



# Our Business Plan for 2020 – 2025

September 2018

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Note: Table figures included within this narrative may be subject to rounding. For more precise figures, please refer to the Ofwat tables.



I am delighted to have joined Affinity Water at an exciting time for our business and for the water industry and I am proud to present you with our Business Plan for 2020 to 2025.

We have consulted widely with customers and stakeholders as we have developed this Plan to ensure we truly understand their diverse needs and expectations and that we are meeting them as far as possible.

Customers live in some of the most economically thriving parts of our country, yet we know that some struggle to pay for basic necessities. We are proud of our record in keeping bills down and of the help we provide through our inclusive services, supporting more than 50,000 customers through our social tariffs. Our challenge remains to keep bills as low as possible whilst delivering against stretching targets for 2020 to 2025.

We operate in a region of environmental importance, featuring rare chalk streams which support a unique ecology. We are committed to, and proud of, our role as stewards of the natural environment, working collaboratively with organisations in our communities including river protection groups and farmers and with our regulators, to protect our environment for future generations.

This past year we have experienced critical weather events, which have stretched our resources - the freeze/thaw event of winter and the long hot dry summer. Our teams performed very well, working hard and drawing on contingency plans and expertise to protect customers and minimise disruptions. With those experiences in mind and considering the challenges of population growth and climate change and with clear support from our regulators and stakeholders, we have included activities into our Plan which will enhance our resilience into the future.

As we have considered and incorporated all the feedback and insights into our Plan, it has evolved and changed. We believe it now provides the best balance of meeting customers' and stakeholders' needs, ensuring that we can continue to supply high quality, affordable water to our customers, whilst taking care of our environment.

For 2020 to 2025 we have developed a Business Plan with ambitious targets for reducing leakage, improving our performance relating to interruptions to supply and delivering improved customer experience. We will abstract significantly less water from the environment and we will engage with our customers and stakeholders to reduce water consumption levels. We have included challenging efficiency savings in this Plan totalling more than £200 million, to ensure we keep bills as low as possible. In total we are investing £1.37 billion, including funding to build increased capacity to transfer water into and across our supply area and to develop plans for a potential regional reservoir, which will provide greater resilience in the future.

Delivering this Plan will require our business to innovate and to evolve, to collaborate with and learn from others, inside and outside the sector and to implement improvements fast and effectively.



I recognise the challenge in delivering this Plan. I am personally committed to do all I can to ensure its successful delivery and I am confident in my team's ability to embrace this challenge and to lead our business into the future.

A handwritten signature in dark ink that reads "Pauline".

Pauline Walsh, CEO, Affinity Water

## Executive Summary

### Working for Customers and the Communities we serve

1. We are the UK's largest water-only company, supplying a population of more than 3.6 million people with more than 900 million litres of the highest quality water every day of the year. At the core of our business and our Plan for 2020 to 2025 is our vision to be the UK's leading community-focused water company. This reflects the importance of the way we work for and with customers and the communities we serve. We believe by understanding and responding to the needs of different communities, we can be accountable to them, at a local level, for how well we provide our services.
2. Our vision is underpinned by four high-level Outcomes, these are the things that really matter most to customers and remain unchanged from the last price review. These Outcomes set the strategic context for us and in the widest sense set out what we are here to do. The Outcomes we have pledged to deliver for all customers are:
  - Supplying high quality water, you can trust
  - Making sure you have enough water, while leaving more water in the environment
  - Providing a great service that you value
  - Minimising disruption to you and your community.
3. In turn, we will help customers understand the true value of water, support them to manage and reduce their consumption and so support the ongoing protection of the environment and future resilience of supplies.

### What matters most to Customers and Stakeholders

4. We have undertaken an extensive and multi-phased programme of customer and stakeholder engagement to ensure our Plan focuses on the things that matter most to customers. We have engaged with over 15,300 customers and stakeholders and taken account of over 5 million day-to-day customer contacts as part of a combined engagement programme. Our Plan has been directly influenced by this work.
5. When we engage with customers, we find high levels of support for maintaining high water quality, reducing abstraction, ensuring supplies are resilient and reducing leakage and per capita consumption (PCC). Most customers contact us infrequently and for the majority, their only interaction is to pay their water bill. We recognise we have a big opportunity to engage more effectively with customers around the water service they receive.

### Our Proposed Plan for 2020 to 2025

6. Our Plan for 2020 to 2025 builds on the strong track record we have achieved to date in delivering the 'enhanced' plan we were awarded five years ago, demonstrating we can be trusted to deliver. Whilst challenging, our current Plan has kept us at the forefront of the industry in terms of leakage reduction, demand management and water abstraction reduction. This is a strong position from which we will continue to stretch our ambition and performance.
7. Over the decade 2015 to 2025 we are targeting to deliver:
  - a continuous supply of high quality water, better than 99.95% compliance
  - 28% reduction in leakage
  - 17% reduction in demand
  - less water abstraction, reducing environmental impact by 78 million litres per day (Ml/d)
  - affordable bills for customers (less than 0.5% increase per year)



- increased help for customers in vulnerable circumstances.
8. Our Plan will also lay the foundations for improved resilience of supplies for future generations by beginning investment today to secure the development of additional regional supply resources before 2040, when they will be needed.
  9. Some important highlights of our Plan for 2020 to 2025 include:
    - Reducing leakage from water pipes by 15% on top of a 14% reduction between 2015 to 2020 (compared to an industry average reduction of 4% over the same period)
    - Reducing average consumption from 147 to 129 litres per person per day, operating at the forefront of demand-side management, and working with partners and communities to prompt behavioural change with regard to water conservation
    - Developing innovative demand management options based on real-time consumption data to further reduce consumption by 2025
    - Improving the strategic sharing and management of regional resources by making improvements to import and export agreements with neighbouring companies
    - Continuing to support the quality of our water resources through our catchment management and river restoration programmes to help habitats and biodiversity of rivers in our supply area
    - Reducing water abstraction by 36 Ml/d to improve sustainability, following the successful delivery of 42 Ml/d of reductions since 2015
    - Investing £1.37 billion across the five-year period, to maintain core network assets to keep services running 24 hours a day, 7 days a week and 365 days a year, investing in local level assets such as pumps, mains upgrades, new mains and investment in service reservoirs that allow us to move water to where we need it. We will deliver major programmes to treat water for wider distribution across our supply area, where and when it is most needed, to improve resilience, and we will start work on a regional reservoir, in partnership with Thames Water
    - We have listened to customers and stakeholders and recognise the challenges facing us as a company located in the South East of England, a region designated by the Secretary of State as an area of serious water stress. Our Plan tackles these challenges head on.
  10. This Business Plan includes our commitments between 2020 to 2025, necessary to achieve the outputs listed above. These commitments, known as Performance Commitments (PCs) are listed in the table on the following page along with other commitments we are making to customers about the service they can expect from us. Our Plan includes a total of 19 PCs that will ensure we deliver our four Outcomes.
  11. In developing this Plan and the commitments we are making, we have given careful consideration to how our Plan will address wider sector strategic priorities as articulated by Ofwat through its four price review themes. We believe our Outcomes and PC framework enables us to address each of these themes as detailed in the table below. To underpin and support the delivery of our commitments we have evolved our approach to work with and for our communities.

Outcomes	Performance Commitments	Great customer service	Affordable bills	Innovation	Resilience in the round
Supplying high quality water, you can trust	Compliance Risk Index (CRI)	✓			
	Mean Zonal Compliance (MZC)	✓			
Making sure you have enough water, whilst leaving more water in the environment	Leakage	✓		✓	✓
	Per capita consumption		✓	✓	✓
	Environmental innovation – delivery of community projects	✓	✓	✓	✓
	River restoration			✓	✓
	Abstraction reduction			✓	✓
	Number of sources operating under the Abstraction Incentive Mechanism (AIM)			✓	✓
Providing a great service that you value	Customer measure of experience (C-MeX)	✓	✓		
	Developer measure of experience (D-MeX)	✓	✓		
	Customers in vulnerable circumstances satisfied with our service	✓		✓	
	Customers in vulnerable circumstances who found us easy to deal with	✓		✓	
	Number of occupied properties not billed (Gap sites)	✓	✓		
	Number of properties wrongly classified as unoccupied (False voids)	✓	✓		
Minimising disruption to you and your community	Supply interruptions greater than 3 hours	✓		✓	✓
	Risk of severe restrictions in a drought	✓		✓	✓
	Unplanned outage	✓			✓
	Number of burst mains	✓		✓	✓
	Properties experiencing longer or repeated instances of low pressure	✓			

Table ES1: Outcomes, PCs and Ofwat Price Review Themes

## Providing a great service that you value

12. We will ensure that we are listening to customer needs and investing in the right technologies to deliver great customer interaction, increased engagement and cost efficiencies. Our approach means all customers, whether they are households, retailers, developers, self-lay providers or new appointees, receive the same focus and attention. Key features of our approach to our household retail activities, building on improvements already delivered, include:

- Continuing to transform our culture to become an increasingly insight-driven business where data is seamlessly collected, pooled and analysed to understand our communities and customers holistically and help us take the right business decisions
- Delivering a personalised experience for customers, to ensure we cater for an individual's circumstances, including temporary or permanent affordability issues or vulnerability - leveraging the expertise and best practices of others in the industry and other sectors
- Focusing on getting things right first time and maximising the opportunity from digital technologies to make things easy and simple
- Strengthening our relationship with customers, promoting what we do and the service we provide and helping to encourage customers to manage their consumption for the benefit of their local environment
- We are adopting a partnership approach with our communities, understanding that we are not always best placed to drive change or influence behaviours. We have learned that for interventions to be successful and for us to deliver our Plan, we must work more closely with delivery partners and stakeholders on the most effective means of securing change.

This Plan includes significant cost efficiencies on base Totex and retail costs totalling £200 million, which enables us to keep our household bills low.

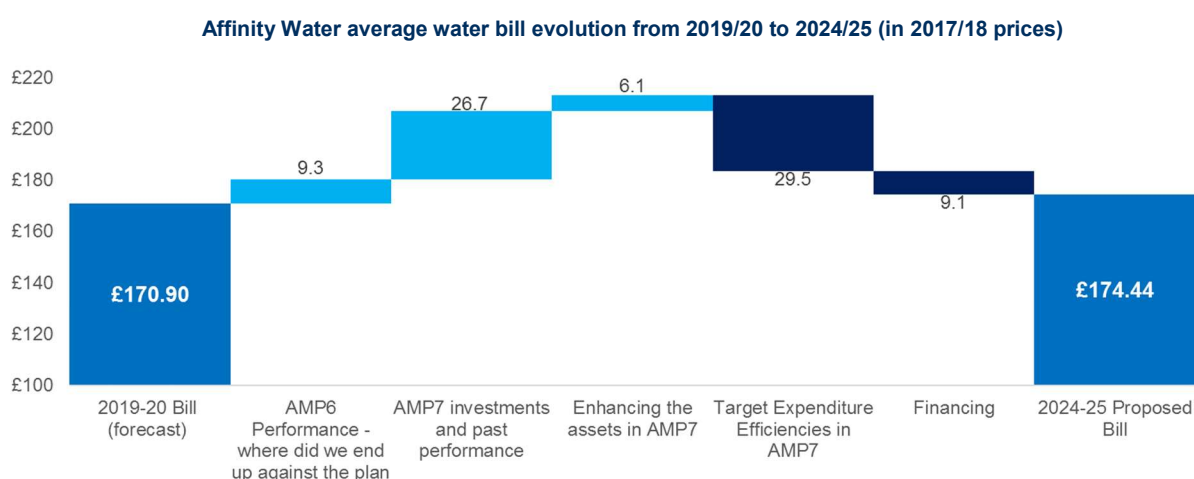


Figure ES1: Bill evolution 2019/20 to 2024/25

- Our Plan means that, on average, household bills will increase by 71p per year between 2019/20 and 2024/25, starting at £170.90 and rising to £174.44, a total increase of £3.54, before allowing for inflation. This equates to a 2.07% increase over the five years, or 0.41% per year, and means that the average bill in 2024/25, without allowing for inflation, will be the same as the average household bill last year, in 2017/18.
- We have tested our proposals with customers. We found that 82% of customers consider the final plan to be acceptable and more than three-quarters find it acceptable for bills to be increased by an extra £3-£5 a year to make sure there is enough water in the future<sup>1</sup>. Most customers can afford their current bills (96%) and could afford the future options presented to them during research surveys (92% and 89%).
- We have compared movements in our average bill with estimates of customers' real household incomes after allowing for housing costs, over the same period. The small

<sup>1</sup> Blue Marble, August 2018, *Affinity Water Resilience Investment, Full Report*



increase in our bills that we have planned for 2020 to 2025 will still represent a declining share of customers' projected disposable incomes.

**Affinity Water average water bills and operating area average weekly household income after housing costs 2011 - 2025 (in 2016/17 prices)**

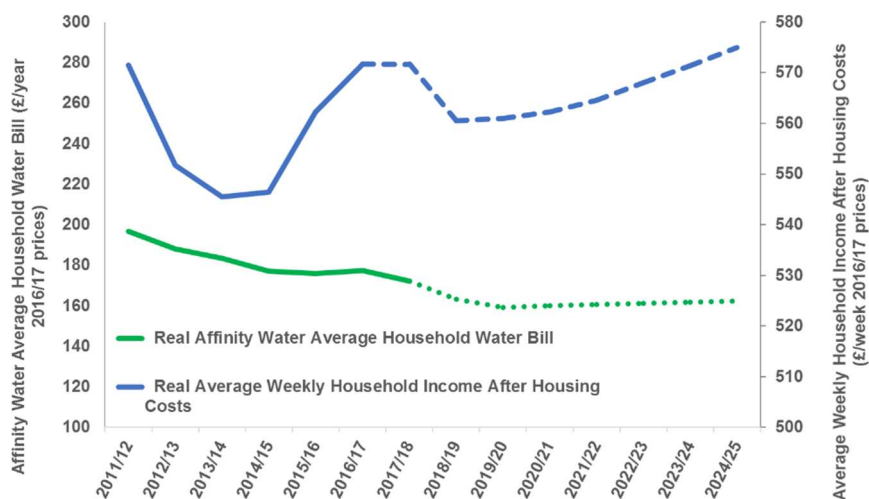


Figure ES2: Comparison of average household water bills and real GDHI

## Challenge and Assurance of the Plan

16. In developing this Plan, we have been challenged and held to account by both our Board and our Customer Challenge Group (CCG). The CCG is an independent group which:
  - Scrutinises and challenges our progress in delivering our current regulated Business Plan between 2015 and 2020
  - Challenges and assesses our engagement with customers as part of the development of this Plan
  - Challenges the company and provides independent assurance to Ofwat on the quality of our customer engagement for this Plan; and the degree to which customer views are reflected.
17. The CCG has done this through regular meetings and engagement with the company during the last 18 months. The CCG has submitted their report alongside this Plan setting out its assessment of our customer engagement evidence base and how this has informed our Plan, including the extent to which customers find this Plan acceptable.
18. The Board has assured itself that our Plan is of high quality, is stretching and delivers for customers, stakeholders and the environment. The Board has also set out how it will oversee and monitor the delivery of this Plan within its Board Assurance Statement.

# 1 About Us

We are the largest water-only supply company in the UK, supplying approximately 900 million litres of drinking water to more than 3.6 million people every day.

We own and manage the water assets and network in an area of more than 4,500km<sup>2</sup> across the South East of England. We operate 94 water treatment works to ensure the water we supply to our communities is of the highest quality. The network of mains pipes through which we distribute water is over 16,600km long.

Our vision is to be the leading community-focused water company. It is underpinned by four Outcomes and 19 Performance Commitments. Our vision reflects the importance we place on our people working within and for the communities we serve. We believe by understanding and responding to the needs of different community groups, we can be accountable to them, at a local level, for how well we provide our services. In turn, we can help customers to understand the true value of water and manage their consumption and our impact on the environment and so help support future resilience of supplies.

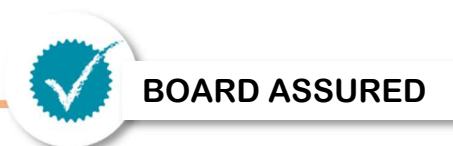
Our supply area brings diverse challenges from: protection of some of the world's most rare chalk streams; to supporting economic and housing growth; providing services to support the country's largest transportation hubs at Heathrow and Dover; tackling diffuse pollution; as well as maintaining high quality, continuous supply to our residential and commercial customers.

Being both the supplier and the steward of a precious, finite resource, we are acutely aware that we need to continue to build trust and legitimacy with customers in their communities. We understand we have a unique privilege to serve our communities and have an important role in supporting, promoting and communicating water conservation messages. We appreciate the importance of the environment from which we abstract water and we will continue to work to reduce the amount of water we abstract from groundwater sources.

Water is vital for public health, and is also essential for economic development. We are fully committed to supporting local economies and regional growth by investing in local infrastructure and assets and continuing to be an important local employer. We employ more than 1,400 people across our supply area and over 70% of them are also customers.

Customers are at the heart of everything we do. We undertake regular research to ensure we know who we are supplying, understand their priorities and to be able to account for their needs. For example, understanding the individual characteristics of customers and differences amongst our communities is vital for things such as, the way in which we communicate, using letters or phone calls rather than emails, to better suit their requirements.

We serve a diverse and wide range of customers. At the highest level, our customer groups are customers who we bill for our service, customers who we provide the water service for, developers, New Appointees, self-lay providers and retailers.



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## 1.1 Our Supply Area

1. Our supply area is divided into eight different geographical communities, based on our existing water resource zones and each named after a local river. This community approach has allowed us to tailor our high-quality service to customers at a more local level.

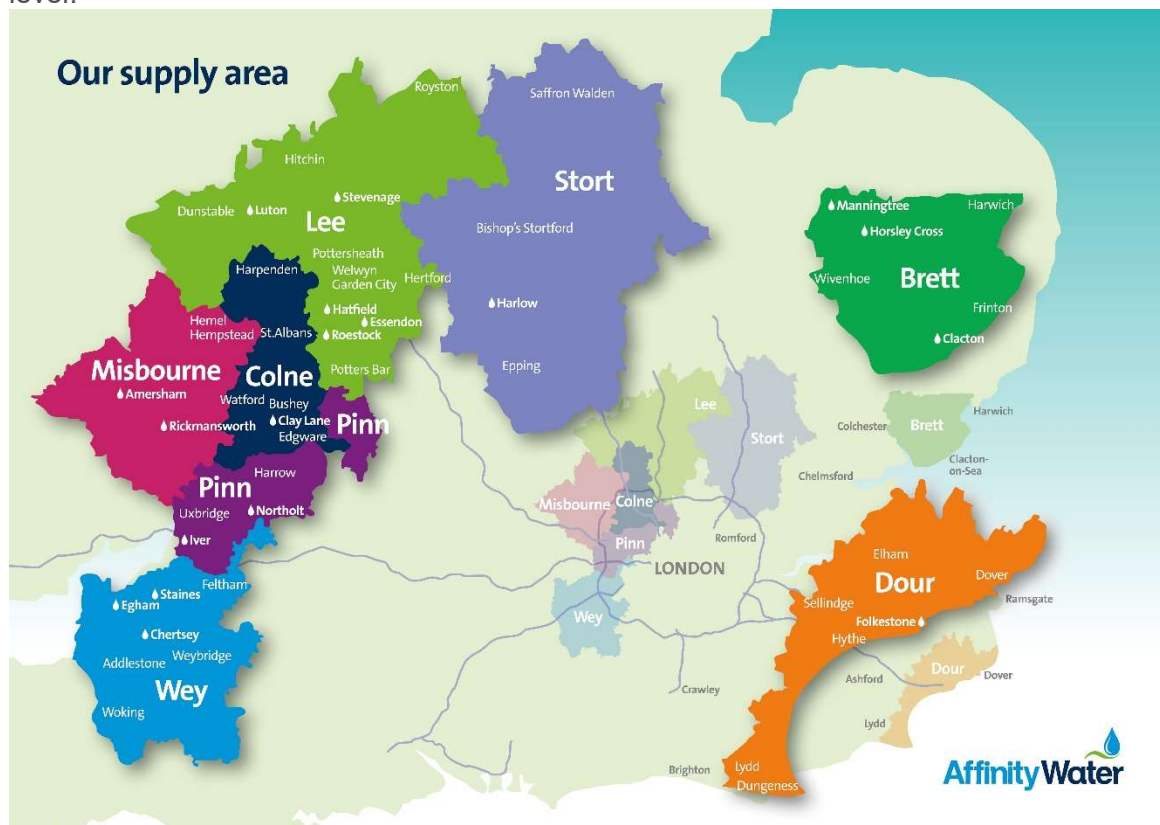


Figure 1.0: The Affinity Water supply area

## 1.2 Our Vision

1. Our vision is to be the leading community-focused water company. It reflects the importance we place on our people working within and for the communities we serve. We believe by understanding and responding to the needs of different community groups, we can be accountable to them, at a local level, for how well we provide our services. In turn, we can help customers to understand the true value of water and manage and reduce their consumption, reducing our impact on the environment and helping to support the future resilience of supplies.

## 1.3 Our Outcomes and Performance Commitments

1. Our vision is underpinned by four Outcomes. These are the areas customers told us matter most to them, both now and into the future. The Outcomes set the strategic context for our business, and in the widest sense set out what we are here to do. The Outcomes remain broadly unchanged from those we introduced in 2015, which reflects the ongoing support from customers for our Business Plan. Those Outcomes we have pledged to deliver are:
  - Supplying high quality water, you can trust
  - Making sure you have enough water, while leaving more water in the environment
  - Providing a great service that you value, and
  - Minimising disruption to you and your community.

