst not run normally they are maintained on "Hot Standby" so as to be available at short notice to cover unplanned events. These sources also form an important part of the Company's drought management strategy.

There are instances, during periods of low demand, when particular borehole sources have to be reduced or taken out of supply because local demand is less than the production capacity and the demand in adjacent zones does not allow for water to be transferred. In some cases the sources which must be reduced are lower cost than those that remain in supply and this can therefore affect efficiency. The option to improve transfer capacity between zones generally involves relatively high capex spend compared to the potential benefit and therefore has been ruled out as a suitable development.

In the Cambridge region, resource is optimised implicitly through the production planning process and the selection of the most efficient production sources. With all sources being borehole, the natural water resource position i.e. aquifer status is reflected in the site efficiency. The pumping water level of the borehole is the 'lift' of water to the surface required of the pump and it has a direct impact on pump efficiency and therefore cost if it is different to the duty point (maximum mechanical & electrical efficiency) of the installed borehole pump. The selection of the most efficient sites naturally therefore makes best use of resource.

Any constraints on individual sites due to local water resource and/or quality issues will render the site 'unavailable' and would be taken in to account during the normal daily production planning process.

Water Quality

In the South Staffs region, after energy, chemicals for water treatment are the next largest cost. The use of chemicals can be highly variable with changes in raw water quality. As an example highly coloured water in the River Severn following heavy rain and the presence of algae in Blithfield both increase the cost of chemical treatment. As a general guide high production costs at either surface water source will result in an increase in production at the other works. However, this strategy is reviewed on a weekly, and if necessary daily, basis to ensure costs are optimised.

Under normal operating conditions water quality does not generally impact on system operation. However, the Company operates a number of blending schemes. These allow sources that individually exceed water quality parameters to be blended with those that are below. When water from the two sources is combined the total level of the particular parameter is below the allowable limit.

Whilst this strategy both reduces operational costs of treatment and capital maintenance requirements (as treatment works are not required) operational flexibility can be reduced. For example when the source used for blending is lost due to outage the blended source must also be taken out of supply.

In the Cambridge region, raw water quality varies very little. Nitrate is the exception, with much of Cambridgeshire subject to historical farming practices that have resulted in an increasing risk across aquifers and thus many sources, of failing the nitrate standard in the future. These risks have been mitigated in the short term by the blending of high nitrate sources with low nitrate sources. This mitigation was readily available due to the highly integrated nature and connectivity of the supply and storage assets. These blending requirements have created constraints impacting on cost and security of supply. In AMP5, it was recognised that with steadily increasing nitrate levels, the blending option no longer constituted an acceptable level of risk and nitrate removal treatment has been introduced as a result.

Appendix 4 responses

More details on the Company's approach to Network Management can be found in the responses to the questions in Appendix 4 of the Ofwat methodology which are addressed in the following tables for each of the operating regions.

Appendix 4: Network Management Questions – Water

South Staffordshire Water – South Staffs Region

Short – Term = Daily / Weekly Medium – Term = Monthly Long – Term = Annually

Ofwat Question	Company Response – SSW Region
1. Please describe your processes for mitigating short run mismatches of supply and demand (by short run we mean the period over which the network configuration is fixed and there is limited scope to balance supply and demand by changing the mix of water sources).	A short-term strategy is set on a weekly basis at the Supply Strategy Meeting. A daily review by the Supply Duty Officer (SDO) is then undertaken. The SDO compares the planned strategy against the actual. Interventions over this time horizon are dependent on a number of factors but will be a balance of cost and risk. Factors under consideration would include; total demand (South Staffs own customers together with Severn Trent Wolverhampton demand), service reservoir storage and resource availability. Local mismatches can be addressed either by optimising service reservoir storage and / or increasing output from surface water works. Companywide discrepancies are more likely to be managed through changes in output from surface works. Most resource stations are available to start and stop remotely, therefore incorporating their use to help manage fluctuations in demand
2. Please outline the main factors that influence your choice between different options for balancing short run supply and demand, including the following: a. the different parameters or cost drivers that are optimised, including whether you explicitly take into account the cost of energy (including different energy tariffs and pump curves), cost of water treatment and maintenance costs;	a,b, The Company monitors the cost of water production and pumping extremely carefully. The costs assigned to this are energy and chemicals. Energy meters are in place monitoring site and sub site energy use. They provide energy usage data for site and plant level, enabling greater optimisation of sources and boosters. The Company has a number of systems / tools available to use to help it optimise its energy costs. These include: • HLTW optimiser – a model that optimises all of the pumping at Hampton Loade for any range of given flows. This takes account of the individual efficiency of pumps, availability of those pumps and the variation in cost during different tariff periods. • SMTW optimiser – a model that optimises the pumping to the four supply zones supplied from Seedy Mill. This takes account of the individual efficiency of pumps, availability of those