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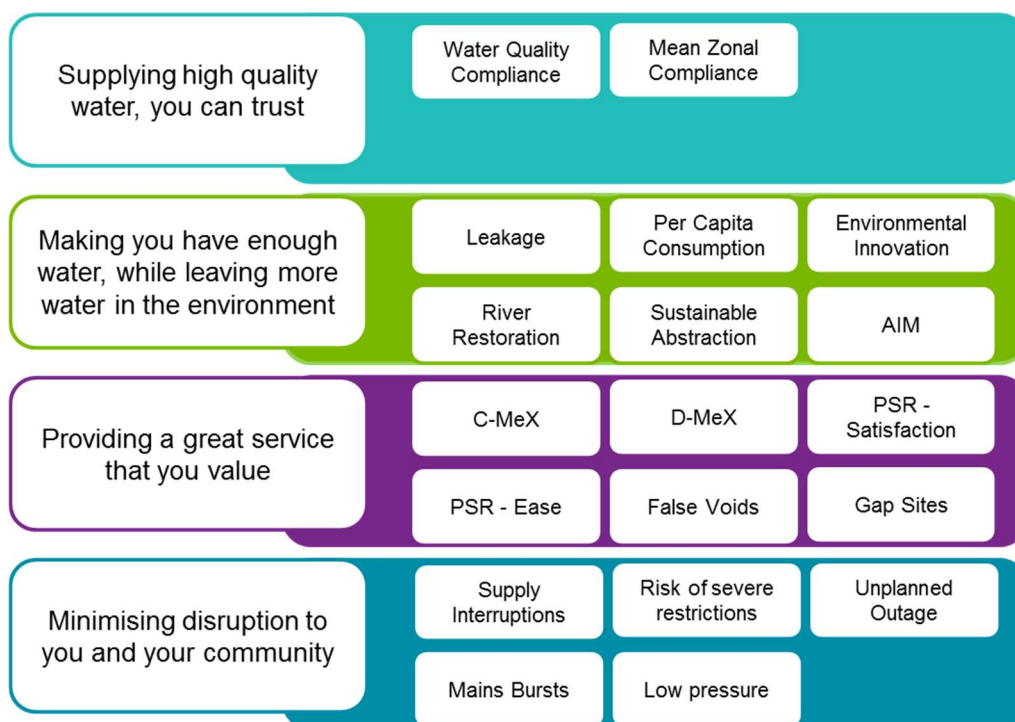


Figure 1.1: Outcomes and PCs for 2020 to 2025

- In developing this Plan we have built on our approach introduced at the last price review. Whilst challenging, our current Plan has kept us at the forefront of the industry in terms of leakage, demand and abstraction reductions, providing a strong position from which we will continue to stretch our ambition and performance. Over the decade, 2015 to 2025, we are making commitments to deliver:

  - 28% reduction in leakage
  - 17% reduction in demand
  - 78 million litres of water per day no longer abstracted, reducing environmental impact
  - 157km of rivers protected through restoration and habitat enhancement
  - expansion of our catchment management programme to reduce the effect of nitrate and pesticide pollution on resources.
- Each Outcome is supported by our proposed Performance Commitments (PCs). The PCs explain the commitments we are making to customers about the service they can expect from us and are listed in the table on the following page. Our Plan includes a total of 19 PCs that will ensure we deliver our four Outcomes.
- We are adopting a partnership approach with our communities, understanding that we are not always best placed to drive change or influence behaviours. We have learned that for interventions to be successful and for us to successfully deliver our Plan we must work more closely with delivery partners and stakeholders who are likely better placed and better informed about the most effective means of engaging and securing change, paving the way for a water resilient future.

Outcomes	Performance Commitments	2020 to 2025 Targets
Supplying high quality water, you can trust	Compliance Risk Index (CRI)	No compliance risks
	Mean Zonal Compliance (MZC)	99.95%
Making sure you have enough water, whilst leaving more water in the environment	Leakage (MI/d)	15% reduction (24.5 MI/d)
	Per capita consumption	13% reduction (18.4 l/h/d)
	Environmental innovation – delivery of community projects	8 community projects
	River restoration	84 projects
	Abstraction reduction	(36 MI/d)
	Number of sources operating under AIM	19
Providing a great service that you value	Customer measure of experience (C-MeX)	These will be comparative industry measures - to be confirmed by Ofwat
	Developer measure of experience (D-MeX)	
	Customers in vulnerable circumstances satisfied with our service	82% satisfied
	Customers in vulnerable circumstances who found us easy to deal with	4.8 on a scale of 1 to 10 (1 best, 10 worst)
	Number of occupied properties not billed (Gap sites)	250 properties
	Number of properties wrongly classified as unoccupied (False voids)	0.3% reduction equivalent to 14,277 properties
Minimising disruption to you and your community	Supply interruptions greater than 3 hours (average minutes / property / year)	Improve from 6 to 3 minutes
	Risk of severe restrictions in a drought	Improve from 43% to 41%
	Unplanned outage (% of production capacity)	3.50%
	Number of burst mains (per 1,000km/year)	186
	Properties experiencing low pressure (average hours / property / year)	8.7 hours

Table 1.0: Outcomes, and Performance Commitments and Targets

## 1.4 Our Owners

1. We are owned by a consortium comprising Allianz Capital Partners on behalf of the Allianz Group, HICL Infrastructure Company Limited (advised by InfraRed Capital Partners Limited) and DIF, an independent and specialist fund management company following acquisition in 2017, as set out in the table below. This change of ownership has brought fully committed, long-term investors to our business, each of which has a demonstrable track record in the investing in critical social infrastructure.

## 1.5 Changes to our business since 2015

Change	Description
Strategy and approach	We have continued to build on our vision to be the 'leading community-focused water company'. We have taken the lead in driving forward regional co-ordination and challenging and promoting new business models. We continue to work collaboratively with our stakeholders, regulators and customers to address industry challenges.
	Since 2015, we have worked hard to build more partnerships both with our stakeholders and within our local communities, helping us to foster a culture of transparency and legitimacy. We are now working more with our peers to better understand how we can address shared issues together in the most efficient way.
	We have insourced some of our key services (including IT, leakage reduction, project delivery and maintenance and repair) and focused on the training and developing of our people in order to strengthen our delivery capability and resilience.
Market Reform	In 2017, we exited the non-household retail market, allowing us to focus on the retail household and wholesale markets. As a wholesaler, we remain active participants in the market and our Wholesale Operations Service Desk frequently tops the league tables in terms of the service it provides to non-household retailers.
Sale of the business	On 19 May 2017 Infracapital and MSIP signed an agreement to sell their 100% interest in Affinity Water Acquisitions (Investments) Limited, which indirectly owned 90% of Affinity Water. As part of the transaction, the buyers also acquired Veolia Water UK Limited's 10% stake in the Affinity Water group. Notwithstanding the sale, we continue to operate as normal, focusing on delivering our high quality service to customers.
Change of Chief Executive Officer	In May 2018, Pauline Walsh became CEO, taking over from Simon Cocks. Pauline joined the business from National Grid where she was Director of Gas Transmission Owner, responsible for building and maintaining the assets of the UK's high pressure national gas transmission system. Pauline has extensive cross sector experience and a strong track record in leadership roles. She has provided a strong strategic influence over the preparation of our Plan for 2020 to 2025.
Change of Chief Financial Officer	Stuart Ledger joined the Board of Affinity Water in October 2017 as Chief Financial Officer. Stuart joined the business from Thames Water, taking over from Duncan Bates. Stuart started his career at EDF Energy and went on to hold a number of senior finance roles. He was the Financial Controller at Wolseley before joining Thames Water in 2008 as the Group Financial Controller. He then became Thames' Chief Financial Officer for Retail in 2013.

Table 1.1: Summary of changes since 2015

## 1.6 Our Customer Challenge Group

- Our Customer Challenge Group (CCG) is an independent group, with an independent Chair. The CCG advises, challenges and supports us to ensure that customer priorities and interests have informed and driven the development of this Plan. The CCG's membership includes representatives from the Consumer Council for Water (CCWater) and the Environment Agency (EA), plus representatives of household customers and special interest groups. We continue to meet with our CCG on a regular basis since it was established in 2012, and much more frequently as we have developed this Plan. More information and the Terms of Reference of our CCG is included in Appendix 3.

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## 1.7 Regulatory Framework

1. The industry in which we operate is rightly subject to extensive legal and regulatory requirements with which we must comply. Details on the water industry regulatory framework and our regulatory partners are included in Appendix 2. The debate over water companies and their regulation and governance has recently been in the spotlight. As an organisation with the aspiration to be the leading community-focused water company, we welcome the challenge this brings.

## 1.8 Understanding customers

1. Customers are at the heart of our business. We listen to and act on feedback every day, we undertake regular research to ensure we know who we are supplying, understand their priorities and to be able to account for their needs. For example, we know that the female/male split is roughly 50:50 with 50.8% female and 49.2% male. This is very similar to the national average in Great Britain (GB) at 50.9% and 49.1% respectively. The age ranges of customers are again all very similar to the national average, with the exception of our Brett and Dour communities where we see a higher percentage of over 55s, 49.1% and 40.9% respectively. Knowing the ages of customers allows us to shape the way we work to better suit their needs.
2. On average, more of customers are in full time employment than the national average apart from in our Brett community, where there is a significantly lower number of customers in full time work. This may be attributed to the greater number of over 55s, suggesting a greater proportion of retirees.
3. Across the board, customers fall into the socio-economic categories similarly to the percentages of the GB national average, AB 26.2%, C1 32.0% and DE with 21.5%, apart from the Dour and Brett communities where there are a significantly higher number of customers in the DE class, 27.9% and 29.4% respectively. With regards to homeowners and renters, again the majority of customers are spread similarly to the Great Britain national average, apart from customers in the Pinn community where there are a significantly higher percentage of renters.
4. The statistics above come the Office of National Statistics data from 2011 census, described in more detail in Appendix 3.

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## 2 Our Track Record

We have made significant progress in the last few years, developing our vision to be the UK's leading community-focused water company, with a view to better understanding and responding to the needs of our different communities.

Delivery of our current Plan, for 2015-2020, has required significant investment in capacity and capability as well as a pronounced shift in business culture embracing the innovation necessary to deliver such an ambitious Plan. To date, we have achieved more than 86% of the targets we set ourselves. We have not had any water quality events which would be classified as 'Major' by the DWI and we have met all related licence obligations.

Our current Plan includes some of the biggest reductions in leakage, demand and water abstraction of any company in the industry and we remain on track, achieving these commitments since 2015.

There are two areas that require improvement. We have not achieved our levels of committed performance relating to supply interruptions and notifying customers of planned interruptions. Our action plan has helped to deliver a significant improvement in performance since Autumn 2017.

We also committed to reducing customer bills by 5% from 2015 to 2020. However, between 2015 and 2025, customers will have seen a 6% reduction in bills. We have aligned our operational Key Performance Indicators (KPIs) to our Performance Commitments (PCs) in response to customer expectations. We want customers and stakeholders to be able to measure our success and hold ourselves to account.

Our health and safety performance continues to improve, ensuring we have been in the top five of the industry league table for the past two years. We have continued to invest in our talent and workforce planning, making full use of the EU Skills Council and Apprenticeship Levy. Our staff are proud to work for a local, community-focused company.

We continue to lead the industry on helping to develop consistent reporting for leakage, PCC and water balance. Not only are we hitting our targets, but the quality of our data is continuously improving, supported by our Water Savings Programme (Metering Programme).

We are leading the regional coordination of water resources in the South East of England and have demonstrated that working together with other neighbouring water companies is a more reliable approach going forward.



**BOARD ASSURED**

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## 2.1 Delivering for customers 2015 to 2018

### 2.1.1 Outcomes and Performance Commitments

1. At the last price review in 2015, we established four Outcomes and set ourselves 13 ambitious Performance Commitments (PCs). Our teams have been, and will continue to be, focused on delivering these PCs to ensure a sustainable supply of water for future generations while meeting the standards of service customers expect today. To date, we have achieved more than 86% of the targets we set ourselves<sup>2</sup>.
2. Delivery of our current Plan, has required significant investment in capacity and capability as well as a pronounced shift in business culture embracing the innovation necessary to deliver such an ambitious Plan. This has helped us meet stretching PCs, particularly in relation to water resources. Our current Plan includes some of the biggest reductions in leakage, demand and water abstraction of any company in the industry and we remain on track, achieving these commitments the since 2015.
3. We have adopted innovative techniques, such as our new reporting system 'WaterNet,' fast-logging, and the installation of 20,000 perma-loggers across a quarter of our network. These have improved our monitoring and response times to leaks. More information on how we will reduce leakage by a further 11 million litres per day by April 2020, is detailed in Appendix 2. We discuss our approach to innovation and how it is driving and shaping our business in Chapter 6.
4. Our reduction in water abstraction from the environment has involved changes in deployable outputs at seven sources across six different river catchments. We have delivered our planned abstraction reductions (42Ml/d) between 2015 and 2020 early, by April 2018.
5. We remain fully focused on tackling our supply interruption performance having missed our PC during the first three years. We explain more about this in section below. We also recognise that although we have won numerous customer service awards and our customer service across SIM, both quantitative and qualitative aspects have improved year on year since 2015, we acknowledge that our SIM score isn't as good as we would like it to be. Our plans to address this are set out in Chapter 7. An overview of performance for 2015 to 2020 against our Outcomes and all 13 PCs is shown in the table on the following page

### 2.1.2 Performance highlights since 2015

1. In addition to our 13 PCs, we have achieved good performance across many areas of our business since 2015. We continue to make significant improvements in a number of important customer service areas, including reducing complaints, introduction of new digital channels and inclusive service for customers in vulnerable circumstances. We have dramatically improved our safety culture and performance, delivered critical business management and intelligence technology and have been recognised for the improvements we have made through industry awards as well as public acknowledgements from Consumer Council for Water (CCWater) and the Drinking Water Inspectorate (DWI).

<sup>2</sup> We have excluded the SIM mechanism from our analysis as this is a comparative measure assessed by Ofwat. We have achieved 31 out of 36 PC's for the years 2015/16 to 2017/18.

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Outcomes	Performance Commitments	Actual 2015/16 to 2017/18	Forecast 2018/19 to 2019/20	Comments
Making sure customers have enough water, whilst leaving more water in the environment	Reduce leakage by 14% - 27 million litres a day A stretching target for reducing leakage in the network to reflect the importance customers place on it	✓	✓	We are investing £505m between 2015 and 2020 to improve our infrastructure and are now achieving levels of leakage lower than we have ever seen before. By 2020 we aim to deliver even greater levels of leakage reduction using innovative technology such as our new reporting system 'WaterNet' and fast-logging, and investing in leading techniques through the installation of 20,000 perma-loggers across 22% of our network, improving our monitoring and response times to leaks.
	Reduce average water use by 7% Supporting customers to enable them to reduce their consumption by offering water efficiency advice and introducing metering for 280,000 households.	✓	✓	Average water use across our region remained broadly in line with our committed performance for the first two years of the Asset Management Period (AMP). In year three, average water use was below our target and we expect it to continue this trend for the remainder of the AMP.
	Improve the water available for use by 4% Increasing flexibility in our network so we can transfer water more effectively around our communities	✓	✓	We have consistently achieved our targets in the last three years and we are therefore confident that our commitments will be met for the last two years of the AMP.
	Abstraction Incentive Mechanism Ofwat will review our sustainability performance and compare this with other water companies	✓	✓	In our latest AIM report, we show that we abstracted an industry leading 3,050 million litres less from the environment for the financial year 2017/18. AIM is a means by which water companies are incentivised to reduce their abstractions from certain environmentally sensitive water sources when river flows are low. Performance is assessed against historic abstraction (1995-2015) when low flow conditions were seen. The AIM scores from all sites are added together, to give a global AIM score for our supply area. This is then compared with the performance of other water companies.
	Sustainable abstraction reductions of 42 million litres a day by 2020 Improving our efficiency in supply and reducing the demand for water enables us to leave more water in the environment	✓	✓	We agreed with the EA to reduce the amount of water we take from environmentally sensitive sites by 42.1 Ml/d between 2015 and 2020 in order to enhance our environment by improving flows and habitats in local chalk streams. This is around 5% of our resource base. We have reduced abstraction in our Beane, Mimram, Hughenden Ver, Gade and Misbourne. catchments. We delivered all our planned AMP6 abstraction reductions (42Ml/d) by April 2018. We have also been instrumental in introducing operating agreements to meet the challenge of groundwater flooding.
Supplying high quality water, you can trust	Compliance with water quality standards Maintaining the high quality of your water by investing in our treatment works, sampling across our network and preserving the quality of our water sources	✓	✓	Mean zonal compliance (MZC) has remained stable, achieving our target, since 2015 and we expect this to continue for the remaining two years.
	Customer contacts about discolouration Understanding and responding to local concerns about water aesthetics	✓	✓	We have consistently outperformed in this area and expect to continue to do so for the remainder of the AMP as we have now completed our mains cleaning projects in our four highest risk zones.
Minimising disruption to you and your community	Unplanned interruptions to supply over 12 hours Targeting investment in strategic mains to limit prolonged disruption to supply	✗	✓	We have failed to deliver our PC for the first three years of the AMP and the number of customers experiencing supply interruptions greater than 12 hours during 2017/18 was particularly high. We take these failures very seriously and have conducted in-depth analysis to understand the underlying cause of failures and have put in place a robust recovery plan. Please see section 2.1.4 for further details of our improvement plans.
	Number of burst mains Investing in our network to maintain service levels	✓	✓	We saw a reduction in burst levels in the first year of the AMP. The extended cold weather of 2016/17 saw an increase in burst levels, but we have remained within our commitments in years two and three. We expect this performance to continue.
	Affected customers not notified of planned maintenance Keeping customers updated when we have to carry out planned maintenance	✗	✓	We have not met our commitments in the first three years of the AMP, but came close in 2016/17 (being only one property away from our target). We have carried out root cause analysis and are already delivering against areas for improvement, meaning we are confident we will achieve our targets for the next two years. Please see section 2.1.4 for further details of our improvement plans.
	Planned work taking longer to complete than notified Effectively planning and carrying out necessary maintenance to our assets to minimise disruption	✓	✓	We have achieved our target each year this AMP and are confident we will continue to do so for the next two years.
Providing a value for money service	Service Incentive Mechanism Delivering a service which meets customers' expectations	See comments →		The service improvement actions we have implemented have not only improved the customer satisfaction scores but also significantly reduced the volume of complaints we receive. We are committed to continuing this trend for the remainder of the AMP.
	Value for money survey Ensuring that we are providing the service which customers and communities value, and that we help those who may struggle to pay	See comments →		2014/15 was taken as a benchmark year and performance since then has remained fairly consistent, although there are significant influences on the index from external, national factors. Our best projection is that the index will be at a similar level for the next two years based on historic trends.

Table 2.0 Performance on our current Outcomes and Performance Commitments

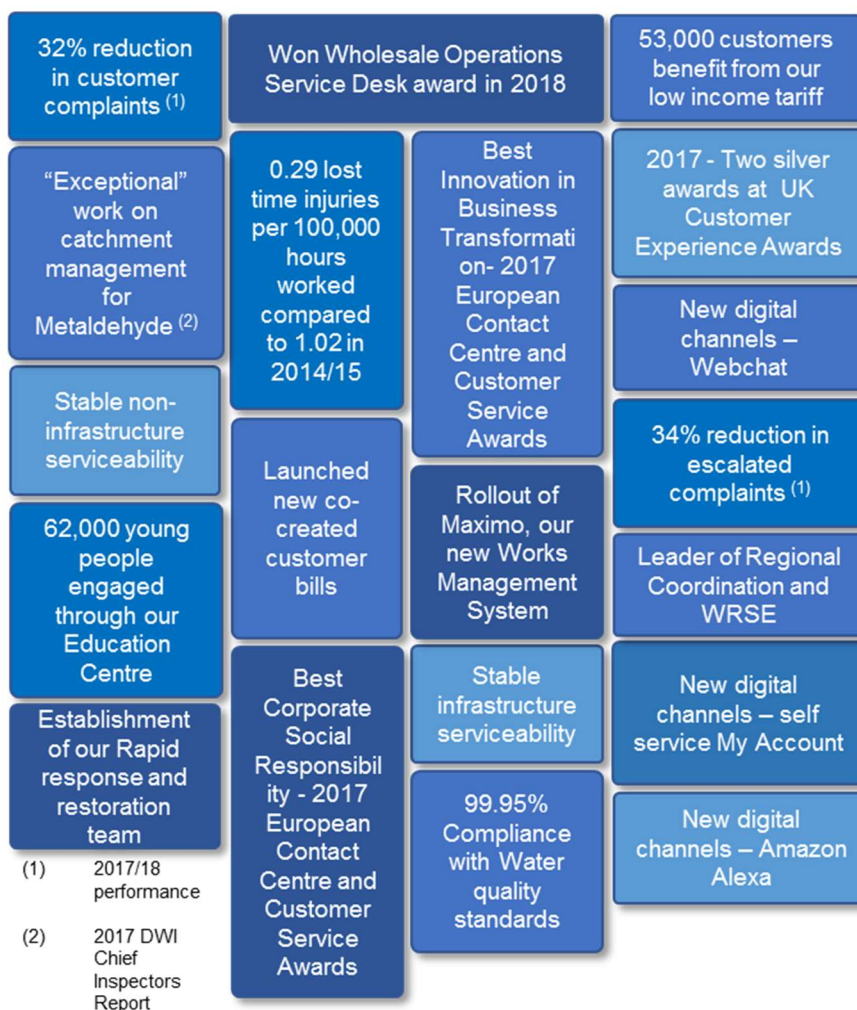


Figure 2.0: Performance highlights of 2015 to 2018

### 2.1.3 Innovation for customers in a digital world

1. Part of improving our operational and corporate resilience was investing in our technology and insourcing our IT delivery. Following this we conducted a review of technology requirements to build capabilities to deliver the right outcomes for customers. Investment in our retail systems began in earnest in 2017. The investment we have made during the last three years gives us a solid foundation and we have been able to utilise the most up to date customer service and technology trends, co-designing and testing our new systems with customers throughout the development stages. This evolution will continue throughout 2020 to 2025.

### 2.1.4 Areas for improvement

1. Overall, we have delivered against the majority of our commitments for the first three years of our current Plan. However, there are two areas that require improvement. We have not achieved our levels of committed performance relating to supply interruptions and notifying customers of planned interruptions. These are discussed in the following sections.

## Supply Interruptions Performance

2. Meeting our supply interruption performance commitment continues to be very challenging and remains a point of emphasis for our Board, who have been active in challenging the development and implementation of our additional operational response plans. Our CCG was also active in the review these plans. We continue to invest in trunk mains and distribution mains, including our 'hot spot' reduction programme, as part of the calmer networks initiative we included in our PR14 Business Plan.
3. Implementation of our additional operational response plans is proving to be effective and since September 2017, we have not breached our target. The post 'Beast from the East' severe freeze/thaw weather incident in March 2018 has been our only significant no water event during this time (see Table 2.1). During the freeze/thaw incident we were able to ensure supply interruptions were identified and mitigated as much as possible, resulting in limited impact to customers, which provides further evidence that our response plans have become more effective. In anticipation of the move to a PC based on a measure of average minutes of interruption per property per annum from 2020, we have been tracking our performance against this measure. We recognise that we still have significant way to go over the next two years.
4. We have established a dedicated improvement team led by an Interruption to Supply Programme Manager, consisting of front line operational managers and senior managers from across the business to deliver a programme of works built around these common themes. Five core work packages have been developed, reviewed and agreed by our Board, as shown below.

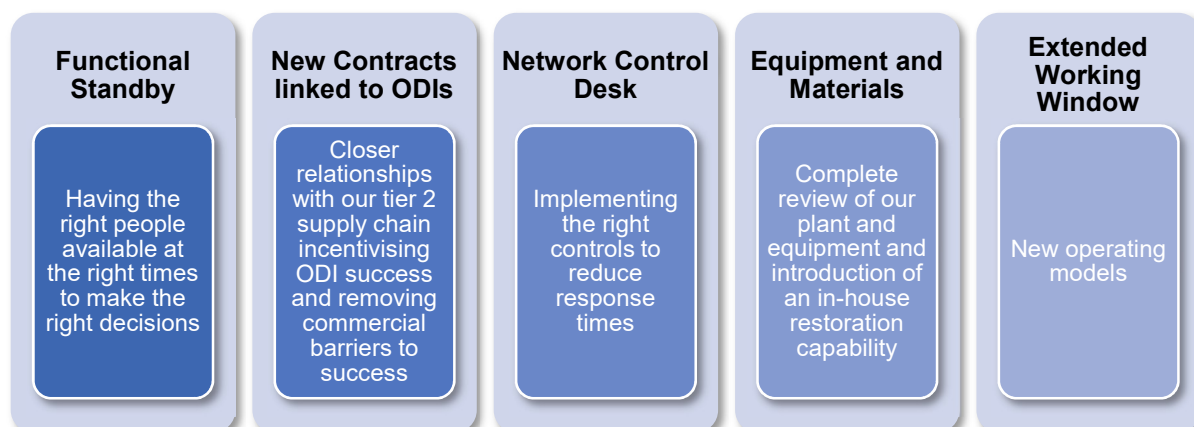


Figure 2.1: Programme and Core Work Packages

5. We continue to make significant progress against these five core work packages set out in the figure above, and described below:
  - Functional standby: The transition to functional standby is being delivered alongside a wider review of our Wholesale target operating model
  - New contracts linked to PCs: Delivery of this work is a key driver for ongoing performance improvement as it will ensure our suppliers are incentivised and aligned to our AMP6 PCs, and will be integral to upcoming contract reviews and awards
  - Network Control Desk: We have established a 24 hours a day, 7 days a week Network Control Desk. The Network Control Desk continues to develop and grow and played a pivotal role in our response to the cold and hot weather events in February, March and July 2018. The team will be able to deliver further benefits as the Network Event Detection Systems (NEDS), Situational Awareness (SA) and other associated projects

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within the Control Vision programme. We have 90% coverage of district meter areas with 15-minute loggers

- Equipment and materials: We continue to strengthen our restoration capabilities with funding being invested in equipment and materials key to the rapid response and restoration of customers' supplies. Equipment, plant and tools required for quick repair and restoration are being stored at new regional hubs across our supply area. We have a new business lead for rapid response and restoration with two managers and thirty-three field technicians who are dedicated to delivering restoration of water supplies during an incident. In July 2018, they began their new standby roles delivering a 24 hours a day, 7 days a week, restoration capability
- Extended working window: Delivery of changes to terms and conditions has now transitioned to our project delivery team and will be completed in 2018/19.

6. Against these core work packages, we set out a 43-point plan covering the more detailed project delivery programme. Appendix 2 gives a status update of this plan. Progress is tracked through regular steering groups and is reported to our Executive Management Team (EMT) and Board each month. Our cumulative unplanned supply interruptions (minutes per property) for 2017/18 is shown in the graph below. The progress we are making will not only help us achieve our current PC but support the move towards the common PC for supply interruptions from 2020.

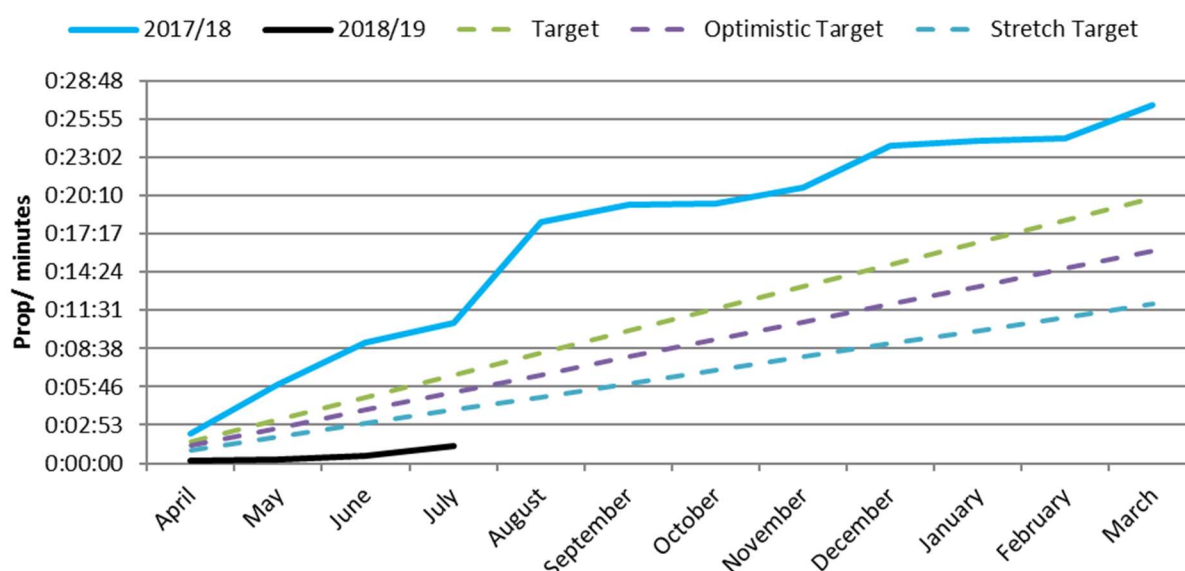


Figure 2.2 Cumulative unplanned supply interruptions (minutes per property 2017 to 2018)

## Customers Not Notified of Planned Interruptions

7. We have missed our target of affected customers not being notified of planned interruptions in the first three years of AMP6. Following a detailed review, we identified that the majority of these failures fall into two main categories; an issue with the customer's boundary stop tap, following a meter installation or a planned network isolation affecting more customers than planned as a result of our Geographical Information System (GIS) not representing the actual configuration of the network.
8. Our teams are tasked and measured on the updates they provide to our GIS team when any anomalies are found. We have systems, both office and field based, that allow notification. Our GIS support team reports on the number of updates made. The potential inaccuracy of GIS has been added to method statements for planned works and



contingency plans put in place. Toolbox talks for all relevant teams are taking to raise awareness of all these issues throughout the year to maintain focus. We are already seeing performance improvements as a result of these initiatives, for both supply interruptions and customers not notified of planned interruptions.

## 2.2 Performance on major incidents 2015 to 2018

### 2.2.1 Major operational incidents

1. Events are reported to Defra as required in the Event Notification to Defra (2017). This covers water supply related risks to cyber security, physical security and personal security under Security Emergency Measures Directive 1998 (SEMD).
2. The table below lists the major operational incidents that have occurred since 2015. More detail on these incidents including our performance, key learning and plans of action are detailed in Appendix 2.

Month	Incident	Incident details
July 2015	Egham WTW	Burst on a single point of failure within the treatment works. Our site-specific contingency was enacted immediately in order to minimise customer impact. Such sites include as a matter of course contingency plans and are subject to SEMD audits. Alternative water supplies were provided to customers.
June 2016	Edgware Road	Burst on a trunk main in north London. Alternative water supplies were provided to customers.
October 2016	Ottershaw Burst	Burst on a trunk main in Surrey in an area which was also undergoing significant mains renewals (planned replacement work) making re-zoning more complex. Alternative water supplies were provided to customers.
February 2017	Arkley Reservoir	Burst on a trunk main which part-emptied a strategic reservoir feeding the north London area. Alternative water supplies were provided to customers.
August 2017	Baldock Burst	Burst on the outlet of a reservoir in Hertfordshire with a health and safety risk delaying repairs. Alternative water supplies were provided to customers.
March 2018	Freeze Thaw Event	Significant weather impact across our supply area resulting in very low strategic storage levels and a significant increase in the number of bursts with localised customer impacts.

Table 2.1 Key operational events

3. We are working to continually improve the resilience of our business. For more information on this topic, please refer to Chapter 9.

### 2.2.2 Water quality events since 2015

1. We have not had any water quality events which would be classified as 'Major' by the DWI. We have also not experienced any Environment Agency (EA) Cat 1 pollution events and we have met all related statutory licence obligations.
2. Events are reported to the DWI as outlined in the Information Direction 2017 and cover quality and sufficiency aspects which could have the potential to impact public health. In future, the way that we manage such events will be incorporated into a new DWI metric – Event Reporting Index (ERI), which will look at populations impacted, the period of time

normal supplies were unavailable, the severity of the impact on public health and how we manage the event.

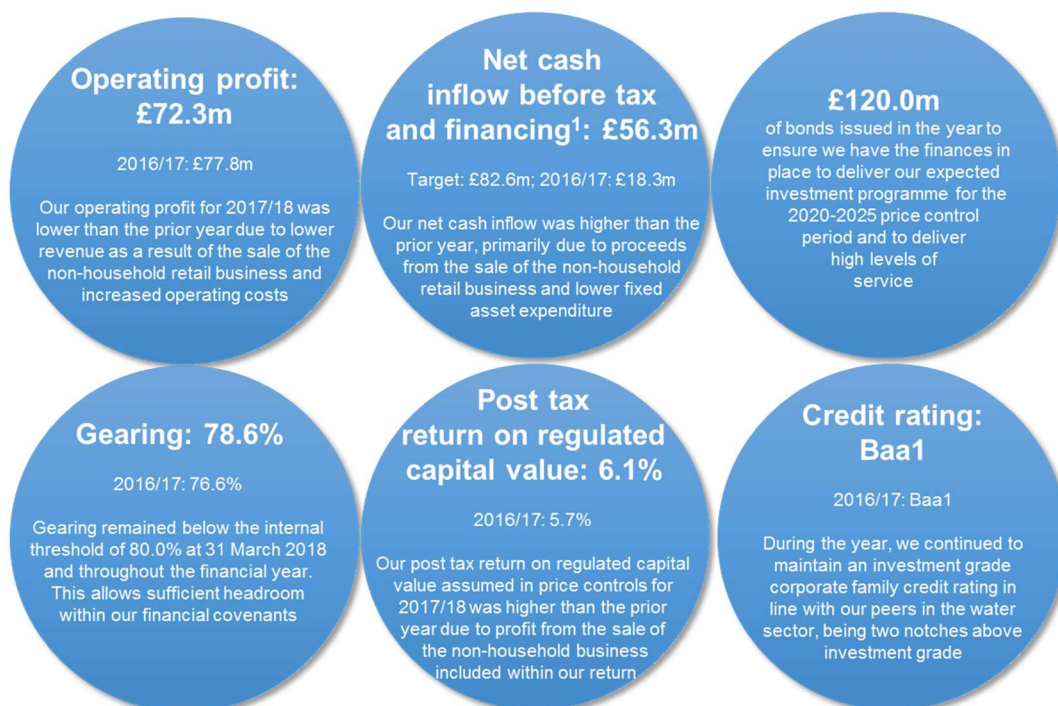
### 2.2.3 Customer liaison during incidents

1. We know how critical it is to ensure customers and stakeholders are kept informed during incidents. We dedicate two members of our Emergency Response Team (ERT) purely to managing customer relationships. The Operational Customer Manager covers both household and non-household liaison and the External Relations Manager ensures our key stakeholders (e.g. MPs, schools, Local Authorities etc.) are all aware of the issue. The team use all available media channels to communicate in advance (where possible), both during and after an event, handling all escalated issues with a direct reporting line to the Emergency Controller for a prompt response.
2. The freeze/thaw incident during March 2018 demonstrated the effectiveness of our response. In particular, we were commended by Ofwat for the detailed information we held on customers in vulnerable circumstances who were impacted. During the incident, we ensured we maintained our focus on providing information proactively as well as responding to any questions or concerns raised via the numerous communication channels we have with customers. Key to providing this focus was our resource planning and the fact that senior managers from our Customer Operations and External Communications teams were part of our Emergency Room Team's Cabinet. These factors ensured that our Emergency Team coordinating our response was kept informed of what customers were telling us, and we could formulate consistent and timely responses accordingly.
3. Our methods of communication with customers during incidents are extensive, reflecting a variety of different channels:
  - Customer phone contact
  - Our website
  - Social media
  - Local media, national media
  - Direct stakeholder briefing.
4. We use our Priority Services Register and mapping system to locate customers who require immediate additional support and also co-ordinate with retailers and local resilience forums. Additionally, if a customer contacts us during the incident to advise that they need extra support, potentially due to a transient need, this information is provided to our Despatch desk to liaise with the customer and service their needs.

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## 2.3 Financial performance

### 2.3.1 Financial highlights



<sup>(1)</sup> This "non-GAAP" measure is calculated for 2017/18 as the total of the following line items per the statement of cash flows (refer to page 111): cash generated from operations; purchases of property, plant and equipment; capital contributions; proceeds on disposal of property, plant and equipment; proceeds on disposal of non-household business; and purchase of intangibles. The 2016/17 figure is as reported in the annual report and financial statements for the year ended 31 March 2017.

1. Challenging operational events causing disruption on our network, have impacted our financial performance. In particular the severe weather event in early March 2018 led to additional expenditure being incurred to ensure interruptions to supply were minimised and we have needed to our production teams flat out over the summer to respond to record levels of demand during one of the hottest and longest heatwaves on record. We have continued to invest in our assets during the year to improve the resilience of our network.
2. Given the capital-intensive nature of this industry, coupled with the need for new investment, and its importance for our customers and communities, we strongly agree that companies in our sector should be financially resilient in the round, and able to withstand shocks and stresses, refer to Chapter 9 for more detail. During the year we further enhanced our financial resilience through raising the funds required to deliver our expected AMP7 investment programme.

### 2.3.2 Wholesale business

1. We have recovered more wholesale revenue compared to our allowed determination due to increased grants and contributions received following a significant increase in new connection work since 2015. The volume of this work reflects improvements in the wider economy, which have been pronounced during 2017/18, particularly in terms of the house building market.
2. In 2017/18, non-household customer demand was higher than anticipated in our Business Plan. Following Market Reform and the opening of the non-household retail market in April 2017, new reports of billing/volume data have been created by the Market Operator in accordance with the operating code of the market. Non-household volume data within

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these reports include estimates that will not be 'firm' until sometime after the end of any billing period. This means an inherent additional uncertainty in non-household wholesale revenue while the market and billing/volume data settles over time through to a full and final reconciliation. This issue will improve once the length of the billing record has several read cycles to assess volumes in a specific period.

3. Because of the way the regulatory price setting framework works, the two issues described above impact on future wholesale revenue and customer bills. This Plan includes a proposal to mitigate the consequences of this impact on customer bills by avoiding unnecessary bill volatility between 2019/20 and 2020/21. Details of our proposal are included in Chapter 10.

### 2.3.3 Retail business

1. Retail revenue since 2015 has been significantly lower than our assumptions in our PR14 Business Plan. This is due to lower numbers of customers on measured tariffs than anticipated. To minimise the impacts to customers of a changing bill value following a meter installation, we allow customers a two-year period in which to switch tariffs to measured charges, starting from the date of their meter installation. During this period, we continue to read meters and send comparison bills to customers, to encourage water savings and so bear the cost of serving a metered customer. When setting tariffs, however, we are only allowed to take into account incremental measured revenue on customers who have switched tariffs. This was not anticipated at the last price review and has resulted in a large reduction of retail revenue as we are not able to recover the additional costs of customers who have a meter installed but are not yet on a measured charge. To date this has impacted, 130,000 customers who have a meter installed but are not yet on a measured tariff, resulting in a shortfall of £2.3m since 2015, with a further shortfall of £2.2m anticipated for the period to 31 March 2020.
2. The second part of the shortfall in retail revenue relates to 2015/16, where we underestimated the initial number of customers who would take up our social tariff, when setting tariffs for the year. This resulted in a shortfall of £1.2m compared with the amount recovered from the remaining customers in 2015/16. We anticipate this to be recovered via the 'midnight adjustment' heading into the next five-year period from 2020/21.

### 2.3.4 Further information

1. Appendix 2 provides more information on a number of important topics including financeability and gearing, analysis of our total expenditure (Totex), taxation and dividends as well as accounting for grants and contributions under new Financial Reporting Standards (FRS).
2. We have included information relating to our financial performance against the 2014 Final Determination from the last price review in Appendix 2. This is information we are required to provide to Ofwat to demonstrate how our actual performance from 2015 to 2020 is different to that assumed at the previous price review and helps Ofwat to set price controls at this price review. We are required to complete a number of data table submissions known collectively as the 'PR14 Reconciliation'. These submissions include revenue adjustments from ODIs and water trading incentives.

## 2.4 Our forecast performance 2018/19 to 2019/20

1. Since 2015, our operational business has gone through significant development in order to strengthen our delivery capability and capacity. This gives us confidence to deliver our

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PCs during 2018/19 to 2019/20 as part of a seamless transition into the next five-year period.

2. Table 2.0 shows that we are on target to meet our Performance Commitments over the last two years of AMP6. Further information surrounding forecast performance can be viewed in Appendix 2.



### Deliverability Statement

*“We continue to make significant progress in delivering our current plan and have demonstrated our ability to tackle adversity and challenges such as the freeze/ thaw in March 2018 and the prolonged summer heatwave. We have specifically targeted areas where we have needed to improve as part of a wider programme of business transformation. We have made changes to our supply chain to achieve greater control and ownership, invested in our talent and workforce planning and strengthened our capability. This has helped to position us well for the next two years, and more importantly, to get us ready for the challenge of delivering a tough, stretching plan for 2020 to 2025.”*

**Chief Executive Officer**

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## 2.5 How we have addressed Ofwat's four Price Review themes

### Great customer service

We have won four customer service awards, introduced new digital channels for customers to use to contact us and seen a reduction in the number of complaints we receive. We have delivered a significant volume of training and development to ensure our people are fully equipped to deal with customers in different circumstances including workshops for our Customer Advisers in partnership with Dementia Friends.

### Affordable bills

We have been able to offer support to over 50,000 customers through our Social Tariff. We have worked with our supply chain to review and renew contracts, ensuring we receive the most cost-efficient service that has been fully market tested.

### Innovation

We have had some great success with innovation this year. Our self-serve solution, MyAccount, is Amazon Alexa enabled. In response to our leakage challenge, we have installed perma-loggers across our network. We pioneered and implemented fast-logging to transform leakage management.

### Long term resilience

We're building a more resilient business for the future by bringing more services back in-house and ensuring our own people are equipped to deliver against our commitments. We're also focusing more on ensuring our people have access to the training and tools they need to do this

We delivered our AMP6 sustainability reductions ahead of schedule, contributing towards a more resilient environment.

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### 3 Listening to Customers and Stakeholders

Our approach to customer engagement at PR14 was built on our experience of working with customers and the community. At PR19, we strengthened our targeted engagement to ensure we heard from as many different types of customers and stakeholders as possible. We have used a range of approaches, both qualitative and quantitative, to gather, test and value opinions and preferences. This focused activity complemented our wider ongoing dialogue with customers and stakeholders.

Our six-phase programme provided a structured, flexible framework that included end of phase reviews known as Triangulation. This iterative approach, with clear feedback loops, gave us confidence that emerging issues could be shared with our CCG and considered during the business planning process.