b. any other factors that are taken into account, including resilience/security of supply, abstraction licence conditions, resource availability, storage capacity, minimum reservoir levels and water quality; c. timeframe over which these factors are taken into account and how frequently they are reset/recalculated; and d. an explanation of any differences in approach across different parts of your network.	pumps and the variation in cost during different tariff periods. • The Quantrix Production Budget Model – a modelling system to record actual energy costs against budget, reforecast the Production budget on a monthly basis and predict costs for the remainder of the year. • Qlikview reporting – a system to record and report operational (energy and chemical) costs for each source station and strategic boosters on a daily basis. The cost of treatment at the surface water treatment works can vary dependant on raw water quality. In the event of poor raw water quality on the River Severn then the cost and risk associated with this is assessed and the supply strategy may be switched to take more water from Seedy Mill as it may be cheaper to treat. Factors which are considered when setting the daily / weekly strategy include: • Leakage levels / demands (weather forecasts,) • Cost drivers – energy tariffs, chemical costs, effluent costs, site / plant efficiency (optimisers), • Resource and plant availability – outages, WQ issues • Service reservoir availability • Blithfield Reservoir operational and drought curves are used to determine who much water can be taken from this source. Any known water quality issues that may influence the strategy are discussed at the Supply Strategy meeting. Sudden deteriorations are dealt with either by the Supply Duty Officer or Supply Strategy Team on a reactive basis. Abstraction licences constrain available water from only two sources and so are generally not significant factors in setting the supply strategy. Minimum service reservoir levels are set each week. Generally storage is full on a Monday morning, lowers to minimum levels over the week to Friday evening and then refilled over the weekend. The minimum level each week will vary dependant on availability and works being undertaken in the supply zones.

	Resource availability is a key consideration and the balance between the restriction / lack of resource and source output is fundamental to the assessment of risk. For example a restriction on output at Hampton Loade of 50 Ml/d for a week in autumn is less significant than a 10 Ml/d restriction for a month in the height of summer. This balance is a fundamental part of planning the appropriate times for works to be undertaken at sites. c. At the Monday weekly supply strategy meeting a strategy for the week will be agreed. Reviews and recalculations against this strategy are undertaken 4 times each day by the Supply Duty Officer using live SCADA data. The reviews monitor actual demands, resource availability and service reservoir storage. Adjustments are made to the network as necessary at these times, if security of supply dictates, or deferred to the following day if it is more cost effective to do so. In addition experienced Control Room staff are constantly monitoring the network to highlight issues arising and make adjustments where necessary. A key requirement of the Supply Strategy meeting is to establish the resource volume headroom that is available for that week. For example, demand is low but there are a number of significant planned works which would reduce resource availability to provide only a small buffer above demand versus high demand when there are fewer restrictions. Hence it is not the absolute availability of resource but the availability relative to demand at any one point in time which is important. Under normal conditions a weekly assessment is made of the factors that influence the network and an operational strategy is set. However, in exceptional circumstances this assessment frequency can be increased to twice weekly or even daily if believed necessary. This escalation process is detailed in the Company's Emergency Planning Document. d. Due to the integrated nature of the network a single approach is taken across the network.
3. Please describe your processes for optimising your network over the medium run. By medium run we mean the period over which the network	The general approach for optimising the network is to have all low cost sources operating at all times. The remaining balance is made up of surface water from HLTW and SMTW.

configuration is fixed, but there is scope to use different combinations of water sources and demand side measures to balance supply and demand.	Production costs for individual sites reflect the impact of energy tariffs and pumping efficiency and include energy and chemical costs. Manpower is not currently included in the Company's tracking of the cost of producing water. The Production cost of water is expressed in £/Ml. This allows a direct comparison of different sources on a like for like basis. In addition any costs associated with zonal transfers (boosters) are taken into account when developing operational strategies. In times of high demand or reduced source availability higher cost boreholes will be reintroduced or be made available for reintroduction
4. Please outline the main factors that influence your choice between different options for balancing medium run supply and demand, including the following: a. the different parameters or cost drivers that are optimised, including whether you explicitly take into account the cost of energy (including different energy tariffs and pump curves), cost of water treatment and maintenance costs; b. any other factors that are taken into account, including resilience/security of supply, abstraction licence conditions, resource availability, storage capacity, minimum reservoir levels and water quality; c. the timeframe over which these factors are taken into account and how frequently they are reset/recalculated;	a,b,c,d,e. The Company's strategy is always based on a balance of using lowest cost sources against risk. At the Monday weekly Supply Strategy meeting a forward look of the next month is undertaken. This includes a review of planned works and the resultant restrictions on resource availability, failures of plant causing unforeseen restrictions on output or unavailability, service reservoir storage availability, network plant availability, the long-range weather forecast and demand trends. The availability of surface waters (Blithfield level and flows in the Severn) is usually key to the ongoing strategy particularly during dry periods when drought control curves are monitored closely. Control curves have been developed for Blithfield reservoir that give guidance on operational flows for any given time of the year compared to reservoir level. These form a framework for the overall strategy. 1 to 3 month predictions on levels in Blithfield relative to control curves are made. The required level of service reservoir storage at any given time is driven by a number of factors but primarily the availability of resources compared to the forecast demand over the given planning horizon. Separate consideration will also be given to the total volume of storage available.