Our CCG were heavily engaged throughout our programme; we sought their advice on the initial design of the programme and invited challenge throughout. We thank the CCG members for their time to attend meetings including CCG sub working groups, attending focus and stakeholder groups, reviewing engagement materials and the level of challenge they provided.

The overall programme has delivered representative findings from across our communities that have been used to inform our future plans to 2025 and beyond. We have tested our Plan and can show that it delivers Outcomes and PCs which customers support, at a price they are willing to accept. Evidence from our engagement is used throughout this Plan to demonstrate how customer and stakeholder views have shaped and influenced our proposals. Throughout our programme, we have found out what is important to customers and stakeholders. These findings were used to inform our business planning process. In particular:

- we confirmed that customers and stakeholders still supported the Outcomes developed at PR14. We changed the order to reflect customer priorities with 'supplying high quality water, you can trust' being the most important<sup>3,4</sup>
- we developed a simplified list of PCs, to help to communicate our commitments to customers and stakeholders more clearly
- we used findings to confirm PC levels and ODIs reflecting strong customer and stakeholder support for reducing leakage. 71% to 73% of customers would find it acceptable for £0.50 to be added and around £4 per year to be subtracted from bills for beating or failing to meet our targets<sup>4</sup>
- we found that 82% of customers consider the final plan to be acceptable and more than three-quarters find it acceptable for bills to be increased by an extra £3 - £5 a year and 84% for them to be increased by £1 - £2 a year to make sure there is enough water in the future<sup>5</sup>.



**BOARD ASSURED**

<sup>3</sup> Blue Marble, July 2016, *Pre-SDS consultation on-line survey*

<sup>4</sup> Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

<sup>5</sup> Blue Marble, August 2018, *Affinity Water Resilience Investment, Full Report*

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### 3.1 An overview of our engagement programme

1. Our Engagement Strategy<sup>6</sup>, which was designed to deliver the objectives below, can be found in Appendix 3.

Objectives
We will understand customers as well as their worlds and priorities; moving toward greater granularity and personalisation on the insights we collect.
We will engage with more customers than before, and with more types of customers.
We will use a wide range of methods and techniques; picking the right tools for the job, to allow us to demonstrate a two-way and ongoing dialogue with customers.
We will innovate through evolution and iteration; learning from previous engagement activities and embedding a continual learning loop into our work.
Our engagement will be honest and realistic; we will ensure we present customers with real choices, and we will provide customers with feedback on how their views have influenced our Plans and the way we do business.
We will start our engagement with an outline programme designed from the start, and deliver all activities in a structured but flexible way.

Table 3.1 Objectives of our customer engagement programme

2. Our approach to engagement with customers and stakeholders has been built upon our programme of engagement at the last price review. We designed and delivered our customer engagement programme through a multi-phased approach with six phases that corresponded with the phased development of our Business Plan and dWRMP. Our phased approach allowed us to maximise our learning within the phases. The triangulation process, at the end of each phase, enabled us to evaluate what we had found out from all of our evidence and define our objectives for the following phase. This outline process is illustrated in Figure 3.1 below.

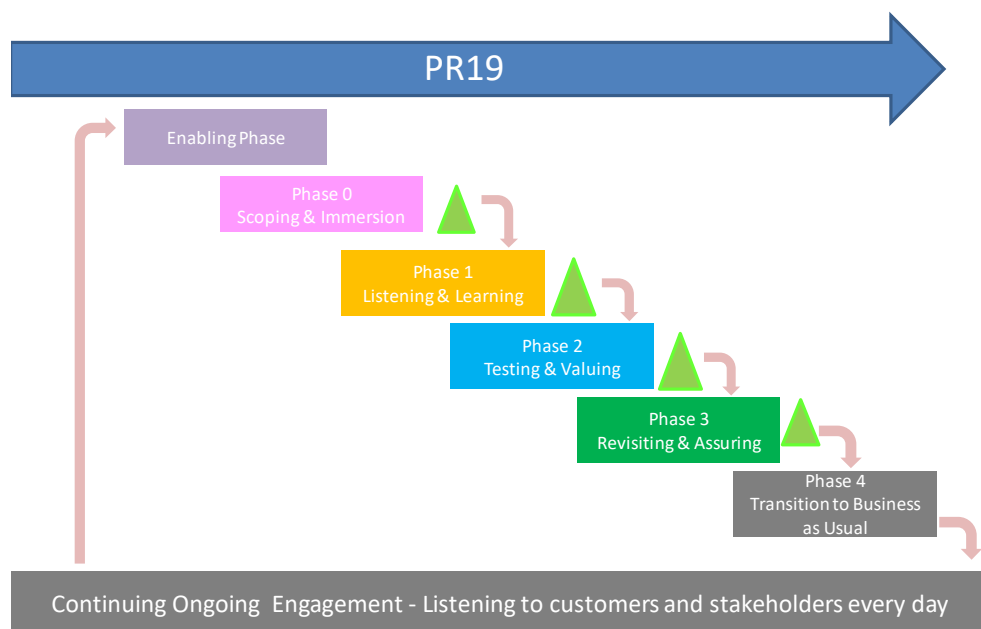
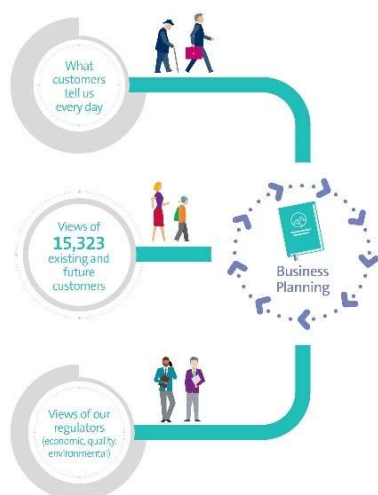


Figure 3.1 Phases of our engagement programme, including triangulation depicted by green triangles

<sup>6</sup> Affinity Water / Arup (2017 updated 2018) Engagement Strategy

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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3. We built on our approach at PR14 by starting earlier with two additional phases, Enabling and Phase 0. We enhanced our engagement by utilising new methods and tools such as ‘step-boards’ and on-line discussion to provide a two-way communication platform that included blogs with Executive Management Team Directors.

4. To support engagement, we appointed the UK’s second largest market research agency, Ipsos MORI, to work with us to deliver our customer engagement programme. The programme included bespoke market research, recommendations for customer segmentation, analysis of operational customer contact data and triangulation.

5. Each piece of research was carefully scoped to ensure we defined the objectives and considered the materiality and significance of the issues to be addressed. This informed the approach we took to ensure the sample size and methodology chosen were both appropriate and proportionate to the importance of the issue. We recognised the need to segment customers and stakeholders, when testing hypotheses, and to disaggregate findings to ensure we identified any significant differences.

6. The challenges of taking the sometimes-conflicting needs and expectations of customers and stakeholders into account were addressed in triangulation. We developed a comprehensive triangulation tool<sup>7</sup> incorporating inputs from three key sources: bespoke market research, customers’ and stakeholders’ views from operational contact data; and broader economic and other research, including input from neighbouring water companies. This approach ensured we fully explored all the underlying customer and stakeholder requirements and priorities as well as those picked up through research. We aligned our triangulation approach to CCWater guidelines<sup>8</sup> and sought a review of our methodology from our CCG. More details are included in Appendix 3. The output from triangulation delivered areas of corroboration, areas of contradiction and recommendations for further activity in subsequent phases.
7. We engaged directly with over 15,300 current and future customers, stakeholders, developers, new appointees, self-lay providers and retailers, and listened to our regulators to understand their priorities and expectations.
8. We listen to customers every day and have included case studies to demonstrate this in Appendix C Data Strategy. We have reviewed the insights from our daily contact<sup>9</sup> with customers, over five million contacts over a nine-month period. We have evaluated customer research on industry related issues and made use of best practice findings from other water companies and examples from outside the sector.

<sup>7</sup> Arup (2018) *Triangulation Tool*

<sup>8</sup> ICF (2017) *Defining and applying ‘triangulation’ in the water sector, for CCWater*

<sup>9</sup> Arup (2017, 2018) *Operational Data Report, Phase 0 and Phase 1*

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## 3.2 Understanding the context

1. We take into account, the context in which engagement takes place, when gathering, analysing and using findings. Our Value for Money tracking survey compares responses for the last four years<sup>10</sup> and we have seen that changes in satisfaction can be linked to wider political factors, such as Brexit, extreme weather conditions and media coverage of issues within the industry.
2. The macro trends we have considered are covered in more detail in Appendix 3. We concluded that:
  - the reliability and quality of the UK's water supply is taken for granted and is considered good value for money when compared with other utilities
  - overall satisfaction with water services is high and most customers have not experienced problems
  - customers believe that protecting the environment is important, nationally and locally
  - customers, especially future customers, expect a level of response similar to that which they would experience from interactions with social media
  - customers relate more to local issues, especially interruptions
  - severe weather events (cold, flood etc) can affect satisfaction
  - socio-economic trends and media coverage of economic anxiety can modify customers' outlook
  - customers' perception is that bills are always increasing (even when they are not)
  - customers are more concerned about Brexit than about their water supply
  - there is reducing confidence in the industry at a national level.

## 3.3 How engagement has informed our Business Plan

1. The following sections show the customer insight objectives, activities and conclusions from each phase and summarise the outputs from triangulation. They show how the results informed the subsequent phase. Further detail on the phase and outputs are included in Appendix 3 section 4.

### Phase Enabling (pre-June 2017)

Customer Insight Objectives	Activities
<ul style="list-style-type: none"> <li>- Understand and review experiences from PR14</li> <li>- Understand new, updated regulatory requirements</li> <li>- Understand and evidence whether the four outcomes from PR14 were relevant and reflected customers' priorities</li> <li>- Consult with customers on our Drought Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>- Tested customer views on the existing four Outcomes developed for PR14 with an online <sup>11</sup>survey of 503 representative customers.</li> <li>- Completed an online survey with 300 purposefully recruited customers for feedback on our Drought Management Plan<sup>12</sup>.</li> <li>- Developed our engagement strategy for PR19.</li> </ul>
Customer Insight Conclusions	
<ul style="list-style-type: none"> <li>- We received a high mean score rating (8 or more out of 10) for all four Outcomes. From this early research<sup>10</sup>, we concluded that there was high level of support for the inclusion of each of the four Outcomes in our future plans; they continue to be relevant priorities for customers.</li> </ul>	

<sup>10</sup> Blue Marble (May, 2018) Value for Money 2017-18

<sup>11</sup> Blue Marble, June 2016 *Pre-SDS Consultation Online Survey*

<sup>12</sup> OPM, April 2017, *Affinity Water Drought Management Plan Survey*

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- Of the four Outcomes, 'supplying high quality water, you can trust' was clearly considered to be the most important Outcome (ranked first by 54% of customers) followed by 'making sure customers have enough water whilst leaving more water in the environment'. We have reordered the customer Outcomes to reflect these priorities<sup>10</sup>
- The majority of people try to use water wisely, regardless of whether there is a drought and a third would try to reduce the amount of water they use in a drought<sup>11</sup>
- Most people felt Temporary Use Bans should apply to all customers equally; be imposed no more than once in every 10 years and would rather experience these restrictions than see their water bill increase<sup>11</sup>
- Almost two thirds of respondents thought that imposing drought orders no more than once in every 40 years is acceptable and would rather experience Drought Orders than see bills increase<sup>11</sup>
- The majority felt it is important to save water for the sake of the environment and future generations<sup>11</sup>.

Table 3.2 Objectives, activities and conclusions of the Enabling phase

## Phase 0: Scoping and Immersion (September 2017 to December 2017)

Customer Insight Objectives	Activities
<ul style="list-style-type: none"> <li>- Review our vision, objectives and ambition for engagement</li> <li>- Review our approach to customer engagement at PR14 and lessons learnt</li> <li>- Build on existing work in preparation of the PR19 programme</li> <li>- Build internal governance structures to deliver engagement services</li> <li>- Review Ofwat requirements for PR19</li> <li>- Understand all potential sources of operational contact data</li> <li>- Develop the engagement programme</li> <li>- Identify themes for initial engagement</li> <li>- Explore customers' and stakeholders' issues and concerns; and start the conversations</li> <li>- Carry out triangulation and learning to inform Phase 1</li> </ul>	<ul style="list-style-type: none"> <li>- Designed, developed and started delivering our multi-phase programme of engagement, building on the approach from PR14</li> <li>- Confirmed our objectives for the programme and gained Board support</li> <li>- Tested new approaches and gathered unprompted views and feelings from customers including: <ul style="list-style-type: none"> <li>o ethnographic interviews with 15 household customers<sup>13</sup></li> <li>o 16 focus group sessions using the 'signpost post' to start the conversation drawing out opinions and views using comparative industry data on leakage, PCC and bill levels<sup>14</sup></li> </ul> </li> <li>- Interrogated our operational data to look for trends, similarities and differences.</li> <li>- Evaluated other research and reporting (including those not specifically commissioned for PR19) and reviewed recent publications, such as Ofwat's draft PR19 methodology and CCWater's report on triangulation.</li> </ul>
Customer Insight Conclusions	
<ul style="list-style-type: none"> <li>- Customers recognise the essential nature of the water service</li> <li>- There is a lot of disengagement about water, it's considered "boring" and not often thought about</li> <li>- Water quality and resilience are not 'top of mind' for most customers</li> <li>- It takes time for customers to make the connection between water use and the environment</li> <li>- Water is generally considered affordable, particularly when compared to other utilities</li> <li>- There is an opportunity for increased engagement</li> <li>- Customers engage with us via a variety of channels</li> </ul>	
Actions from Triangulation that informed Phase 1 <sup>15</sup>	
<ul style="list-style-type: none"> <li>- We completed our first Triangulation exercise and identified the performance commitments and associated themes to investigate further in Phase 1 including: <ul style="list-style-type: none"> <li>o Customer views on water quality, leakage, the environment and resilience</li> </ul> </li> </ul>	

<sup>13</sup> Ipsos MORI, July 2017, *PR19 Customer Engagement Phase 0 Ethnographic Interviews Research Report*

<sup>14</sup> Create 51, August 2017, *PR19 Engagement Pre-SDS Focus Group Research Report*

<sup>15</sup> Arup/Ipsos MORI, October 2017, *Affinity Water Customer Engagement Programme Triangulation Report Phase*

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- Customer views of our proposed PCs and target levels
- How customers feel about vulnerability and affordability
- How we should further segment customers to ensure we reflect everyone's needs; such as customers who see themselves as vulnerable, future customers and those who had interruptions to their water supply.

Table 3.3 Objectives, activities and conclusions from the Phase 0 – Scoping and Emersion

## Phase 1: Listening and Learning (January 2018 to March 2018)

Customer Insight Objectives	Activities
<ul style="list-style-type: none"> <li>- Identify and explore issues, attitudes and opinions from customers</li> <li>- Gather further information about customers' expectations of their water service provider</li> <li>- Consult with specific customer segments, including those who have been disrupted by interruptions to their supply and customers in vulnerable circumstances</li> <li>- Engage with stakeholder groups to enhance our understanding</li> <li>- Consult on our Drought Management Plan</li> <li>- Explore operational contact data, drawing on multiple sources to help us understand why customers get in touch</li> <li>- Triangulate findings from the different engagement activities and operational data findings to confirm priorities, and ultimately help finalise our PR19 PCs</li> </ul>	<ul style="list-style-type: none"> <li>- Recruited an on-line community of 2,000<sup>16</sup> customers and gathered their views and opinions over a five-month period. We: <ul style="list-style-type: none"> <li>○ Tested their views and opinions on their water service in five surveys</li> <li>○ Asked quick questions on nine different issues</li> <li>○ Built discussions using 'step boards' on four different issues</li> <li>○ Shared five blogs and stories to explore issues in more detail</li> </ul> </li> <li>- Co-created events with an environmental charity, Hubbub<sup>17</sup></li> <li>- Held customer and stakeholder events linked to our Drought Management Plan</li> <li>- Held stakeholder workshops to gather the views of groups, individuals and community leaders to corroborate customer engagement findings<sup>18</sup></li> <li>- Held face-to-face interviews with customers in vulnerable circumstances or who had experienced an interruption to their supply<sup>19</sup></li> <li>- Surveyed a representative cross-section of 500 customers about their views on our social tariff<sup>20</sup></li> <li>- Explored and analysed operational customer contact data and identified why customers make contact</li> <li>- Analysed industry research and fed relevant observations into Triangulation</li> </ul>
Customer Insight Conclusions	
<ul style="list-style-type: none"> <li>- Water is considered essential by customers – however, they pay less attention to water relative to energy and communication utilities</li> <li>- Water supply is reliable in customers' eyes - resilience is taken for granted</li> <li>- Tap water is trusted, seen as safe and clean</li> <li>- Customers consider themselves 'average' and 'efficient' in terms of water consumption – with little means to compare themselves to others</li> <li>- Minimising leakage is thought to be a key part of the 'contract' between company and customers</li> <li>- There is an appetite for additional investment to reduce leakage further</li> </ul>	

<sup>16</sup> Affinity Water, January 2018, *Triangulation and Validation of our phase 1 Customer Engagement*

<sup>17</sup> Hubbub, April 2017, *Research Report# Tapchat Water Saving Campaign*, Hubbub, November 2017, *Impact Report, #Tapchat Water Saving Campaign*

<sup>18</sup> Affinity Water, December 2017, *Summary Notes Stakeholder workshop, vulnerability*, Affinity Water, January 2018, *Summary Notes Stakeholder Workshop Vulnerability*

<sup>19</sup> Arup/Ipsos MORI, March 2018, *Affinity Water Customer Engagement Programme Triangulation Report Phase 1*

<sup>20</sup> Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

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- There is scope to improve communication during interruptions through outage/bursts
- Customers did not directly describe themselves as 'vulnerable'
- 'Vulnerable' customers are actively trying to manage household bills with a sense of pride in paying
- Clear customer priorities informed the development of our performance commitments for PR19

#### Actions from Triangulation that fed into Phase 2<sup>21</sup>

- Initiate further work on the bespoke PCs, in partnership with the CCG sub-working groups
- Gather more feedback on: resilience and the environment, interruptions and customers willingness to pay for reduced disruption / willingness to accept compensation on different options and levels of service
- Test the draft Water Resources Management Plan (dWRMP) to gauge how much customers value different levels of service
- Test packages of services for the Business Plan with associated bills
- Interrogate operational data to identify trends, similarities and differences with market research findings

Table 3.4 Objectives, activities and conclusions from the Phase 1 – listening and learning

## Phase 2: Testing and Valuing (April 2018 to July 2018)

Customer Insight Objectives	Activities
<ul style="list-style-type: none"> <li>- Consult and engage with a broad range of customers, stakeholders and retailers on the proposals set out in our draft Business Plan and draft Water Resources Management Plan (dWRMP) <ul style="list-style-type: none"> <li>o Test acceptability of different packages of services and bill levels</li> <li>o Seek views and test support on our preferred and alternative dWRMP plans</li> </ul> </li> <li>- Target engagement to gather more evidence to support Performance Commitments</li> <li>- Explore operational data in detail as recommended from Triangulation</li> <li>- Triangulate findings from the different engagement activities and operational data findings to confirm priorities, and ultimately help define our PR19 PCs</li> </ul>	<ul style="list-style-type: none"> <li>- Tested dWRMP with the preferred and alternative plan using mixed modes to explore and test customer priorities in the dWRMP, using eight focus groups and an on-line survey of 1,000 representative customers<sup>22</sup></li> <li>- Ran seven regional forums attended by a broad range of stakeholders<sup>24</sup></li> <li>- Tested customer support for three different Business Plan packages (based on the dWRMP) using eight focus groups (including future customers) and 825 face-to-face interviews<sup>23</sup></li> <li>- Consulted on our social tariff and four customer Outcomes<sup>22</sup></li> <li>- Explored the views of future customers using five discussion groups and online surveys targeting school age young people<sup>24</sup></li> <li>- Analysed industry research with observations feeding into Triangulation</li> <li>- Carried out research to explore compensation levels for supply outage</li> </ul>
Customer Insight Conclusions	
<ul style="list-style-type: none"> <li>- Almost eight in every ten customers (74-78%) found the proposed level of bill acceptable across the three main plan packages on which we consulted<sup>22</sup></li> <li>- The four customer Outcomes are important and are strongly supported<sup>22</sup></li> <li>- There is general support for the Social Tariff to help others, and there is also support for a small increase to help more customers<sup>22</sup></li> <li>- Customers report they have no difficulty in paying their water bill<sup>22</sup></li> <li>- Leakage is an issue for customers and stakeholders and 89% of customers support continuing to find ways to reduce leakage<sup>21</sup></li> </ul>	

<sup>21</sup> Arup, July 2018, *Customer Engagement Programme, Triangulation Phase 2*

<sup>22</sup> Ipsos MORI, June 2018, *Affinity Water Draft Water Resources Management Plan (dWRMP) Research report*

<sup>23</sup> Ipsos MORI, May 2018, *Affinity Water Business Plan Qualitative Research*, Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

<sup>24</sup> Affinity Water, April 2018, *Future Customers Secondary School Survey*, Affinity Water, May 2018, *Future Customers, Secondary School Focus Groups*

- 89% say that the local environment is important to them personally<sup>21</sup>
- Water is considered abundant in the UK which increases scepticism about the risk of drought, the impacts of climate change and population growth<sup>21</sup>
- Future customers are keen to see water shared across the country<sup>23</sup>
- Interruptions, reliability of supply and water quality were not causes for concern <sup>25</sup>
- 78% said they are careful about how much water they personally use
- 55% think they might be able to make a small reduction in their household consumption
- Reducing PCC and abstraction were popular amongst stakeholders who also support the need for greater communication to customers
- Spending money on environmental projects was popular with customers and stakeholders<sup>24</sup>
- Future customers were more likely to consider it primarily our responsibility, rather than that of the customer, to be environmentally friendly<sup>23</sup>

#### Actions from Triangulation that fed into phase 3<sup>26</sup>

- We completed our third Triangulation exercise, compared data and findings from different sources and identified themes to follow up in phase 3 including:
  - o Test acceptability of a revised bill following feedback from customers and stakeholders
  - o Increase our understanding of customer views on long-term investment and resilience

Table 3.5 Objectives, activities and conclusions from the Phase 2 – Testing and Valuing

### Phase 3: Revisiting and Assuring (July 2018 to August 2018)

Customer Insight Objectives	Activities
<ul style="list-style-type: none"> <li>- Test acceptability of the final plan including part of the bill which takes account of inflation and wastewater</li> <li>- Test the principle and package of proposed penalty and reward levels of ODIs</li> <li>- Test and confirm acceptability of the Social Tariff proposals</li> <li>- Engage with developers to understand their priorities and expectations</li> <li>- Gauge acceptability for long-term investment and additional resilience</li> <li>- Triangulate findings from the different engagement activities and operational data findings to confirm the final package and assure the final Performance Commitments</li> </ul>	<ul style="list-style-type: none"> <li>- Completed a series of 'customer insight' meetings exploring long-term challenges<sup>27</sup></li> <li>- Tested acceptability of the final bill with 1,000 representative customers and confirmed acceptability of a proposal for our Social Tariff, ODI and reward and penalty levels<sup>28</sup></li> <li>- Completed a representative survey with 500 customers and found strong customer support for long-term investment<sup>29</sup></li> <li>- Participated in Wave 1 of a national D-Mex survey for developers<sup>30</sup></li> <li>- Consolidated our findings from all phases and provided detailed customer evidence to support our four Outcomes and common and bespoke PCs</li> <li>- Identified opportunities for ongoing and future engagement</li> </ul>
Customer Insight Conclusions	
<ul style="list-style-type: none"> <li>- 82% of customers consider the final Plan package to be acceptable before additional resilience, however, this percentage is lower when inflation and wastewater costs are added<sup>27</sup></li> <li>- 60% say it would be acceptable to add an extra £1.50 a year to their bill to assist a further 25,000 households via the Social Tariff<sup>27</sup></li> <li>- 39% of customers support a system of incentives and 71% to 73% would find it acceptable for Affinity Water to add around £0.50 or to subtract around £4 from their bill per year for beating or failing to meet targets<sup>27</sup></li> <li>- 47% support and 42% say they have no views either way about water treatment in Sundon<sup>27</sup></li> <li>- 78% support us investing now to ensure there is sufficient water in future<sup>28</sup></li> </ul>	

<sup>25</sup> Traverse, June 2018, *Draft Water Resources Management Plan 2020 to 2025, Stakeholder Engagement Report*

<sup>26</sup> Arup/Ipsos MORI, August 2018, *Affinity Water Customer Engagement Triangulation Report Phase 3*

<sup>27</sup> Blue Marble July 2018, *Qualitative Research Additional Resilience Investment Report*

<sup>28</sup> Ipsos MORI, August 2018, *Phase 3 Final Acceptability Survey Research Report*

<sup>29</sup> Blue Marble, August 2018, *Affinity Water Resilience Investment, Full Report*

<sup>30</sup> Ofwat, August 2018, *D-Mex Wave 1 Results*

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- More than three-quarters find it acceptable for bills to be increased by an extra £3-£5 a year and 84% acceptable to increase them by £1-£2 a year to make sure there is enough water in the future<sup>28</sup>
- Most customers can comfortably, fairly comfortably or 'yes, it is a stretch' afford their current bills (96%) and future bill options (92% and 89%)<sup>28</sup>
- Developers' priorities are consistent with the themes identified from Phase 2 consultation with stakeholders, customers and retailers - they want to be kept informed, are concerned about the speed of responses and want good customer service<sup>29</sup>

Table 3.6: Objectives, activities and conclusions from the Phase 3 - Revisiting and Assuring

2. The Triangulation tool, included in Appendix 3, sets out the evidence for each PC and Outcome that we analysed during our engagement programme.

#### Phase 4: Transition to Business as usual (September 2018 onwards)

Transitional Objectives
<ul style="list-style-type: none"> <li>- Review our learning and experience from PR19 and compare to experiences across the industry</li> <li>- Promote and support our community strategy by aligning stakeholder and community engagement activity</li> <li>- Maximise opportunities to integrate customer feedback from all sources to keep abreast of customer concerns and priorities</li> <li>- Finalise our ongoing engagement strategy for the longer term including ongoing customer insight</li> </ul>

Table 3.7: Transitional Objectives

### 3.4 Customer Challenge Group

1. Our CCG was established in 2012 to challenge and support us during the development of our Plan for 2015 to 2020 that was submitted to Ofwat in December 2013.
2. In May 2016, Ofwat published its expectations for companies' customer engagement for PR19 stating that each company should have a CCG in place and setting out a number of expectations for CCGs in terms of their purpose, scope and membership.
3. The current chair of the CCG, Teresa Perchard, was appointed by the non-executive directors in April 2016. The 14 members of the CCG are representatives of diverse communities, including community bodies and interest groups, that are active in the communities and areas we serve. The Environment Agency and the Consumer Council for Water (CCWater) are also represented. Full details of the role they played and examples of their interactions with us are included in the CCG Annex to Appendix 3 that includes the Terms of Reference and Minutes to all CCG meetings.
4. We have had an honest, open and positive relationship with our CCG whose members have been heavily engaged throughout the engagement programme; we sought their advice on the initial design of the programme and invited challenge throughout. We set up sub-working groups of the CCG to oversee the development of the bespoke Performance Commitments for Vulnerability, Affordability, Resilience and the Environment. Terms of Reference for the sub-working groups were produced and these are included in Appendix 3.
5. We have responded to constructive challenges from the CCG under three broad categories:

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- CCG challenge / feedback after Triangulation
  - CCG challenge / feedback received after quarterly meetings – including feedback on market research material, methodologies etc.
  - CCG challenges against the challenge criteria / feedback after the release of the Aide Memoire by Ofwat in March 2018.
6. We evaluated their suggestions and made improvements to surveys, questionnaires and stimulus material. Responses and actions are recorded in a challenge log which is included in the appendix of the CCG report.

## 3.5 Wider engagement

1. We know that different customers can have different needs and expectations and throughout our engagement activity we have used representative sampling to ensure we captured the full range of views.
2. We chose to use broad segmentation for representative samples and quotas that were consistent with the 2011 census data. When compared to the national average, we identified few significant variations. For example, our Pinn community has a higher ethnic population compared to the UK as an average - 49% versus 14%. Similarly, both Dour and Brett have an older population with Brett having 49% of its population aged 55+ compared to a UK average of 35%. Other noticeable differences are the high percentage of rented households in Pinn, more than 36% compared to 24% in Brett.
3. These macro issues have been considered when we wanted to gather representative feedback for quantitative analysis and have been helpful in identifying communities when we wanted to target specific subjects.
4. We have consistently seen the same results throughout our engagement, whether from open-ended qualitative research or detailed quantitative research. We have also found that overall groups and geographies have more common factors than differences.

### 3.5.1 Engagement with future customers

1. We understand the importance of engaging with future generations so that we can help to raise awareness of water, energy and environmental issues from a young age. Our Education Services Team provides support to teachers both inside and outside the classroom, offering a practical learning experience to support the school curriculum. We held specific engagement events as part of Phase 2 with future customers. These events included focus groups in five secondary schools, a quantitative survey of almost 900 secondary school children and a qualitative survey of over 100 secondary school children. The feedback received reinforced how vital it is that we continue to engage with this age group on a regular basis to ensure we are sharing the right information and using the right methods to support them, both now and in the future as they become paying customers. It is younger future customers who believe they can do more to save water, with our research highlighting their views below:
  - 75% agree that there is a need to save water
  - 86% agreed that individuals should be careful about the amount of water they use
  - 89% of future customers think we should do more to save water and reduce wastage through leakage and bursts
  - Customers have a limited awareness and understanding of us and the service we provide; with limited interaction (beyond billing)

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- 88% of future customers agreed that the cost of water is important to them
- Customer service expectations are higher among younger, future customers who prefer text, online and social media as well as TV and celebrity advertising
- There was little awareness of the cost of water
- They were not clear about how high water use could damage the environment.

### 3.6 Triangulation

1. The diagram, figure 3.2 on the following page, shows the stages of our extensive engagement programme, summarising the activity delivered by phase. This iterative approach, with formal Triangulation at the end of each phase, meant we reviewed and evaluated the conclusions from all our evidence base on a regular basis via our Triangulation tool and used the findings to inform the next phase of engagement. Our approach to Triangulation was informed by CCWater's guidance which describes Triangulation as the process of "using multiple and independent measures to examine a hypothesis or conclusion being investigated, with the intent of using multiple perspectives to minimise bias and maximise validity". We followed four key principles from this CCWater guidance these were:
  - the approach should be transparent and apply clear rationale
  - it must be flexible for different needs and situations
  - it must learn from contradictory evidence
  - it must take deliberate steps to avoid confirmation bias
2. We adopted CCWater's seven-step process in the Triangulation tool we used. A full list of activities and approach to Triangulation is included in Appendix 3. Each part of the customer engagement programme has helped to shape the Business Plan as demonstrated in figure 3.2.

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### 3.7 What customers and stakeholders want

1. At the end of the programme and as part of Triangulation, we summarised our overall, cross-phase, findings of what customers and stakeholders have told us. Our findings were grouped against our four outcomes and split in two ways. We grouped and categorised the findings under a number of themes based on what customers and stakeholders told us that they want and expect from our service. Further detail can found in Appendix 3 section 4.2.



Figure 3.3: What customers and stakeholders want

#### 3.7.1 Effectiveness of engagement

1. We have followed a consistent approach to planning, delivering and assessing each piece of engagement or research to ensure we can effectively answer the question or objective we originally set. The process is outlined in our Engagement Strategy in Appendix 3. In the early phases, we adopted a set of assessment criteria, listed below, that are consistent with the CCG Terms of Reference, to provide evidence of effectiveness for the CCG:
  - Quality of insight – understand customer priorities, needs and requirements
  - Quality of proposition- cover issues that matter to customers: give customers realistic options
  - Quality of process – ongoing, two-way, transparent
  - Diversity and reach – use right methods to engage the appropriate range of customers
  - Future customers' interests – appropriate mode, method and spread of engagement
  - Current performance – what do we know and how is that used to compare performance.
2. Each piece of research was evaluated and challenged during the Triangulation. The CCG developed and applied its own 19-point assessment framework, using their Terms of Reference and based on the Ofwat PR19 Method Statement. Details of all activities and methodologies are included in Appendix 3.



### 3.7.2 CCG assessment

1. To assess the effectiveness of our customer engagement underpinning our Plan, our CCG developed Ofwat's Aid Memoire into 19 test areas. 15 of the test areas have been assessed and rated as green, which indicates that our engagement programme has met the test criteria. The remaining three test areas were rated as amber which indicates we partly met the test criteria. Further information is set out in the CCG report.

## 3.8 Increasing transparency of reporting

### 3.8.1 Developing our performance reporting

1. As outlined in Chapter 8, our community commitments for 2015 to 2020 were largely around the provision of more relevant and timely information to customers so that they could better understand performance and challenges within their local communities. We have learned from our experience and have developed our approach. From 2020 we will:
  - do more to understand the data that customers and community partners want to see, rather than providing them with the data that we think they want
  - work to provide tailored data in a more relevant way to our different communities
  - provide data in a way that is accessible, including using the most up to date digital methods, making it easy for customers to find and respond to.
2. We publish online monthly performance data on leakage, usage and our performance commitments. We do this across the company and by community. This allows customers and stakeholders to compare data across time and between communities.
3. We have found this approach has increased transparency and through sources such as the Edelman Trust Barometer and our work with the think-tank Sustainability First we know that transparency is key to retaining trust amongst customers and stakeholders in the communities we serve.
4. We intend to develop this approach further through the introduction of the common PCs from 2020, which will then be reported against using the industry-wide Discover Water website. This will provide a consistent set of standard information allowing customers to compare our performance to that of our peers. We believe this comparison will be important to help customers put our performance into context, understand our successes and hold us to account when we need to make improvements.

### 3.8.2 Expanding our reach and coverage

1. Through research conducted alongside a number of research organisations and think-tanks and through work conducted by the Open Data Institute we have identified the following groups that we will seek to work more closely alongside:
  - Local government officials to support the development of local strategies for planning, economic growth and community development, and administering local housing, planning and transport systems
  - Emergency services, including police, fire and rescue, LRFs and public health services
  - Retailers and major commercial water users as well as business associations
  - Developers, self-lay providers and inset agreement providers
  - Environmental groups and sustainability forums both local and national

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- National government officials across different departments or agencies, including policymakers focused on housing, infrastructure and the regional economy, and the environment
- Politicians representing the views of their constituents and parties on local issues, as well as those acting and making decisions at a national level
- Think-tanks and policy organisations that undertake research and advocacy work.

### 3.8.3 Ongoing support and challenge from our CCG

1. In conjunction with our CCG we plan to explore using open format data. We have already identified the need to provide more localised data than at community level. In particular, we are developing the ability to report water usage data at DMA (District Meter Area) level.
2. We also know that the groups above find the ability to examine relationships between different data more useful. Many stakeholders involved in data use the term “data observatory” to describe this process of bringing data together to understand the interrelationships between different aspects of our performance. Indeed, a data observatory becomes more powerful still when this data can be used to combine performance with other seemingly unrelated data such as traffic flows.
3. We will continue to use our CCG partners to scrutinise, challenge and support the development of prospective new channels of customer communication, including helping us assess the effectiveness of methods and to review our success in establishing effective customer co-creation of future reporting formats.

### 3.8.4 Continuing to develop natural capital accounting and integrated reporting

1. We are also working with the think-tank Policy Exchange to build on the work we have done so far to examine natural capital approaches to assessing our impact and effectiveness. As natural capital methods become more important, data is becoming more important in the natural environment. We have already run citizen science projects and we are beginning to make weather and rainfall data public.
2. For many customers, detailed data is too much. However, it is important that they can understand and appreciate transparent information about our operations and performance. To enable this, we’re planning to test our Community Model and measurement framework with our communities in 2018 and know that this will also present us with a real opportunity to talk to customers and better understand what it is they expect us to report, how frequently and using what methods. This critical feedback will help us to finalise our reporting framework for 2020 to 2025.

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### Deliverability Statement

*"We listen to and act on customer feedback every day. We built on our in-depth understanding of customers and completed extensive consultation to understand priorities, views and perspectives of customers and stakeholders that informed the development of our Plan. Our stakeholders are wide-ranging across topic specialists and customers have been representative of our customer base, including current and future customers as well as developers, new appointees and self-lay providers. We will be transparent in our communications to customers and keep them updated on our progress and performance in our delivery".*

**Director of Customer Relations**

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### 3.9 How listening to customers and stakeholders addresses Ofwat's four Price Review themes

#### Great customer service

Customers expect high levels of personalised customer service with access to information relevant to them in a way that works for them. Future customers have a high expectation of customer services with a preference for use of social media.

#### Affordable bills

Customers generally see that water is affordable, particularly when compared to other utilities. Water was felt to be affordable in smaller households with fixed incomes but harder in fluctuating usage or large family households or where there was unstable income. Most customers do not describe themselves as vulnerable. The majority of customers support the provision of help for customers who face financial difficulty.

#### Innovation

We have embraced new approaches throughout the engagement activity reaching out to customers and stakeholders using different media, tools and techniques, the online community and ethnographic interviews were innovative. Operational data, existing research and our understanding of customers and stakeholders informed our Plan.

#### Long term resilience

Customers understand the challenges. They want water today and water tomorrow. While our research has shown that customers found it hard to engage in long term plan. They accepted the principle of paying small amounts now to limited big increases for the next generation).

## 4 Our Outcomes and Performance Commitments

Our Business Plan for 2020 to 2025 aims to ensure we deliver for customers and stakeholders. Our approach has been to do this by focusing on the things that really matter most to customers, these are known as Outcomes. Outcomes set the strategic context for us and in the widest sense, set out what we are here to do. We have set ourselves 19 PCs that will help deliver our Outcomes.

PCs cover a whole range of service attributes including things like leakage, supply interruptions and consumption. We are required to have 9 common PCs. These are targets that all water companies must have. In addition, we have 10 more PCs covering things that are important to our customers, such as low pressure or satisfaction surveys for customers in vulnerable circumstances. We describe our proposed PCs, for 2020 to 2025, as our PC Framework and we have engaged extensively with customers around the target levels we have set in this plan for each of the PCs. We have also carefully considered the views of our stakeholders and regulators so that our targets are stretching and ambitious.

The majority of our PC targets are incentivised by ODIs. This means that if we fail to deliver the targets we have set we will have to make underperformance payments. On the other hand, if we do better than our targets we could earn outperformance payments. We have developed a thorough and detailed approach to ensure we establish, value and calibrate the ODIs as required by our regulator. In doing this we have taken into account customer views around the valuation of benefits and costs. This means that the financial impact, in terms of Return on Regulated Equity (RoRE), of our projected performance is consistent with the things that are customer priorities such as water quality, leakage and supply interruptions.

We have carefully considering the detailed design of each ODI as part of the overall proposals, seeking to limit the use of caps and collars and deadbands in forming our final package of proposals.

In developing performance projections, we combined analysis, evidence and data, to develop scenarios covering future performance which we have then considered in the context of the overall PC framework so we can understand the likelihood of either failing or doing better than our targets.

Our overall approach in terms of financial incentives (RoRE), excluding C-MeX and D-MeX, results in +1.05% and -2.82% respectively under a “possible” P10/90 scenario, equivalent to £4.8m and (£12.9m) per year on average between 2020 and 2025.

We have also assessed, excluding C-MeX and D-MeX, a range of incentives under a “plausible” P25/75 scenario giving a range of +0.16% and -1.31% respectively, equivalent to £0.8m and (£5.9m) per year on average between 2020 and 2025. This plausible scenario would impact customer bills on average between £0.54 and (£4.25) per year.

Our engagement with customers shows that 39% of customers support a system of incentives and 71% to 73% would find it acceptable for us to add around £0.50 or subtract around £4.00 from their bills per year for beating or failing to meet targets<sup>31</sup>.



**BOARD ASSURED**

<sup>31</sup> Blue Marble, July 2016, *Pre-SDS consultation on-line survey*

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## 4.1 Introduction

1. This Chapter presents our approach to developing our Outcomes Framework for 2020 to 2025, building on the approach we introduced following the previous price review. In developing our approach, we have been very clear about the need to ensure that our approach is easy for customers and stakeholders to understand.

**“The Outcomes framework and its associated Performance Commitments are one of the most customer-facing elements of the price review. For the engagement process to be effective it is important that Outcomes, and the Performance Commitments that support them, should be easy for customers and other stakeholders to understand. It is also important that the Performance Commitments relate clearly to the Outcomes that companies are pursuing.”** (Ofwat, Delivering Water 2020)<sup>32</sup>

2. Our overall Outcomes Framework is made up of:
  - Outcomes: how we have evolved our customer facing Outcomes based on our customer feedback;
  - Performance Commitments (PCs): our proposed PC framework and target levels, including relative stretch, based on balancing expectations from regulators and stakeholders with feedback from customers, while considering current and future performance; and
  - Outcome Delivery Incentives (ODIs): the approach we have taken to establishing, valuing and calibrating incentives as well as evaluating the financial impact, in terms of Return on Regulated Equity (RoRE), of projected performance in possible and plausible scenarios including consideration of ODI design details.
3. We have aligned PCs against our Outcomes. We have done this to simplify the presentation and communication and to make it as easy as possible for customers and stakeholders to understand our Outcomes and the PCs that support them. We specifically looked at this following challenge from our CCG and taking into account reporting requirement. The approach we propose ensures that PCs clearly relate directly to the Outcomes illustrated in the figure on the following page.
4. In developing our overall Outcomes Framework, we have taken full account of the extensive interdependencies between ODI incentives, PC targets, level of stretch, projected performance, scale and scope of Total Expenditure (Totex) and delivery risk. Large elements of the Outcome Framework are technical and therefore we have included our detailed proposals and methodology in the supporting Appendix 4.