d. an explanation of the extent that different water sources and demand side measures are used to balance supply/demand over time; e. an explanation of whether alternative optimisation scenarios are modelled, and if so how frequently; and f. an explanation of any differences in approach across different parts of your network.	f. Due to the integrated nature of the network the approach discussed above is applied across the whole Company area.
5. Please outline the resources your company employs in undertaking its water network management functions. For example, this could include staff levels, control rooms, telemetry and automatically operated equipment.	Green Lane Control Room, manned 24 hours every day, has the ability to: • Start, stop, and change output from Production sites and Booster sites • Use control valves to move water from zone to zone • Control service reservoir levels through all of the above Hampton Loade and Seedy Mill Control Rooms, manned 24 hours every day, maintain the output from the treatment works and co-ordinate activities for other sites in the north and south of the Company's area of supply. They use the bespoke optimisers to identify the most cost effective pumping regime over a 24 hour period. Supply Strategy Manager has the overview of the supply network and the line management responsibility for the Supply Duty Officers. A rota of six Supply Duty Officers who for a week at a time are responsible 24/7 for the supply strategy. The Supply Strategy Team made up of representatives from Production, Water Quality, Energy Operations, Control & Automation and the Supply Duty Officer for the prior week and the Supply

	Duty Officer for the next week. In addition to the Supply Duty Officer the Company also has a large Emergency Team on twenty-four hour call. Staff who can be called upon out of normal working hours if necessary include: Mains Repair Teams, Electrical and Mechanical Production Operatives, Water Quality Scientists, Control and Automation Engineers, Customer Call Centre Operatives, Stores Staff and a Media Rota.
6. Using specific examples, please describe how any recent and future planned network management related investments in your water business were considered and justified (including cost minimisation and other objectives such as resilience/security of Supply).	Investment optimisation process using bespoke I/O Tool from ICS. Bottom up approach through template workbooks for cost, risk/resilience and customer acceptability and single model scheme selection for business planning. Network management related investment includes a huge range of activities such as source stations, mains, boosters, service reservoirs. A selection of specific examples are noted below. **AMP 5** • The Cookley borehole station refurbishment included the provision of a generator in order to provide security for the output from the site. The new pumps which were installed during the refurbishment were designed to optimise the output from the site. • The Pumping Efficiency Programme (PEP) is a 5 year programme of plant refurbishment or replacement based on energy efficiency testing and estimated pay back. A programme of pump testing is undertaken and the results are reviewed to identify potential candidates for efficiency improvement. • The Company commenced a programme of borehole asset maintenance to improve the condition and performance of borehole assets. The objectives of this work are dependent on the specific site in question but are generally aimed at improving water quality, reducing outages, improving efficiency and securing resources. • A new transfer pump is being installed at Himley to provide zonal resilience.

	AMP 6 • Replacement of nitrate plants at various locations are planned. Without this the Company's ability to meet peak demand and provide resilience to drought will be compromised. • Replacement of the service reservoir at Outwoods is necessary to maintain zonal security • The PEP will continue. • The borehole asset maintenance programme will continue.
7. When optimising your network, what factors do you consider when deciding whether to use your own water resources, or to contract with other companies for bulk supply in order to ensure efficiency?	South Staffs Water is a net exporter of water providing around 35Ml/d to Severn Trent Water from Hampton Loade. South Staffs Water also provides smaller volumes totalling approximately 1.2Ml/d at a number of other locations. South Staffs Water has a surplus in its supply demand balance and has sufficient water to meet demands of its own customers using its own sources of water and therefore does not generally require additional water via bulk supplies. However, there are a small number of very low volume bulk imports that are used on a daily basis; these tend to be remote in rural location with no direct connection to the Company's network. The Company reviews the economics of these bulks on a regular basis to consider whether it would be more cost effective to lay new mains to connect to the Company's own network. The Company does also have access to large emergency transfers. These will only be called on in the event that the Company cannot meet a local demand usually as a result of asset failures such as trunk mains bursts which tend to be of short duration. In general the Company does not consider employing large transfers as part of its normal operational strategy; this is primarily due to the high cost associated with bulk imports compared to its own water production cost. The Company is currently in discussions with Severn Trent Water to make available to them some of the Company's surplus water under water trading.

8. Please describe how you would or do adjust your optimisation processes to take into account the input of water by a third party. This should include what activities you do or would do to ensure water quality and customer service standards are maintained.	The small bulk imports that the Company currently takes from Severn Trent are subject to a bulk supply agreement. Regular liaison meetings are held between the two parties to discuss any issues. The treatment of a third party entrant wishing to use the Company's network would be covered under the Company's Access Code. The impact on the Company's Supply Strategy following this input would be dependent on whether the supply was for a) a new customer or b) a customer previously supplied by the Company. In the example of (a) there would be no overall change to the supply demand balance as the demand to be supplied by the Company would remain the same. Network capacity at the location of input would be the key factor. The approach to optimisation of the South Staffs source inputs and the network would be unchanged. In the example of (b) there would be an overall reduction in the demand to be supplied by South Staffs. An additional input from a third party would mean that the Company would be able to reduce the volume of water input into supply and this would be managed in the same manner as a reduction in demand. This in theory would mean that an equivalent volume of the most costly water would not be put into supply and thus lead to a reduction in the overall unit cost of water produced. When considering an input by a third party, the following factors would be key, these are :- • Location • Volume • Water quality (water high in nitrates whilst compliant could impact upon existing blend schemes) With regard to both security and continuity of supply all customers directly connected to the Company Network will receive the same level of customer service regardless of the supplier and the Company would continue to implement all existing monitoring and safeguarding systems relating to water quality and customer service.

9. Please explain how planned maintenance outages are coordinated on your water network, including how you take account of the interests of third party suppliers and customers.	The Company has a PPS (Policy and Procedure Statement) which sets out requirements for obtaining a 'Permit to Work' for planned maintenance. All maintenance work must have a permit or a notification prior to being undertaken. The application for a permit must include details of the nature of works, duration, impact on supply (partial reduction / full reduction in output) and risk. Once completed applications are submitted to Networks department which review, process and co-ordinate all work requests. The review will ensure that the Company is not over exposed to risk, either through large reductions in output or available storage. Permits must be agreed by representatives from various departments including Water Quality, Production and Networks. Prior to commencing any work the Supply Duty Officer has the right to veto at the last minute any works they believe will put the network or customers at an undue level of risk. This review of risk would also be applied to third party suppliers.
10. Please describe how your long-term planning/investment planning takes into account network management processes and issues. For example, do the costs of short-term balancing factor into your investment decisions?	When considering long-term future investment a number of factors are taken into account. These include whole life costs, environmental impacts, customer acceptability, risk including premature asset failure and any impacts during the construction or commissioning phase. Short-term impact also forms part of the risk assessment process. Planning of investment works which will impact on network management is carefully considered. For example the proposed replacement of Outwoods service reservoir during AMP6 requires some enabling works to be completed prior to this major scheme to ensure that network risks are minimised during the construction period. This enabling work may include some small scale additional resilience mains, ensuring the availability of emergency bulk supplies from Severn Trent Water and ensuring source inputs to the zone are as reliable as possible. The cost of short term balancing of supply during any major works would be included as part of the option analysis undertaken for the project but these would not drive a change in investment decision.

Appendix 4: Network Management Questions - Water

South Staffordshire Water – Cambridge Region

Physical balancing and cost minimisation We want to understand to what extent these processes are objectively determined, the scope for discriminatory treatment of different sources, and how each company balances cost and other factors in making network management decisions.	
Ofwat Question	**Company Response – CAM Region**
1. Please describe your processes for mitigating short run mismatches of supply and demand (by short run we mean the period over which the network configuration is fixed and there is limited scope to balance supply and demand by changing the mix of water sources).	CAM has a single water resource zone and one major supply zone supplied solely from chalk groundwater– Cambridge accounting for 85% of water delivered. The production, storage and network assets are highly integrated with the majority of its sources interconnected with major storage. This generates a high degree of flexibility, resilience and opportunity for efficiency only limited by water quality blending constraints, predominantly for nitrate.
2. Please outline the main factors that influence your choice between different options for balancing short run supply and demand, including the following: a. the different parameters or cost drivers that are optimised, including whether you explicitly take into account the cost of energy (including different energy tariffs and pump curves), cost of water treatment and maintenance costs; b. any other factors that are taken into account,	a. The majority of customers connected to the network are supplied under gravity head from storage. The strategic storage reservoirs at Cherry Hinton, Madingley and Bluntisham are maintained on a planned and optimised daily cycle. All other storage units are supplied on demand to maintain level to give security of supply. The water resource headroom translates into multiple standby production sites with planned maintenance adjusted to maintain availability relative to demand. b. Local site control and real time exception alarming through SCADA and the 24-hr manned control room maintain abstraction limits, water quality blend and security obligations and objectives.