<sup>32</sup> Delivering Water 2020: Our final methodology for the 2019 price review, Ofwat, December 2017

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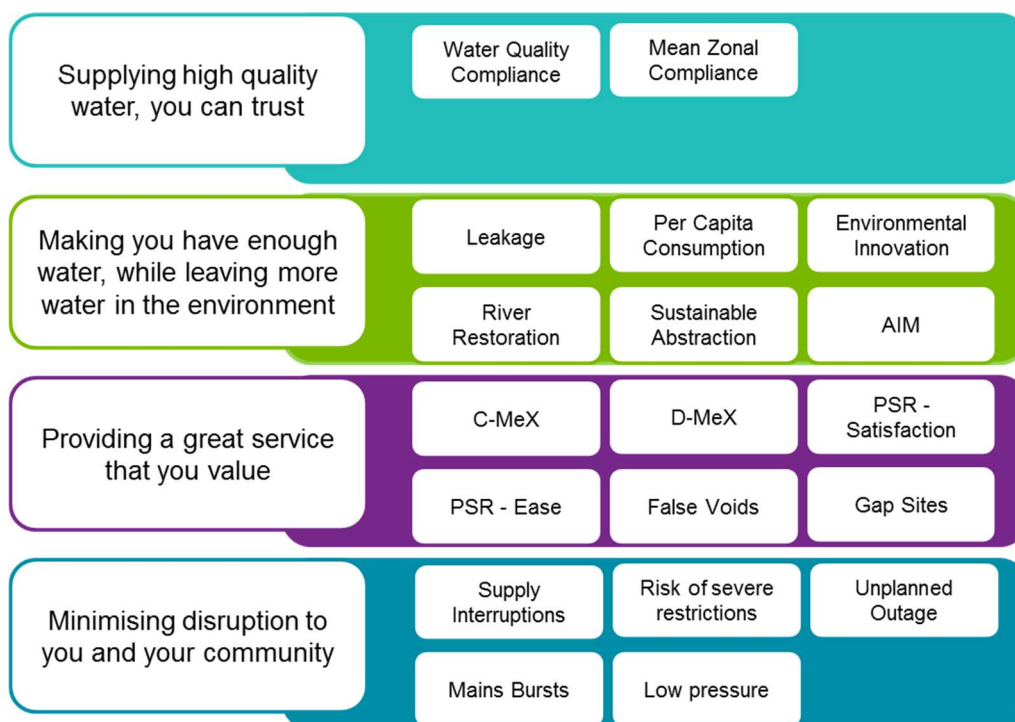


Figure 4.1: Outcomes and PCs for 2020 to 2025

## 4.2 Outcomes

1. Our approach to Outcomes has been to make limited changes to our existing four Outcomes. We have sought to improve their clarity, in the interests of simplicity, transparency and consistency but also because this reflects the feedback we have received from customers. Work we conducted during our Phase 0 customer engagement 'Scoping and Immersion' confirms that our four Outcomes are in line with customers' priorities and are supported by the majority of customers (71%).<sup>33</sup>
2. When engaged, most customers focus on specific issues, such as leakage or water quality. These issues are PCs which measure service opposed to higher level Outcomes. Our four Outcomes represent our long-term aims, and are something we aspire to achieve for customers. They set the strategic context for the company, our shareholders and regulators and articulate, in the widest sense, what we are here to do.
3. There remains strong support from customers to retain four high level Outcomes. We specifically asked customers about the importance of each of our four Outcomes. Customers told us<sup>34</sup>:
  - 95% consider guaranteeing a supply of high quality water they can trust is extremely important for future plans;
  - 88% consider that ensuring they, their communities and the environment have enough water, is important for future plans;
  - 86% consider providing a valued service is important; and
  - 81% consider minimising disruption is important.

<sup>33</sup> Blue Marble, July 2016, *Pre-SDS consultation on-line survey* and Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

<sup>34</sup> Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

4. We are therefore not proposing any significant changes to our Outcomes. We will, however, change the order of priority of our Outcomes by listing water quality first and minimising disruption last. We have also broadened our Outcome around value to reflect great service more than just value for money. This reflects our experience since 2015 that the concept of Value for Money is difficult to evaluate and is influenced by many factors outside of management control.
5. Our Outcomes for this Business Plan will be:

- Supplying high quality water, you can trust
- Making sure you have enough water, while leaving more water in the environment
- Providing a great service that you value
- Minimising disruption to you and your community

## 4.3 Performance Commitments

### 4.3.1 Overall PC Framework for 2020 to 2025

1. PCs are the basis of our service proposition to customers and are the most important elements in our Business Plan. Our PCs fall into categories:
  - Common PCs: these are required and specified by Ofwat for all companies, so that customers and stakeholders can compare companies' commitments and delivery more easily
  - Bespoke PCs: these are required by Ofwat for all companies but specified by companies. They should cover customers in vulnerable circumstances, affordability, the environment and resilience as well as gap sites and void properties
  - Legacy PCs: those that exist between 2015 to 2020 and that companies will need to maintain or explain why they are not maintaining them.
2. Our proposed PC framework is set out in the table below. We are proposing a total of 19 PCs made up of the 9 Common PCs (C), 7 Bespoke PCs (B) and 3 Legacy PCs (L). This is an increase from our existing PC framework which is made up of 13 PCs. We will keep the PC definitions unchanged during the period 2020 to 2025.

No	Performance Commitment for 2020 to 2025	C/ B/ L	Simple explanation
1	Leakage (MI/d)	C	This is the amount of water leaking from pipes each day
2	Per Capita Consumption (l/h/d)	C	This is the amount of water each person uses each day
3	Risk of Severe Restrictions in a Drought (% popn. 1:200)	C	This is the percentage of all customers who would be impacted by a very severe drought if it happened (for example a rota cut). It is assumed that a severe drought is something that might only happen once in every 200 years.
4	Water Supply Interruptions >3 hours (avg. min lost per prop)	C	The average length of time in minutes that each property, on average, is without continuous supply of water each year. The measure only applies to minutes greater than 3 hours.
5	Unplanned Outage (MI flow rate)	C	This is the amount of time that water production assets are not available due to unplanned maintenance.

No	Performance Commitment for 2020 to 2025	C/ B/ L	Simple explanation
6	Mains Bursts	C	The number of times water mains burst per 1,000km of network (c.16,000km)
7	Water Quality Compliance, Compliance Risk Index (CRI)	C	Score achieved under a risk based monitoring methodology used by the Drinking Water Inspectorate (DWI) to assess compliance with water quality standards.
8	Customer Measure of Experience (C-MeX)	C	Customer measure of experience to be carried out independently via survey on behalf of Ofwat
9	Developer Measure of Experience (D-MeX)	C	New housing developer measure of experience to be carried out independently via survey on behalf of Ofwat
10	Properties experiencing longer or repeated instances of low pressure	B	The average length of time in hours and minutes that each property, on average, experiences longer or repeated instances of low pressure.
11	Customers in vulnerable circumstances satisfied with our service	B	Survey of customers in vulnerable circumstances to find out if they are satisfied with the service they receive
12	Customers in vulnerable circumstances who found us easy to deal with	B	Survey of customers in vulnerable circumstances to find out if they find the service we provide easy to deal with
13	Environmental Innovation – Delivery of Community Pilot Projects	B	Completing eight environmentally focused, innovative pilot projects in our communities, enabling us to improve the knowledge and evidence of water use within our catchments
14	Number of properties wrongly classified as unoccupied (False Voids)	B	The percentage of properties listed as empty on our company billing system, but is in fact is occupied and using water.
15	Number of occupied properties not billed (Gap Sites)	B	The number of properties that we will aim to find that can be added to our billing database so that we are charge all customers for their use.
16	River Restoration	B	Delivery of restoration and habitat enhancement schemes in water bodies.
17	Abstraction Reduction	L	Reducing the amount of water we abstract from environment in line with the sustainability reductions programme set out by the Environment Agency
18	Number of sources operating under the Abstraction Incentive Mechanism (AIM)	L	Reduce the environmental impact of abstracting water at environmentally sensitive sites in low flow periods
19	Water Quality Compliance, Mean Zonal Compliance (MZC)	L	A measure of compliance with drinking water standards used by the DWI.

Table 4.1: Overall PC Framework for 2020 to 2025

### 4.3.2 PC Targets and Stretch

1. The level at which we set our PC targets is important for several reasons. PC targets signal the level of stretch in our Business Plan and impact on the service proposition we are making to customers. The PC target also directly impacts on the level of expenditure (Totex) we believe we need to deliver, after assessing future efficiency, and hence will have a direct impact on customer bills. As a result, the PC targets sit at the heart of determining the balance of risk and reward in our Business Plan.
2. In setting the level of PCs we have considered a wide range of factors and views including:

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- customer views and priorities through specific engagement activities and importantly through day to day operational contact plus through benefit valuation and stated preference evidence
  - expectations from regulators, stakeholders and government
  - our understanding of current and future performance.
3. Our approach to each of the common PCs is set out in the table below. Given the strategic importance of water resources, four of our common PC targets are heavily influenced by our Water Resources Management Plan (WRMP). We found wide support for greater ambition and stretching proposals for Leakage Reduction and Per Capital Consumption (PCC), all while maintaining Risk of Severe Restrictions in a Drought and Unplanned Outage PCs at their current levels.
  4. In combination with our bespoke PC on Sustainable Abstraction Management, we have a challenging basket of measures, designed to achieve an outcome in which water resources demand is balanced in an efficient and economical way with water resources supply. Taken together, these five PCs illustrate our continuing commitment to lead on environmental sustainability, helping to protect and enhance the environment while securing long-term supplies.
  5. Our proposals for 2020 to 2025 for each of the PCs discussed above also need to be considered in terms of how they build on existing targets for 2015 to 2020. Our current Plan achieved 'enhanced' status in part because we set ourselves stretching targets for PCs around our water resources position. Our proposals in this Plan extend our stretching targets across a full decade.
  6. Of our remaining common PCs, we are committing to:
    - a target of zero compliance risk for the water quality CRI, recognising that our objective is to minimise and mitigate all compliance risk
    - a target to achieve upper quartile for C-MeX and D-MeX while recognising these PCs are comparative measures and are yet to be finalised by Ofwat
    - a target performance in line with the best in the industry (3 minutes per property per annum on average) by the end of 2025 for supply interruptions
    - a target to maintain burst levels in line with historic reference levels consistent with 'stable' serviceability, reflecting customer preference to focus on dealing with the impact of bursts quickly and efficiently, and to balance investment over time in respect of intergenerational equity.
  7. Our bespoke PCs are also stretching, not least as they are new commitments we have not previously made. We are setting ourselves ambitious targets for customers in vulnerable circumstances through our inclusive customer service initiatives by setting our satisfaction survey target at 82% and our survey on ease targeting a score of 4.8 out of 10 (with lower scores better). Further information on these metrics is included in Chapter 7.

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Common PCs	Comparative Performance and stretch over 2020 to 2025	Summary
Leakage (MI/d)	<ul style="list-style-type: none"> <li>Ofwat expectation that leakage should be reduced by at least 15%</li> <li>Plan includes 15% reduction for 2020 to 2025</li> <li>28% reduction for 2015 to 2025</li> <li>Industry average leakage reduction in 2010 to 2015 is 4.1% vs 14% for us</li> </ul>	Significant reductions
Per Capita Consumption (l/h/d)	<ul style="list-style-type: none"> <li>Lowest PCC (2016/17) is 127. Our company average PCC is 151.7, ranging from 173.1 in the Misbourne community to 119.6 in the Dour community)</li> <li>Plan includes 13% reduction for 2020 to 2025 to 129</li> <li>17% reduction for 2015-2025 - Industry average PCC reduction in 2010 to 2015 is 4.3% vs 7.1% for us</li> </ul>	Significant reductions
Risk of Severe Restrictions in a Drought (% popn. 1:200)	<ul style="list-style-type: none"> <li>Plan to achieve a small 1.8% improvement for 2020 to 2025</li> <li>Cross company comparisons difficult in this area</li> <li>Maintaining performance with a significant reduction in resource base</li> <li>78 MI/d planned reduction in abstraction across the decade</li> </ul>	Running harder to stand still
Water Supply Interruptions >3 hours (avg. min lost per prop)	<ul style="list-style-type: none"> <li>Ofwat expectation to target upper quartile i.e. less than 4 minutes</li> <li>Plan to start 2020 at 6 minutes and achieve 3 minutes by 2025</li> <li>During 2015 to 2025 average company PC was 9.5 mins</li> <li>Average for last 3 years approximately 24 mins</li> </ul>	Significant improvement
Unplanned Outage (MI flow rate)	<ul style="list-style-type: none"> <li>Cross company comparisons difficult in this area</li> <li>Key measure of asset health</li> <li>Plan to maintain 41 MI/d or less capacity impacted by unplanned outage</li> <li>Maintaining performance with a significant reduction in resource base requiring assets to work harder</li> </ul>	Running harder to stand still
Mains Bursts (per 1,000km)	<ul style="list-style-type: none"> <li>Plan to maintain performance to continue to achieve stable serviceability in line with historic reference levels</li> <li>Comparable measure across companies in 2015 to 2020 shows all are maintaining existing levels</li> <li>Customer priority responding to supply interruption caused by burst not the actual burst itself</li> </ul>	Maintain service
Water Quality Compliance, Compliance Risk Index (CRI)	<ul style="list-style-type: none"> <li>This is a new risk measure introduced by the DWI that Ofwat have adopted</li> <li>Plan to target zero with recognition that we are aiming to achieve performance better than industry average for 2017</li> </ul>	Maintain service
(C-MeX)	<ul style="list-style-type: none"> <li>Both C-MeX and D-MeX will be run as shadow measures during 2018/19 and 2019/20 to inform the final design</li> <li>We will not have an explicit target for AMP7 until we understand our likely relative position to others.</li> </ul>	Significant improvement
(D-MeX)		

Table 4.2: Common PC Comparative Performance and Stretch for 2020 to 2025

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8. We are introducing a revised measure on low pressure. Our proposed PC targets prolonged or repeated low pressure and so recognises length of time of impact rather than just numbers of properties impacted. In this sense, it is similar to the supply interruption PC for 2020 to 2025. We are setting tough targets on false voids and gap sites as well as new targets on environmental innovation and river restoration with over 157km of river to be improved by 2025.
9. We are retaining three PCs from our existing framework that we have termed legacy PCs. One of these, discussed earlier, is an ongoing commitment to further reductions in water abstraction. We will also retain the Abstraction Incentive Mechanism (AIM), as expected by Ofwat, and Mean Zonal Compliance (MZC) as a reputational ODI.
10. Finally, we will not be continuing with three of our existing PCs. Two of these will continue as ongoing key performance indicators (Affected Customers not Notified of planned interruptions and Planned Works Taking Longer to Complete than Notified) rather than PCs. This is because they are both Guaranteed Standards of Service (GSS) and include compensation payments directly to impacted customers. The third PC that we will not continue with is the Value for Money Survey that we have run since 2015. The survey has been valuable and provided insight and intelligence that we have been able to take into account in developing this Plan. However, the Value for Money (VFM) Index, that the survey was designed to inform, has proven to be less useful and will soon be superseded by the introduction of C-MeX.
11. Further information on each specific PC is included in Appendix 4 where we have developed a standard template providing key information including our long-term PC projection, evidence that the target we have set is stretching, as summarised in the table below, in addition to a number of key Ofwat test criteria and assessment framework developed by our CCG. We also include a comparative assessment showing the direct evolution of our PC framework from 2015 to 2020 into 2020 to 2025.

## 4.4 Consultation and Engagement Feedback

1. During Spring 2018 we issued our draft Business Plan consultation publication<sup>35</sup> in which we set out three draft packages for consultation with customers, each with different service propositions and consequential investment and bill impacts. We conducted a wide range of engagement activities including qualitative focus groups and quantitative acceptability testing<sup>36</sup>. We have taken into account the feedback in developing our final PC targets and our Final Plan has changed as a result. Further information on our approach and detailed findings is set out in Chapter 3.
2. Generally, we found stakeholders focused on strategic issues and the longer term, particularly in relation to water resources<sup>37</sup>. We found support for 15% leakage reduction,

<sup>35</sup> Affinity Water, April 2018, *Our Future Plans, Consultation Document*

<sup>36</sup> Ipsos MORI, May 2018, *Affinity Water Business Plan Qualitative Research* and Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

<sup>37</sup> Traverse, June 2018, *Draft Water Resources Management Plan 2020-2025, Stakeholder Engagement Report*

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greater demand reduction, higher levels of abstraction reduction and improved drought resilience. Stakeholders clearly recognised that greater ambition around water resources and increasing dependence on demand side measures, to balance water resources demand and supply, brings greater risk to operational and supply resilience.

3. Customers' views were also supportive of the more ambitious Plan and strongly supported reducing leakage, maintaining water quality and protecting the environment. Some customers also picked up on the risk of relying on demand side measures and remained concerned about exactly how reducing consumption would be achieved given many customers already believe they are efficient when it comes to water use.

## 4.5 Common PCs

1. The table below illustrates the Common PC packages we used to consult with customers, expressed as Base Plan J, Stretching Water Resources (SWR) Plan L and Stretching Operational Performance (SOP) Plan K. The table shows our current target performance and where stakeholders and/or customers might have a different view to that consulted on. The final column shows the PC target we are proposing.

Common PC	Current Target Performance	Base Plan J	SWR Plan L	SOP Plan K	Stakeholders / Customers	Final
Leakage (MI/d)	14%	11%	15%	11%	15%	15%
Per Capita Consumption (l/h/d)	147	129	124	129	124	129 <sup>38</sup>
Risk of Severe Restrictions in a Drought (% popn. 1:200)	42.9%	41.1%	41.1%	41.1%	41.1%	41.1%
Water Supply Interruptions >3 hours (avg. min per prop per annum)	approx.18	12 to 6	12 to 6	6 to 3	< 3 mins	6 to 3
Unplanned Outage (% of production capacity)	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Mains Bursts (per 1,000km)	186	186	186	186	186	186
Water Quality Compliance, Compliance Risk Index (CRI)	n/a	3.5	3.5	3.5	0.0	0.0
C-MeX	n/a	t.b.c	t.b.c	t.b.c	Comp.	t.b.c
D-MeX	n/a	t.b.c.	t.b.c.	t.b.c.	Comp.	t.b.c.

Table 4.3: Common PCs for 2020 to 2025

<sup>38</sup>In our dWRMP customers were consulted on targets of 124 or 129 l/h/d by 2025, compared with a target level of 147 l/h/d by 2020. However the target included in our Alternative Plan was calculated incorrectly as this included the effect of Temporary Use Bans in a normal year which would not apply. This has been corrected for our rdWRMP and this Plan. Our rdWRMP consumption reduction target of 129 l/h/d compared with our current average consumption of 151.7 l/h/d, remains stretching as the Plan L figure which customers supported and involves more demand management than was in our dWRMP.

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## 4.6 Bespoke and Legacy PCs

1. We have included a comparable table below for our Bespoke PCs and Legacy PCs. In all cases, apart from Sustainable Abstraction Management (also driven by our dWMP), the same target levels have been set for each PC across all three Plans. Unlike the Common PCs, all the Bespoke PCs do not already have an equivalent 2015 to 2020 measure. Further information on how our existing 13 PCs for 2015 to 2020 compare to the proposed 19 PCs for 2020 to 2025 is included in the Appendix. In response to Ofwat's feedback on our early bespoke PC submission in May 2018, we have split the False Void and Gap Site PC into two separate PCs, developed our Environmental Innovation PC definition and evolved the two bespoke PCs on vulnerability. More details on the definitions of these PCs, are included in Appendix 4.

Bespoke and Legacy PC	Current Performance	Base Plan J	SWR Plan L	SOP Plan K	Stakeholders / Customers	Final
Properties experiencing longer or repeated instances of low pressure (avg. hours per property)	12.0	8.7	8.7	6.5	8.7	8.7
Customer Survey - Customers in vulnerable circumstances satisfied with our service (%)	n/a	82%	82%	82%	82%	82%
Customer Survey – Customers in vulnerable circumstances who found us easy to deal with (score)	n/a	4.8	4.8	4.8	4.8	4.8
Environmental Innovation – Delivery of Community Pilot Projects	n/a	8	8	8	8	8
Number of occupied properties not billed (False Voids - % of total properties)	2.62%	2.3%	2.3%	2.3%	2.3%	2.3%
Number of properties wrongly classified as unoccupied (Gap Sites - per year)	n/a	50	50	50	50	50
River Restoration (projects)	n/a	36	36	36	36	36
Abstraction Reduction (Ml/d)	n/a	10	39	10	36	36
Number of sources operating under the Abstraction Incentive Mechanism (AIM)	n/a	0	0	0	0	0
Water Quality – Mean Zonal Compliance – CRI (%)	n/a	99.95	99.95	99.95	99.95	99.95

Table 4.4: Bespoke and Legacy PCs for 2020 to 2025

## 4.7 Outcome Delivery Incentives (ODIs)

1. Our ODI approach has been developed from our experience at the last price review where our existing PCs and ODIs were established through customer engagement and consultation and were designed to reflect customer preferences and priorities. In developing our proposals, we have taken into account Ofwat's expectations for PR19 and we have taken an iterative approach. We combined a detailed bottom up approach to

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establishing and valuing incentive rates, considering incremental benefits and costs, with a top down approach to calibrate incentives so that as an overall package we can evaluate the financial impact, in terms of Return on Regulated Equity (RoRE), of projected performance in possible and plausible scenarios. Finally, we have also then carefully considered the detailed design of each ODI as part of the overall proposals. Further detailed information on our approach, summarised below, is set out in Appendix 4.