including resilience/security of supply, abstraction licence conditions, resource availability, storage capacity, minimum reservoir levels and water quality; c. timeframe over which these factors are taken into account and how frequently they are reset/recalculated; and d. an explanation of any differences in approach across different parts of your network.	c. Daily (24-hr) production planning by the 6-man shift control room overseen by the Production Manager maintains strategic storage to efficiency targets utilising night and day electricity tariffs. Production sites are ranked on real time efficiency utilising site electricity metering through a SCADA interface. The pumping plan is reactive to production site outages and is adjusted on an 'as and when' basis with the next available lowest cost site. d. All zones operate on a similar basis.
3. Please describe your processes for optimising your network over the medium run. By medium run we mean the period over which the network configuration is fixed, but there is scope to use different combinations of water sources and demand side measures to balance supply and demand.	The highly integrated supply, storage and distribution network and the high associated level of physical connectivity provides a high degree of production site and network service delivery flexibility. The network configuration and supply zone arrangements have been fixed for 160 years and are not influenced by development which is accommodated largely by local network enhancement or addition.
4. Please outline the main factors that influence your choice between different options for balancing medium run supply and demand, including the following: a. the different parameters or cost drivers that are optimised, including whether you explicitly take into account the cost of energy (including different energy tariffs and pump curves), cost of water treatment and maintenance costs;	Medium run supply variation is implicitly managed through the daily production planning process. a. All production sites are chalk groundwater, inherently good in quality, requiring simple treatment at WTW's local to the abstraction. The production sites are therefore discrete stand alone and can be operated in any combination (within limited fixed nitrate blending constraints). Real time electricity efficiency and daily production cost reporting per site allows efficient and reactive production planning in conjunction with time of day electricity tariffs. In real terms there is very little variation in running costs between all

	sites.
b. any other factors that are taken into account, including resilience/security of supply, abstraction licence conditions, resource availability, storage capacity, minimum reservoir levels and water quality; c. the timeframe over which these factors are taken into account and how frequently they are reset/recalculated; d. an explanation of the extent that different water sources and demand side measures are used to balance supply/demand over time;	b, c and d. All factors and supply and demand balancing are taken into account in the local site controls, fixed and stable network and storage asset configuration and daily planning process. Varying demand is met by varying production site operation on a daily basis and reactively on asset failure.
e. an explanation of whether alternative optimisation scenarios are modelled, and if so how frequently; and f. an explanation of any differences in approach across different parts of your network.	e. There is no production optimiser for sites. CAM will share the tools and experience of SSW to implement appropriate optimiser and dynamic planning tools. f. There is no difference in approach across the network
5. Please outline the resources your company employs in undertaking its water network management functions. For example, this could include staff levels, control rooms, telemetry and automatically operated equipment.	Local 24-hr, 365 manned operational control room. Local dedicated bespoke SCADA system with exception alarms and site selection control. Supply Strategy Manager Supply Strategy Team – Production, SDO, WQ, EOps, C&A
6. Using specific examples, please describe how	Investment optimisation process using bespoke I/O Tool from ICS. Bottom up approach

any recent and future planned network management related investments in your water business were considered and justified (including cost minimisation and other objectives such as resilience/security of supply).	through template workbooks for cost, risk/resilience and customer acceptability and single model scheme selection for business planning.
Supporting the development of market / commercial arrangements	
7. When optimising your network, what factors do you consider when deciding whether to use your own water resources, or to contract with other companies for bulk supply in order to ensure efficiency?	Opportunities to trade with neighbouring suppliers or enter into bulk supply agreements under commercial arrangement are limited by environmental constraints regionally. Affinity Water and Anglian Water are water resource constrained at our borders. The challenge to existing abstraction licences by the Water Framework Directive in the future, together with NEP constraints under the current Habitats Directive in the water scarce East Anglian region are barriers to trading.
8. Please describe how you would or do adjust your optimisation processes to take into account the input of water by a third party. This should include what activities you do or would do to ensure water quality and customer service standards are maintained.	The system would re-balance for any additional supply input in principal regardless of volume but would require strategic consideration for larger volumes which may constrain the point of connection into the system.
Efficient coordination of activities	
9. Please explain how planned maintenance outages are coordinated on your water network, including how you take account of the interests of third party suppliers and customers.	A weekly production planning meeting for operational and capital asset delivery line managers identifies risks and mitigation. All planned above ground asset and infra asset works other than routine maintenance require a RAMS (Risk Assessment Method Statement) with a sign off escalation commensurate with risk. Where supply arrangements exist or are considered, a level of service identifying the supply

	arrangements and demand constraints are agreed and where appropriate mitigation for outage is provided. Thus may include back-feeding and/or boosting in the event of loss of service.
Longer-term decision making	
10. Please describe how your long-term planning/investment planning takes into account network management processes and issues. For example, do the costs of short-term balancing factor into your investment decisions?	When considering long-term future investment a number of factors are taken into account. These include; whole life costs, environmental impacts, customer acceptability, risk including premature asset failure and any impacts during the construction or commissioning phase. Short-term impact also forms part of the risk assessment process. Planning of investment works which will impact on network management is carefully considered. For example enabling works may need to be completed prior to commencement of major schemes to ensure that network risks are minimised during the construction period. This enabling work may include some small scale additional resilience mains, ensuring the availability of emergency bulk supplies and ensuring source inputs to the zone are as reliable as possible. The cost of short term balancing of supply during any major works would be included as part of the option analysis undertaken for the project but these would not drive a change in investment decision.

South Staffs Water

incorporating

CAMBRIDGE WATER COMPANY

Community Engagement

December 2013

Contents

Overview

Community Activity and Engagement with Customers

The Company has put its customers and the communities they live in at the heart of its operations for more than 160 years.

From extensive customer research, the Company recognises that it has a role and responsibility to support customers in becoming more water aware. There is a clear appetite amongst the community to participate in water saving initiatives both to reduce water usage but also to raise awareness of the whole water cycle, and customers expect the Company to take the lead in this

Communication plays a vital role within the community, shaping and changing behaviours. The Company has a commitment to continue its work in the community by encouraging and harnessing greater awareness and participation.

Following customer research and recommendations from CCG in planning for the future, the Company has set itself a clear objective of delivering an excellent experience to customers and the community.

It will do this in the following ways:

Engagement - Listening to what customers want from the business

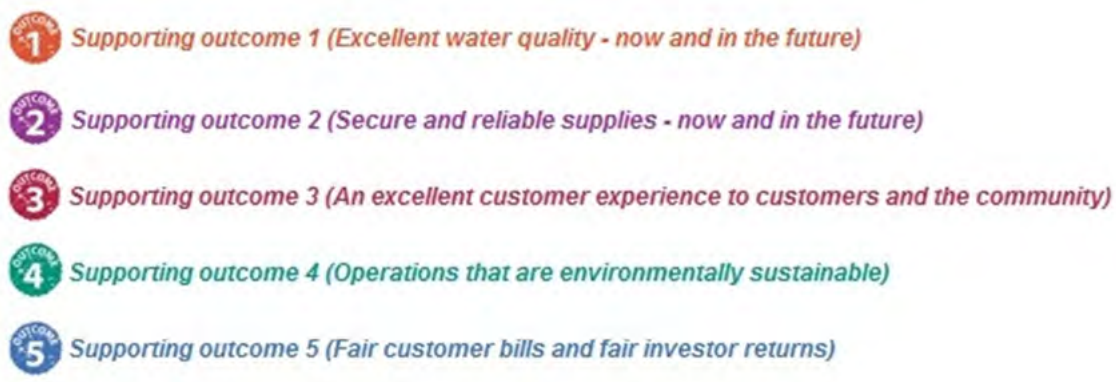
Culture - Placing customers and the community at the heart of its business culture

Delivery - Ensuring the community plan delivers what customers want

Engagement

The Company has just undertaken its largest ever customer engagement research project to really understand what is important to customers and why.

This research has been used to formulate the company's five outcomes:



Culture

In 1853 South Staffs Water and Cambridge Water were launched with a single intention – to provide clean and safe drinking water to people living in the local communities.

Today, that key objective still exists, the Company puts everything it does for customers at its heart – members of the Board are committed to delivering the highest level of customer service, there is a customer voice team which manages relationships with customers. The Company also employs dedicated customer service operatives who work closely with its hands-on contact centres. Alongside these service roles, the Company has a dedicated corporate social responsibility programme, including its education and wildlife centre on the Blithfield Estate, donations and grants for good causes and an active employee volunteering scheme.

Everything the Company does is focused on delivering the highest levels of service to customers and the communities in which they live.

Delivery

The Company recognises its customers and the communities they live in are intrinsically linked. Through nurturing the combined needs of customers, the community, environment and staff it plans to meet all of the five key outcomes through its community engagement activity. Further details on how it will achieve this are described in the following sections.

The Company will consistently review feedback it receives from customers, via surveys, emails, word of mouth and other communication channels to further enhance and measure the success of its community engagement plan.

The Company has expanded on its strategies and activities for community engagement within its Retail Strategy.

Approach

The Company has adopted the following approach to community engagement:

Proportionate to Its Business

While community engagement is about being all things to all people, the Company also recognises that to do so effectively requires its activities to be proportionate to its business.

With its strong commitment to community engagement the Company ring fences budget to support Corporate Social Responsibility (CSR) projects and initiatives proportionate to the size of the business.

Driven by an overarching ethos of giving back to its community, the Company offers support both in direct funding but also resource for local, national and international activities.

Open and Transparent

It is important that any decisions made under the banner of its community engagement process are open and transparent both internally and externally. A separate donations and grants committee is responsible for allocating funds to local projects and The Charitable Trust is run entirely independently of the Company. The Company also seeks third party endorsement and customer feedback wherever possible.

Encourages Feedback

The Company seeks to actively encourage feedback on its community engagement activity and make positive changes based on that feedback. It does by offering multiple engagement points for customers – letter, email, telephone, text, and proactively seeking feedback via customer satisfaction surveys, net promoter scores, focus groups, willingness to pay surveys, acceptability testing. More detail on the Company's approach to customer feedback can be found within its Retail strategy.

The Company is increasingly seeking to test any changes it makes as a result of feedback with its customers.

Is fun!