#### 4.7.1 Bottom Up Assessment

1. To establish and value individual incentive rates we have used the following formula<sup>39</sup>:
  - ODI underperformance = Incremental benefit – (incremental cost x p)
  - ODI outperformance = Incremental benefit x (1–p)
2. This is the approach we adopted at PR14 for our existing ODIs. This approach requires estimates of marginal and incremental valuation of benefits and costs. For the cost side of the equation we worked to understand the efficient marginal costs of different levels of investment and their expected impact on changing levels of performance, as measured by each PC.
3. For the benefit side of the equation we have developed a benefit transfer database to ensure that our evidence is broader and more robust than relying on a single stated preference research survey (also often called Willingness to Pay (WTP) research). We recognise the challenge of WTP as a research technique and have chosen to develop our approach to use multiple sources. The benefit transfer database includes WTP data points across multiple surveys carried out across the industry for PR19 both PR14 as well as surveys we have carried ourselves in the past.
4. Incremental benefits are important as they not only provide an absolute valuation of service attributes but also provide a relative valuation between service attributes. This is particularly relevant in establishing our overall ODI proposals as incentive rates need to reflect customer preference and priorities, in this case expressed implicitly through the relative valuation of service attributes. The use of multiple sources, as we have done, helps to ensure that we are not subject to a single survey bias both in absolute and relative valuation.
5. In a few instances, where it is difficult to establish incremental benefit valuation with sufficiently robust data, we have set incremental benefits equal to marginal costs. This is consistent with the approach we took in establishing our existing incentive rates. As a final cross-check, we have reviewed the incremental benefit valuation rates to understand the implied relative prioritisation of service attributes.
6. The output from this phase of work is an initial set of incremental costs and benefits for each PC. The underlying data has been subjected to challenge internally and audited by our Reporter. We have also checked the incentive rate calculations with existing ODIs to understand where we have seen any significant changes as part of a risk-based approach

<sup>39</sup> Delivering Water 2020: Our final methodology for the 2019 price review, Ofwat, December 2017, Appendix 2 (page 91)

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to challenging our data. The schedules of incremental costs and benefits are set out in Appendix 4 and within each of the PC templates therein. We are not proposing a threshold for enhanced outperformance or underperformance rates.

#### 4.7.2 Top Down Assessment

1. In parallel to the bottom up work we have also undertaken a top down assessment as our overall ODI proposals have developed. This approach considers the overall value of potential out and underperformance in terms of RoRE as a cross check to the bottom up calculations. A critical part of this process is to consider carefully the balance of potential outperformance and underperformance recognising the relative stretch of each PC target and, critically, taking into account customer preferences.

#### 4.7.3 Projected Performance

1. Our future performance will be impacted by a range of factors including, but not limited to, the scale, scope and effectiveness of our future investment, maintenance of assets, our recent operational experience, our supply chain and how effectively we manage ongoing and emerging risks. In developing performance projections, we combined analysis, evidence and data from our asset strategy and management teams with insight from our frontline operational teams including our production, network and asset delivery teams. The output from this has been to develop for each PC a range of scenarios covering possible and plausible performance:
  - Our “possible” scenario is consistent a base RoRE assessment for ODIs on a high and low case using a P10/P90 range of probabilities. The easiest way to think of the P10/P90 is as a series of outcomes where the downside or upside has a 10% of occurring. In effect, this means the outcomes being modelled are not the most extreme possible but still have only a relatively low chance of occurring
  - The “plausible” scenario is based on a high and low case using a P25/75 range of probabilities. We have developed this internally alongside the P10/90 range to understand the point at which there is effectively a 50/50 chance of downside or upside performance and hence a greater likelihood of out and underperformance being realised.
2. Our analysis also considers the cumulative impact of projected performance across the whole PC framework. Several PCs have varying degrees of dependency on each other. For example, a sudden surge in Mains Bursts would have a knock-on effect on Supply Interruptions and Leakage. We have applied analysis to our performance data and projections to build an overall level of projected performance for the purposes of evaluating financial impact and ultimately potential impact on customer bills, be that an upward or downward adjustment depending on whether we outperform or underperform. In doing this we have not aggregated any of the PCs.

#### 4.7.4 Financial Impact

1. To assess the financial impact of our ODIs we carry out a relatively simple process of multiplying the outperformance and underperformance by the incentive rates generated bottom up. We have carried out this analysis across each of our PCs to get an initial

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evaluation of financial impact across the whole PC framework, excluding C-MeX and D-MeX, as illustrated below.

- At this point we have no deadbands, caps or collars so outperformance and underperformance incentives apply as soon as performance deviates from the underlying target PC level. By replicating this approach for all PCs, we get a position with no caps or collars. In this case the value of financial incentives exceeds the indicative range of  $\pm 1\%$  to  $\pm 3\%$  of RoRE that Ofwat is expecting. To manage this impact, we consider the detailed design of each ODI.

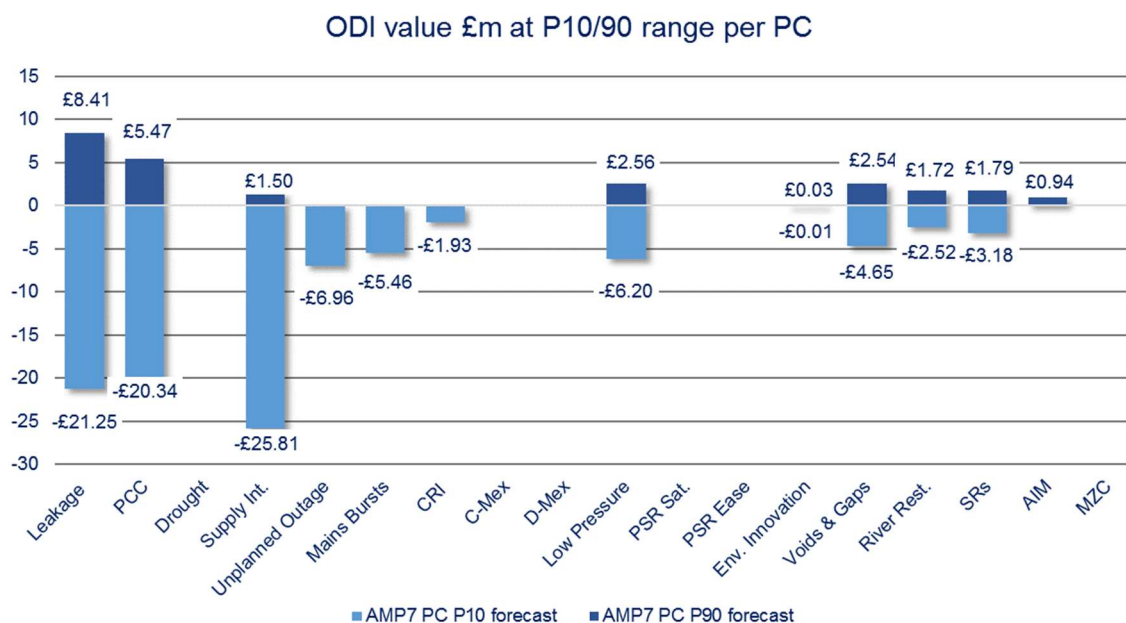


Figure 4.2: ODIs for 2020 to 2025

#### 4.7.5 ODI Detailed Design

- Regulatory requirements for ODI design are more prescriptive than those in place five years ago when we developed our original incentives for 2015 to 2020. We have taken account of the following:
- ODI type – of our proposed 19 PCs, we have financial incentives (£) for 15 of them, as illustrated in the table on the following page. We have included non-financial incentives for the following:
  - Both customer vulnerability satisfaction PC survey measures as we do not think it is appropriate to include financial incentives in relation to customers in vulnerable circumstances
  - We are retaining a water quality PC of MZC that is non-financial. We have the CRI PC with a financial incentive, and so think it appropriate to avoid giving undue weight to financial incentives relating to water quality
  - Risk of Severe Restrictions in a Drought PC as we have already strong incentives on a number of correlated PCs such as leakage, PCC and Unplanned Outage and we think it appropriate to avoid giving undue weight to financial incentives relating to this risk

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- For the remainder, we have set out which PCs have a 'unit based' performance payment where the financial incentive is dependent on performance compared to target. We have also indicated where the financial incentive is either an outperformance payment (£+), an underperformance payment (£ -) or both outperformance and underperformance (£ +/-)
- 3. ODI form – all our PCs have financial incentives that impact on revenue and not the Regulated Capital Value (RCV)
- 4. ODI timing – all our proposals are revenue based and we will seek to ensure that any application of incentive payments is done in conjunction with other incentive mechanisms to ensure a smooth profile of bills over time within period
- 5. Caps and Collars – while Ofwat has issued guidance around the indicative range of incentives (the price setting methodology suggests an indicative range for ODIs of  $\pm 1\%$  to  $\pm 3\%$  of RoRE) this overall financial impact does not have a cap or collar. Nevertheless, for individual PCs, companies are expected to apply caps and collars to calibrate the overall framework; we are proposing collars and caps for some PCs as part of our overall calibration:
  - We have included underperformance collars for six PCs, of which three apply to the P10 range of our projected performance, shown in the table below. This is designed to calibrate the overall framework within the indicative RoRE range expected
  - The other three PC collars are set at the P10 range and so only apply if our actual performance was worse than projected at the P10 level
  - We have included outperformance caps for two PCs, leakage and PCC
  - C-MeX and D-MeX PCs will effectively have caps and collars applied by Ofwat, subject to their final form.
- 6. Deadbands – are used to mitigate performance risk around PC targets; in effect outperformance and underperformance payments should apply soon as performance deviates from the underlying PC target. However, we have proposed deadbands for supply interruptions and CRI
  - We propose a supply interruption deadband between our 2020 starting point of 6 mins and what we forecast to be the upper quartile of 3 minutes. We believe this is a pragmatic approach to balance the significant improvement required to achieve our target both in 2020 and our end target of 3 minutes by 2025. During 2015 to 2020 we have measured supply interruptions on a different basis to the rest of the industry and so we expect there to be a period of transition. The deadband is proposed to avoid penalties during this transition when we are meeting a stretching PC but one that is not yet at upper quartile
  - We propose a CRI deadband between our target of 0 and our average performance over the last couple of years at 2.8, still below the national average for 2017. The deadband reflects the volatility around this new PC measure which will require some time to settle down.
- 7. The impact of the design of our ODIs has been tested against the bottom up and top down approaches, considering incremental benefits and costs described earlier so that as an

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overall package we can evaluate the financial impact with the Caps, Collars and Deadbands implemented.

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No.	Performance Commitment for 2020 to 2025	ODI Type	ODI Form	ODI Timing	Cap / Collar	Dead Band
1	Leakage (MI/d)	£ + / (-) unit based	Revenue	In period	Cap and Collar	No
2	Per Capita Consumption (l/h/d)	£ + / (-) unit based	Revenue	In period	Cap and Collar	No
3	Risk of Severe Restrictions in a Drought (% popn. 1:200)	Non-financial	n/a	n/a	n/a	n/a
4	Water Supply Interruptions >3 hours (avg. min lost per prop)	£ + / (-) unit based	Revenue	In period	Collar	Yes
5	Unplanned Outage (MI flow rate)	£ (-) unit based	Revenue	In period	Collar	No
6	Mains Bursts (per 1,000km/year)	£ (-) unit based	Revenue	In period	Collar	No
7	Water Quality Compliance, Compliance Risk Index (CRI)	£ (-) unit based	Revenue	In period	Collar	Yes
8	Customer Measure of Experience (C-MeX)	£ + / (-) unit based	Revenue	In period	Cap and Collar	No
9	Developer Measure of Experience (D-MeX)	£ + / (-) unit based	Revenue	In period	Cap and Collar	No
10	Properties experiencing longer or repeated instances of low pressure (average hours)	£ + / (-) unit based	Revenue	In period	Collar	No
11	Customer Satisfaction Survey - Customers in vulnerable circumstances satisfied with our service (%)	Non-financial	n/a	n/a	n/a	n/a
12	Customer Satisfaction Survey - customers in vulnerable circumstances who found us easy to deal with (score)	Non-financial	n/a	n/a	n/a	n/a
13	Environmental Innovation – Delivery of Pilot Projects	£ + / (-) unit based	Revenue	In period	No	No
14	Number of properties wrongly classified as unoccupied (False Voids)	£ + / (-) unit based	Revenue	In period	No	No
15	Number of occupied properties not billed (Gap Sites)	£ + unit based	Revenue	In period	No	No
16	River Restoration (project units)	£ + / (-) unit based	Revenue	In period	No	No
17	Abstraction Reduction (MI/d)	£ + / (-) unit based	Revenue	In period	No	No
18	Number of sources operating under the Abstraction Incentive Mechanism (AIM)	£ + unit based	Revenue	In period	No	No
19	Water Quality Compliance – Mean Zonal Compliance (MZC) (%)	Non-financial	n/a	n/a	n/a	n/a

Table 4.5: ODI Detail Design Summary for 2020 to 2025

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## 4.8 Final Proposals

- Our final ODI proposals are set out in the figure below showing the potential range of outperformance and underperformance for each PC in the “possible” P10/90 scenario. Our overall approach in terms of financial incentives (RoRE), excluding C-MeX and D-MeX, results in +1.05% and -2.82% respectively, equivalent to £4.8m and (£12.9m) per year on average between 2020 and 2025.

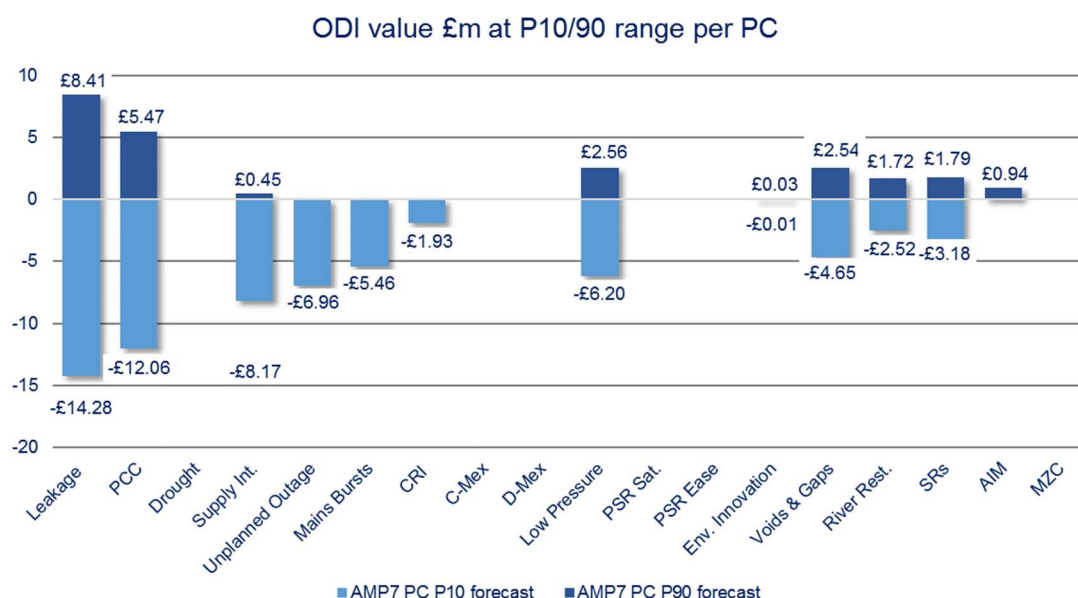


Figure 4.3: Final ODIs for 2020 to 2025

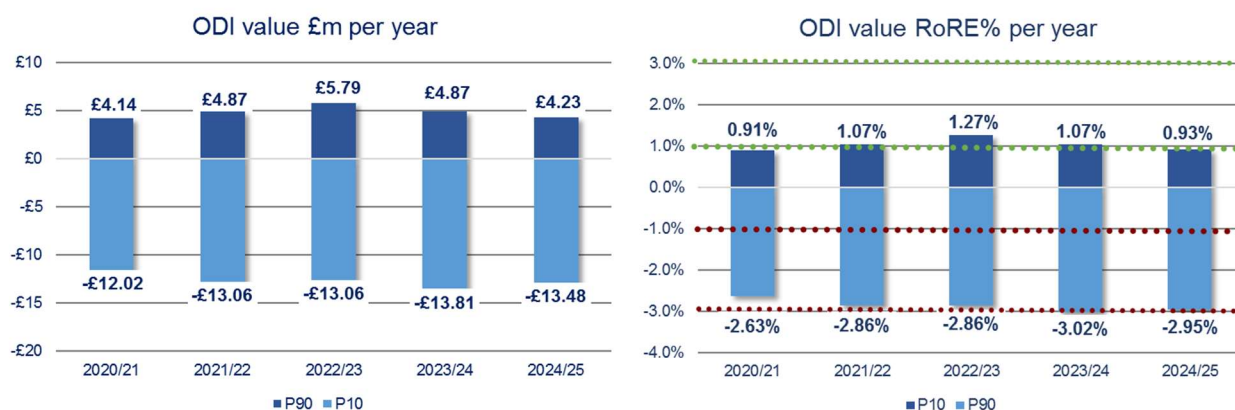


Figure 4.4: Final ODIs and RoRE for 2020 to 2025

- We have also assessed, excluding C-MeX and D-MeX, a range of incentives under a “plausible” P25/75 scenario giving a range of +0.16% and -1.31% respectively, equivalent to £0.8m and (£5.9m) per year on average between 2020 and 2025. This plausible scenario would impact customer bills on average between £0.54 and (£4.25) per year.

3. Our engagement with customers shows that 39% of customers support a system of incentives and 71% to 73% would find it acceptable for us to add around £0.50 or subtract around £4.00 from their bills per year for beating or failing to meet targets<sup>40</sup>.
4. What is evident from the final ODI framework is that incentives are focused around the issues that clearly matter most to customers. Aside from C-MeX and D-MeX, details of which are to be confirmed by Ofwat, the next most challenging PCs are leakage, PCC, and supply interruptions all of which have very stretching targets for 2020 to 2025 clearly showing that our proposed ODI framework is effective in focusing management on the issues that matter most to customers and for which the company will incur underperformance payments or achieve outperformance payments depending on outturn performance.



### Deliverability Statement

*"We have challenged ourselves and considered the clear views of customers and stakeholders in challenging our Outcomes and developing our PCs and ODI framework. Delivery of our PCs will help ensure we achieve our Outcomes. These are the things that matter most to customers and in the widest sense are what we are here to do. Our approach includes stretching commitments around water resources while maintaining our base service and resilience in the face of a tougher operating environment. We have set ourselves challenging delivery incentives with both outperformance opportunities and underperformance risks to ensure we are held to account on delivery."*

**Director of Regulation & Corporate Affairs**

<sup>40</sup> Ipsos MORI, June 2018, *Affinity Water Business Plan Acceptability Survey*

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## 4.9 How our Outcomes and Performance Commitments address Ofwat's four Price Review themes

### Great customer service

Our PC proposals include significant commitments and incentives for us to deliver a great customer service. C-MeX will give more customers than ever a voice in holding us to account and we have specifically set bespoke PCs that will make us target the things that matter most to customers, including low pressure and reducing our impact on the local environment.

### Affordable bills

We have worked hard to keep bills as low as possible and to develop proposals that mean our performance is incentivised in a way that customers find acceptable in terms of potential impact on bills. Our engagement with customers shows many customers support a system of incentives and 71% to 73% would find it acceptable for us to add around £0.50 or subtract around £4.00 from their bills per year for beating or failing to meet targets.

### Innovation

We have specifically introduced an Environmental Innovation PC to deliver pilot projects aimed at bringing together different sector experts, charities, faith groups, developers and housing groups, schools and academia and wider stakeholders to deliver a range of projects across each of our communities, gathering evidence and trialling delivery methods. This takes a holistic, multiparty view of catchment scale water use to engage local people, and link their water using behaviours with the aquatic environment.

### Long term resilience

We have made sure that our PC proposals directly address long term resilience by including asset health, environmental enhancement and abstraction reduction targets. We have incentives so that we are held to account for delivery and encouraged to bring forward projects wherever it is possible to do so.

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## 5 Managing Water Resources in the Long Term

Our Business Plan builds on the solid foundations of our Water Resources Management Plan (WRMP19). It determines investment required during the AMP7 period to maintain our supply and demand balance for those years and into the future.

Our WRMP19 is informed by our consultation on our draft WRMP19 giving us confidence that the investments included in our Business Plan have the support of customers and stakeholders. We will carry out further consultation in Spring 2019 to further refine our plan but we do not expect there to be any change in our investment programme for AMP7.

Our WRMP19 will include:

- Sustainability reductions of 33.71 Ml/day in our Central Region and 2.6 Ml/day in our East Region
- Leakage reduction of 15% during AMP7 and 50% by 2050
- A normal year annual average PCC of 129 l/h/d by the end of AMP7 in 2024/25 and further reduction to 110 l/h/d by 2040
- “Water 2040” – a long-term strategic plan to enable us to move water freely around our Central region
- Conditioning treatment of our supply from Anglian Water, enabling us to move water freely around our Central region
- Planning for development of a new regional reservoir working with Thames Water
- Improved drought resilience to 1 in 200-year return period by 2025 and removing the need for rota cuts and standpipes under all drought conditions from 2037.

Our investment will unlock the potential for our supply area to act as a transfer hub for South East England providing the foundation for future water trading and long-term regional supply and environmental resilience. We have named this “Water 2040”.

We will continue our work with Water Resources in the South East (WRSE) and Water Resources East (WRE) and will share our activity based costing model with other companies in the WRSE to promote transparency of cost of water transfers, which we believe is essential for water transfer arrangements.

In preparing our WRMP19 we have considered market opportunities for third parties and neighbouring water companies to provide water to us. We are keen to foster future opportunities in water trading, demand management and leakage services and our bid assessment framework will provide third parties with confidence that options they propose will be assessed on a level playing field with in-house options.

We believe there is scope for us to incentivise retailers to offer creative demand management services to their non-household customers; a model that could ultimately lead to a cascade of water from water-rich areas to water-stressed areas and drive innovation in the market.



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## 5.1 Introduction

1. For this Chapter, we have included in the following table a description of the terms used in respect of the water resources management plan that we are preparing for the period 2020 to 2080.