The Company believes that where appropriate there should be an element of entertainment in its community engagement activity, whether it is sending out its Hippo mascot to schools, providing interactive features on its website, giving an entertaining talk to the Women's Institute or sponsoring local firework shows. Wherever possible it hopes to put a smile on someone's face.

Community Engagement Programme

Work in the Community

Supporting outcome 3 (An excellent customer experience to customers and the community)

The company is determined to continue to raise its profile in the community. Typically it will achieve this on two levels:

Supporting the community - Giving something back to community in which it services

Raising awareness - Ensuring everyone who lives in the community is aware of, and able to access the services the company is able to offer

Supporting the Community

As part of its existing corporate responsibility programme the Company has a long history of working closely with local communities. Existing schemes include offering grants for good causes, sponsoring community events, and offering bottled water to organisations organising fundraising or sporting events.

The Company also regularly give talks about the water supply to community groups on request.

Case Study

Children at Guilden Morden Brownies and Oakington Primary School in the Cambridge region are now able to help save water and care for the environment after they both received two water butts. The Brownies will be using theirs to water a new natural hedge they have planted in the grounds of The Pightle.

Children from Oakington Primary School hope they will help the school work towards achieving its Silver Eco Award, which focuses on saving water.

Continue to Work Closely with Schools

The Company offers a comprehensive education programme. In the South Staffs region the Company runs its own education centre from a converted sawmill at Blithfield reservoir. Children in key stages one and two spend the day at the Site of Special Scientific Interest to lean about water, wildlife and science.

The Company also gives talks to school assemblies on requests as well as providing plastic water bottles for school intake children.

Continue to Engage with its Customers (on issues that matter to them)

During the next AMP, the Company will be doing more to ensure the information it communicates to customers is appropriately targeted. By this it means:

- Producing materials that appeal to different target audiences
- Accessing different target audiences in different locations, for example liaising with the CAB to deliver messages about avoiding debt, providing water efficiency advice in a fun way to school children, liaising with vulnerable groups regarding special tariffs or ways to save water.
- Delivering these messages in different ways to different target audiences, for example by advertising in parish magazines, putting up clear signs in the roadway and ensuring our own customer communication channels are accurate and up-to-date. It also aims to ensure it maximises opportunities for digital communications, via its website, email, SMS and through social media.
- Ensuring that communications are accessible, for example by offering information in large print or Braille.
- Ensuring it proactively engages in an appropriate way with elderly, vulnerable or hard to reach members of society, on issues that matter to them such as special tariffs, bogus callers and password protection schemes.
- Ensure the effective use communication that is relevant to the customer.
- Mapping the customer journey, so the Company is more acutely aware of how and what experiences affect customers.
- Proactively informing customers about work the Company is undertaking in their local communities, such as repairs to water pipes or water main rehabilitation schemes.
- Encouraging customers to be more aware of issues affecting their water supply, for example, by reporting leaks.
- Making its presence known in the community by exploring grass roots opportunities, such as attendance to key events, customer drop-in sessions and talks to community groups. The Company will also engage with hard to reach groups that represent minority sections of the community.

Develop and Enhance its Workforce

Supporting outcome 1 (Excellent water quality - now and in the future)

For many customers, the only contact with the Company is with front line staff. With this in mind, the Company continues to support training and development of its workforce, particularly those who have contact with customers on a daily basis, to ensure the highest levels of customer services are maintained.

As a business with its core services at the heart of the community, every touch point that customers have with the Company needs to be consistent and valued. To this end, training and development forms a major part of the Company's HR strategy.

The Company recognises that investment in employees is key to the success of its business. It will continue to recognise and reward the investment staff make to the Company and the communities in which they live through:

- Investors in People – investing time and resources in employees to assist them in reaching their full potential and to enhance the overall performance of the business, for the benefit of all customers
- Enhance internal communications and employee benefits – following the merger, the Company is revisiting its existing internal communications to ensure it encompasses both regions and supports staff in their work and leisure activities.
- Matched funding schemes – rewarding employees who choose to raise funds for good causes by match funding them up to £250.
- Employee volunteering – encouraging employees to volunteer in their local communities by granting up to three days of paid leave every year

Care for the Environment

Expand its Biodiversity and Environmental Considerations

Supporting outcome 1 (Excellent water quality - now and in the future)

Supporting outcome 4 (Operations that are environmentally sustainable)

The Company works with national, regional and local organisations and groups to protect and enhance the natural environment and provide opportunities for local communities.

It is also committed to exploring a diverse range of initiatives to expand biodiversity and environmental considerations to make its operations more sustainable, and plan for the future. More detailed information can be found in the Company's Environmental Strategy

In the South Staffs region most of this work is focused around the Blithfield estate, which stretches across 2,350 acres in the heart of rural Staffordshire. The estate, which is made up of Blithfield Reservoir and neighbouring woodlands, is a Site of Special Scientific Interest and recognised wildlife habitat.

The site opened to the public in 2009 and since then a range of visitor attractions have been incorporated, including woodland walks, trout fishing and a sailing club. There is also a converted saw mill which is used as an education centre, to offer science and water efficiency education for key stage two and three.

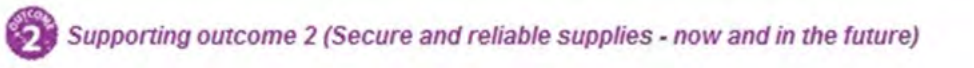
Over the next AMP the Company will be working in partnership with organisations such as Natural England, The Wildlife Trust and the RSPB to best utilise the existing facilities at Blithfield in order to engage with the community on a larger scale, and enhance the educational facilities.

In addition to Blithfield, the Company also:

- Works in partnership with organisations that care for the environment (Natural England, Wildlife Trust, RSPB, and the Environment Agency) to ensure it protects and enhances the environment wherever possible.
- Liaises with developers, local authorities and industry experts regarding best practice for reducing water consumption.
- Develops catchment management schemes, and leads or supports local catchment partnerships.
- Mitigates any environmental impact from its operations, protecting and where possible enhancing biodiversity.
- Is committed to protecting its resources through, managing leakage, increasing meter penetration, and where possible, supporting water re-use technologies.

- Is committed to ensuring it secures the best financial deals for customers, for example by negotiating better prices with energy companies which can then be passed onto customers.
- Raises public awareness of the need to conserve and value water for generations to come. The Company does this by supplying free water meters to domestic customers, offering water efficiency advice on request and providing water saving devices free of charge.

Protect Water Resources for Future Generations



The Company will continue to engage with the public in order to conserve its water resources for future generations and help customers manage their consumption. Specifically it aims to:

- Continue to predict and/or react to seasonal or long term changes in the climate to help customers value water and manage their consumption, via its:
  - Awareness and publicity campaigns
  - Water efficiency advice and access to free water saving products
  - Drought awareness

The Company is committed to reviewing and improving its metering services in support of raising awareness of water efficiency amongst its household and non-household customers.

Case Study

In 2012 a Wrap up for Winter campaign was run in the Cambridge region. The campaign advised customers to take precautionary measures for the cold winter months ahead, by wrapping up exposed pipe work.

It also educated customer on what to do if a pipe freezes or bursts. Leaflets and billing literature was produced to offer customers a foam lagging voucher which they could trade in for five metres of free foam lagging at their local DIY store.

This was supported by a website campaign. In total more than 400 vouchers were traded in by customers, prompting the company to repeat the campaign across both regions in subsequent years.

Works in Partnership with Others

South Staffs Water recognises the importance of working in partnership with other organisations that also operate within the communities it serves. For example it works closely with the Citizens' Advice Bureaus in both regions, Natural England, the Wildlife Trusts, the RSPB and the NFU. It also has good working relationships with its neighbouring water companies, Severn Trent Water and Anglian Water.

Over the next AMP the Company plans to build on its existing relationships with local authorities, emergency services, housing associations, healthcare and educational institutions as well as charity and special interest groups.

This will be of particular importance with the new Welfare Reforms. More detail on the Company's commitment to supporting customers experiencing financial hardship can be found within the Affordability strategy.

Working together strengthens the messages the Company wants to communicate to customers and where appropriate, will enable the Company to share resources and best practice for the benefit of the community as a whole.

For example in the Cambridge region, the Company has been working with Neighbourhood Watch groups to raise awareness of bogus callers and the local police and CAB on how to better communicate via social media.

On an international scale the Company also works closely with WaterAid to help fund water and sanitation projects overseas that make a real difference to the lives of people in the developing world.

Engage with Customers

Engage with its Non-household Customers

Non-household customers are also fundamental to the business, more so in preparation for the planned extensions of competition to all non-household customers in 2017., see Retail strategy.

The Company is committed to working with non-household customers to ensure it:

- Continues to deliver a proactive and efficient services for business customers
- Asks for feedback from commercial customers so the Company is able to deliver what they want
- Offers water efficiency audits on request
- Offers assistance with leak detection
- Provides accurate and consolidated bills

Assist customers who are struggling to pay their bills

The Company is aware that finding money to pay a water bill can be challenging, particularly in today's economic climate. It has a number of schemes in place to assist customers in meeting their bill payments, or avoid slipping further into debt.

A significant part of the community plan is to raise awareness of the schemes among all customers, particularly vulnerable or hard to reach members of society, to inform them of the initiatives the company has available, such as:

- The independent Charitable Trust
- The New Start scheme (in the Cambridge region)
- Tariffs and flexible payment arrangements
- Advice on conserving water through water efficiency/metering
- Working in partnership with agencies designed to assist people in financial difficulties, eg CAB
- Keep abreast of changes affecting people's ability to pay (e.g. Universal Credit)
- Ensure information is targeted and relevant and proactive wherever possible.

Full details of the Company's commitment to supporting customers experiencing payment difficulties can be found within its Affordability strategy.