Terminology	Description
WRMP19	The water resources management plan that we are preparing, setting out our plans to maintain the balance between water supply and demand over the 60-year period from 2020 to 2080
draft WRMP19 (or dWRMP19)	the draft of the WRMP19 that we prepared for statutory public consultation, which took place between 19 March 2018 and 23 May 2018
revised draft WRMP19 (or rdWRMP19)	The revised draft of the WRMP19 upon which we plan to consult the public in Spring 2019

2. Our WRMP19 will set out our plan to secure the long-term provision of resilient and sustainable water supplies for customers today and tomorrow by explaining how we will adopt a twin-track approach to balancing supply and demand and building supply resilience to last for the next sixty years and beyond to 2080. It will underpin delivery of our second Outcome: making sure you have enough water while leaving more water in the environment.
3. We have prepared our Business Plan investments on the basis of our WRMP19 and our investment programme is fully aligned with our WRMP19. Our programme includes the investments required for the first five years of WRMP19 (see section 5.2). WRMP19 is the product of the consultation that we carried out on our dWRMP19 and it therefore follows that the investments needed to deliver WRMP19 are supported by customers and stakeholders.
4. Our WRMP19 will be our most ambitious to date. It supports our long-term strategic aim to move water around our supply area as freely as possible, laying the foundation for our supply area to operate as a transfer hub for the region, facilitating future water trading. It also includes a new regional resource to be developed with Thames Water (see section 5.3).
5. We will present our rdWRMP19 for further consultation to enable customers and stakeholders to fully understand and engage with our final proposals and to have the opportunity to comment further before we publish our final WRMP19 (see section 5.4).
6. Regional co-ordination through our work with WRSE and WRE has been integral to development of WRMP19 (section 5.5) as is our commitment to exploring the opportunities that water trading can bring, which our Bid Assessment Framework will encourage and support (section 5.6).

## 5.2 Our WRMP19

1. We consulted with customers and stakeholders on our dWRMP19 from 19 March 2018 to 23 May 2018. Our dWRMP19 comprised the “Preferred Plan” and the “Alternative Plan”.

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A summary of the results from the dWRMP19 consultation is presented in Appendix 3<sup>41</sup>. Customers and stakeholders showed very clear support for the Alternative Plan but asked us to be still more ambitious.

2. Our rdWRMP19 will be developed from the Alternative Plan making changes to the Alternative Plan to reflect the representations that we received. It will plan to balance supply and demand into the future without developing any new groundwater from chalk aquifers in our Central region.
3. Our rdWRMP19 will include:
  - Sustainability reductions of 33.71 Ml/day in our Central Region and 2.6 Ml/day in our East Region
  - Leakage reduction of 15% during AMP7 and 50% by 2050
  - A normal year annual average PCC of 129 l/h/d by the end of AMP7 in 2024/5 and further reduction to 110 l/h/d by 2040
  - Water 2040 – this is a long-term strategic plan to enable transfer from our water treatment works on the River Thames towards the north and east and to improve interconnectivity in our Central Region. This enables us to move water around our supply area as freely as possible and prepares our network for future transfers and water trading (“Water 2040”)
  - Conditioning treatment of our supply from Anglian Water to ensure it can be used throughout our Central Region
  - Planning for development of a regional reservoir, working with Thames Water
  - A 1 in 200-year return period drought resilience without the use of additional abstraction from the environment through drought orders and drought permits from 2026 and eradicating the need for rota cuts and standpipes under all drought conditions from 2037, once the new regional reservoir is operating.
4. We have based our investment programme on the investment required for the Alternative Plan, on which we have consulted and for which there was clear support. We have then added investments with demonstrable support in the representations received from customers and/or stakeholders. These additional investments are related to future resilience and are:
  - Strategic supply transfer schemes – these form the first phase of “Water 2040” - £36.67m.
  - Investment in preparing for delivery of the Upper Thames Reservoir in 2037 rather than 2039 as proposed in the Alternative Plan - £18.49m.
5. These two additional investments will lay the foundations for future resilience of supply for our supply area and for the region as a whole. Implementing “Water 2040” will provide us with the capability to move water freely within our Central supply region. This will unlock the potential for our supply area to act as regional transfer hub for South East England including for water from the new regional reservoir.
6. The Table below summarises the investments to be included in our WRMP19 and our Business Plan.

<sup>41</sup> Ipsos MORI, June 2018, *Affinity Water Draft Water Resources Management Plan (dWRMP) Research report*, Traverse, June 2018, *Draft Water Resources Management Plan 2020-2025, Stakeholder Engagement Report* and Arup, July 2018, *Customer Engagement Programme, Triangulation Phase 2*.

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Theme	Description	Totex Cost £m
Sustainability reductions	Improvements in resilience of local networks to facilitate delivery of abstraction reductions of 33.71 Ml/d in our Central region and 2.6 Ml/d in our East region in accordance with WINEP3 by 2024.	58.42
Leakage reduction	Identification and repair of leaks to achieve reductions of 15% in AMP7 on top of the 14% reduction in AMP6.	35.5
Water Saving Programme	Completion of our water saving programme and household metering (forecast to save 18% per household based on evidence of achievement to date).	75.22
Reducing customer consumption reduction measures	Portfolio of projects to achieve demand reduction (normal year annual average PCC of 129 l/h/d by the end of AMP7 in 2024/25) including use of "fast data" to provide customers with surrogate information about their water use, water efficiency measures, smart metering and a behavioural change programme.	65.01
Using our imports to full capacity	Conditioning treatment of our supply from Anglian Water at Sundon to ensure transfers can be used in any zone in Central Region to facilitate further sustainability reductions and preserve resilience of supply to customers.	13.336
Strategic supply transfer	Phase 1 Water 2040: strategic transfers to enable 17 Ml/d from our Thames WTWs (in our Wey Community) to be transferred north and east and other improvements in the connectivity of our network.	36.67
New resource development	Enabling a new 8 Ml/d abstraction from the greensand aquifer.	5.541
Preparation for a regional reservoir	Investment in AMP7 for planning and other items to enable the development of additional resource capacity in the South East by 2037 in partnership with Thames Water.	18.49
Natural capital value	Working with local stakeholders and catchment partnerships to deliver eight pilot schemes to assess the water environment life cycle of those communities and options for enhanced demand management measures through water recycling and studies.	2.00
River morphology	A programme of river restoration and habitat enhancement projects in catchments working with the EA to improve environmental resilience.	19.04
Environmental investigations	WINEP3 programme of environmental investigations.	6.33
Catchment management	Expansion of the Catchment Management programme to reduce the effect of nitrate and pesticide pollution on our resources.	7.11

Table 5.1: Investments to be included in our WRMP19 and our Business Plan.

## 5.3 Regional Reservoir

1. Our WRMP19 includes plans to invest in new resource development as part of a regional scheme to benefit millions of customers in the South East. The preferred strategy is to secure additional reliable water by transferring water from a new regional reservoir in the Upper Thames catchment to be developed with Thames Water, which could support new abstractions in the Lower River Thames reaches.

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2. This project would include a new surface water abstraction, a new raw water treatment facility, transfers and pumping stations. It will be delivered alongside improvements in our ability to move and distribute water within our Central region as a result of Supply 2040. It forms part of our longer-term strategy to expand our strategic network to further enhance resilience.
3. Planning long-term resilience in this way means we are able to link our own nearer term requirements for resilience and our neighbouring companies' long-term requirements in order to benefit as many customers as possible in a water stressed region.
4. The scheme will support our meeting of an extreme drought (1 in 500-year event) by 2037. Large reservoir schemes have a minimum 15-year 'lead in time'. We are co-ordinating with Thames Water who are also planning for the need in AMP10. We have included development costs in our investment programme to support the later procurement and civil construction phases of the project. The project is likely to be delivered through direct procurement.

## 5.4 Our WRMP19 Timeline

1. The next step in finalisation of our WRMP19 is publication of our Statement of Response to the representations received to the consultation on our dWRMP19. The Statement of Response will:
  - detail the consideration that we have given to representations received in response to the consultation;
  - explain changes to be made to the rdWRMP19 as a result of that consideration; and
  - where no change is made provide a reason for this.

We will publish our Statement of Response on or before 31 October 2018. We intend to prepare our rdWRMP19 and to carry out a further consultation on our rdWRMP19 in Spring 2019.

2. The purpose of the proposed further consultation is to explain clearly to stakeholders the single rdWRMP19 that we propose to adopt, which includes Upper Thames Reservoir brought forward to 2037 from 2039. It will also inform any refinements needed to the rdWRMP19. This is particularly important in circumstances where the rdWRMP19 could be scrutinised at a public inquiry.
3. As all of the investment in the rdWRMP19 was already included in the Alternative Plan, or has been added to the rdWRMP19 in response to representations received during the statutory consultation, we do not expect any change to the investment programme included in the Business Plan for AMP7 as a result of this further consultation. We intend to publish our final WRMP19 on or before 31 July 2019.

## 5.5 Regional Coordination

1. An important strategic element of resilience in water resources is the regional context. We have taken a leading role in the WRSE project, supported WRE and participated on the steering group of the Water UK Long Term Water Resources Plan, working with the Environment Agency and other water companies to assess strategic water supply opportunities across the regions.

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2. We have undertaken significant inter-company and third-party collaboration to support potential regional solutions. Identifying options and cross border supplies, from all our neighbouring water companies, has been a crucial component in the development of our WRMP19.
3. The development of the latest WRSE strategy has seen significantly more co-ordination between member companies both at strategic and technical level than ever before. Together we are committed to continuing our collaborative work, for the benefit of customers and the environment. We want to reach further, so that we can more efficiently plan and manage this scarce resource at a regional level. We have an ambitious agenda that we recognise can be achieved by our working together as a cohesive group of six companies, rather than acting in isolation. The evolution of the WRSE provides the ability for the group to significantly increase its leadership for water management and resilience for the south east.
4. Change is needed: the current WRMP process has successfully increased resilience over time and has supported population growth and environmental enhancement across the region. However, the process alone doesn't deliver the level of resilience to drought now expected, or the true value or utility of water. The parameters of planning have changed and regional groups can address this.
5. The WRSE offers great benefits in terms of innovation and savings, from efficiency of technical work; scale of endeavour and sharing resources. While additional funds are being put forward initially, the WRSE will be cost-beneficial overall.
6. By increasing our inputs to the group, the WRSE has the potential to develop a single regional water resource management plan for the region; develop a 'trading hub' for the southeast; be resilient to increasing pressures including extreme drought; be able to embrace the direction of travel set out by the Defra 25-year Plan and National Infrastructure Commission Water Infrastructure Plan; and work collaboratively with other regional groups and the proposed Environment Agency National Framework.
7. We believe that a system operator function could operate as a key enabler to promote water trading as an economic and resilient solution to water scarcity in the South East and have put forward proposals for the structure of WRSE in AMP7 operating within a national framework. We welcome recent endorsement of this approach from DEFRA and Ofwat.
8. We have been instrumental in promoting collaboration and an extension of the scope of the WRSE to include development of regional strategic plans, with a facility to support companies during periods of operational challenges such as droughts and floods.
9. We have developed a specific operational accounting tool to facilitate a transparent access price for our operational zones from District Meter Area level upwards. This Activity Based Costing model is configurable for the division between water resources and network plus price controls and collates all maintenance and replacement costs associated with our infrastructure and non-infrastructure assets to build accurate and reliable site and transfer prices per zone. We are keen to share this model with other companies in the WRSE to complement Ofwat's water resources market information platform.
10. As part of our consultation process we led a WRSE/Water UK drought Sprint event which concluded that extreme drought would cause immeasurable adverse economic effects to many industry sectors in the London area and should be prevented by improving drought

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resilience and avoiding service restrictions and standpipes. We have taken account of this feedback and have built accelerated delivery of additional resilience measures into our WRMP19.

11. The WRE project seeks to address water resource planning issues in a new and innovative way, and we aim to emulate the strength of that stakeholder approach in our proposed Lee Community project in AMP7.

## 5.6 Trading of Water and Sourcing of Water Resource, Demand Management and Leakage Services

1. We are also interested in opportunities to trade with parties that are not members of WRSE or WRE. We are willing to trade with any party that either wishes to take from us, or offer to us, a reasonable volume of reliable, sustainable and cost-effective water resources. During pre-consultation for our draft WRMP19 we invited offers for trading new supplies under our current procurement process.
2. In preparing our WRMP19 we identified possible schemes to provide additional water resources and transfers from neighbouring water companies and third parties. Each of these options was defined and priced in accordance with the methodology set out in the Water Resources Planning Guidelines.
3. We then undertook an investment appraisal to identify the best portfolio of options to either increase the amount of water available, reduce water demand or both, using a least cost model known as the Economics of Balancing Supply and Demand (EBSD) model. The model identifies the least cost solution, in all years of the planning period, under every planning condition. As a result, our WRMP19 includes changes to existing cross border supply agreements and new transfers from 2020 for both security of supply and to meet the challenge of sustainability reductions.
4. We are keen to see more of these water trading opportunities come forward in the future. We are also keen to benefit from the innovation and ideas of third party providers of leakage and demand management services.
5. The Affinity Water Limited Trading and Procurement Code (“Code”) sets out the policies, principles and requirements that will apply in respect of trades of water between Affinity Water and third parties including other water companies. Ofwat have consulted on this and has approved this Code (see Appendix 5).
6. We have developed a Bid Assessment Framework (“BAF”) to support the market for water resources, demand management and leakage services. It provides the framework for potential bidders to understand the context, scope, principles and process by which third party providers can bid to supply Affinity Water with these services and gives confidence that third party bids will be assessed fairly alongside in-house solutions.
7. Our BAF includes development of a new “Water Trading Portal” to act as a repository of information, publicise new opportunities and serve as a single point of reference for potential bidders. It explains clearly the stages of our procurement process and how this will interact with development of our future water resources management plans. It also explains that third party and in-house options for new supplies of water are assessed using the EBSD model based on multi-criteria analysis.

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8. We will in due course publish our standardised evaluation criteria to provide further clarity and certainty to bidders. In the case of water trading these criteria will reflect the multi-criteria analysis used by the EBSD model to assess options. These criteria will include factors such as environmental impact, deliverability, risk, resilience and a customer preference comparator.
9. Our BAF sets out two routes for procuring demand management services from third parties. We may seek these in a traditional manner where we have determined the nature of the demand management service we wish to procure. However, we also want to seek “demand management options” where bidders are invited to propose solutions for delivering a defined volume of demand reduction. These will be assessed using the EDBD model based on multi-criteria analysis and again we will publish standardised criteria to enable bidders to understand how their options will be assessed.
10. We have identified an opportunity for retailers to play a significant role in demand management with the attendant benefits of lower costs for all customers and improving resilience through spreading demand reductions across all water users. We envisage that we could provide an incentive to retailers in return for their work in supporting their non-household customers in reducing demand. The figure below illustrates how this would work:

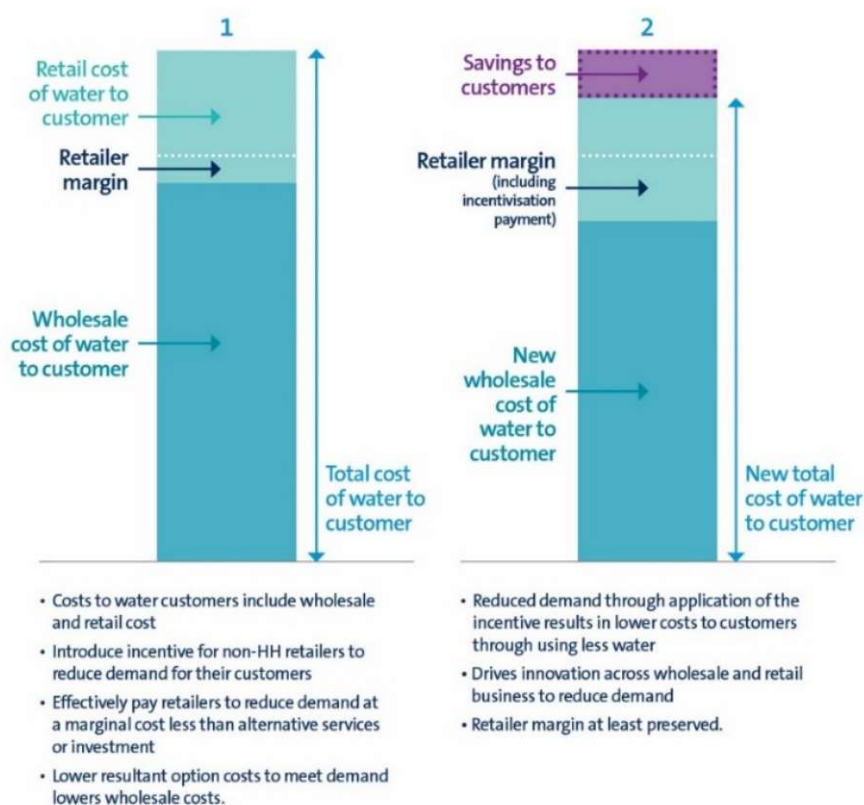


Figure 5.1 Schematic showing how retailers could be incentivised to provide demand management and customer side leakage services

11. The left-hand column shows the components of costs to non-household customers: the wholesale cost, the retail cost and the retailer margin. The right-hand column demonstrates the position following incentivisation and corresponding reduction in non-household customer demand. Non-household customers are paying less because they

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are using less water. The retailer's margin, however, is maintained or increased. This is achieved by us, as wholesaler, paying an incentive that at least compensates for the reduction in the amount of retailer margin that results from the lower non-household customer demand. This benefits all customers because the WRMP portfolio cost falls. At the same time, overall resilience of supply will be improved by sharing demand reductions across the full range of water users.

12. We are aiming to achieve a 13 Ml/d reduction in non-household demand by 2025, which is approximately 10% of the total. We will publicise this opportunity to all retailers to ensure a level playing field and will seek partners to pursue opportunities within our supply area.
13. This is a financial incentive, allied to the work on regional coordination, and because of the nationwide reach of retailers this could lead to the 'cascade' of water from those areas that are water-rich to those that are water-stressed. This has the potential to drive innovation across both the wholesale and retail markets.



### Deliverability Statement

*"We have developed our Drought Management and Water Resources Management Plans as integral inputs to our Business Plan such that we have robust plans for both the next 5 years as well as looking ahead to 2060. We have mapped out the challenges we face in meeting population growth at the same time as our resource base is diminishing as a result of climate change, sustainability reductions and pollution. We are planning to improve resilience of supplies in severe to extreme drought to prevent damaging the economy of London and the South East. Our Plan shows how we have set ourselves ambitious targets to reduce leakage in the short and longer terms and work in partnership with our customers and stakeholders to reduce consumption. We are also acting to make best use of our existing resources to plan for additional resources in the future at a fair price in conjunction with other companies through the Water Resources in the South East group. A key part in our delivery plan is working in partnership with Thames Water on the development of a new regional storage reservoir in Oxfordshire and this work is already underway."*

**Director of Asset Strategy**

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## 5.7 How our WRMP addresses Ofwat's four Price Review themes

### Great customer service

The investment proposed by our rdWRMP19 ensures we will be able to meet our outcomes and Performance Commitments in AMP7 which will improve our customer service across many areas.

### Affordable bills

Our thorough and robust approach to supply / demand planning through our dWRMP19 and rdWRMP19 has ensured our proposed investment is best value for customers in the long term and necessary to meet our statutory duty to supply water and meet our levels of service.

We recognise some customers are already water efficient but many are not and we will do more to provide detailed information on their consumption to encourage behavioural change to reduce use which in turn will enhance resilience

### Innovation

Our rdWRMP19 proposes a wide variety of solutions to meet customer demand into the future. Some of these involve cutting edge solutions which are pushing the boundaries of new technologies such as our conditioning plant to ensure our import from Anglian Water can be used throughout our Central region for the long-term and our fast data option to help manage demand.

We have promoted the regional co-ordinator principle in WRSE in conjunction with transparent pricing for transfers between water resource zones and companies to obtain access to new future resources at a fair price.

### Long term resilience

Our rdWRMP19 proposes investment to maintain our current resilience and to provide additional resilience to ensure we can meet demand under more severe planning conditions. Our involvement in WRSE and WRE encourages regional transfers and our support for the Regional Reservoir will enable more resilient water supplies to the South East for the longer term.

We have been working in partnership with the Environment Agency since 1990 to reduce the effect of our operations on the water environment. We reduced abstraction by 40 MI/d before AMP6, by a further 42 MI/d during AMP6 and plan a further reduction of 36 MI/d in AMP7. We will also continue our successful programme of river restoration and habitat enhancement, catchment management.

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## 6 Delivering our Investment Plan

Our AMP7 Wholesale Investment Plan provides for total planned expenditure (Totex) for 2020 to 2025 of £1,373m. This will allow us to deliver our statutory obligations, our outcomes and our performance commitments for customers and the environment.

Our maintenance Totex (£946m) will be approximately 4% lower than for AMP6 but we will be delivering better outcomes and improved performance as a result of making stretching and challenging efficiencies.

Our enhancement Totex (£427m) is 104% higher than for AMP6. This is driven by the environmental requirements set out in the Water Industry National Environment Programme and by expenditure to ensure future water supply and environmental resilience.

Our Investment Plan includes £347.23m of investments on environmental enhancement, contributing towards achieving Water Framework Directive objectives through planning for the delivery of 36.3 Ml/d sustainability reductions, carrying out investigations and options appraisals, and morphological works to improve over 157km of river. It includes all WINEP3 measures.

We are adopting a twin-track approach to resilience with investment in improving the security of our supply for the future while at the same time seeking to reduce customer demand. Our supply-side investments include development of a new regional reservoir working with Thames Water. We will also be installing conditioning treatment for water from Grafham WTW to ensure that we can supply water anywhere in our Central Region. We will also be implementing the first phase of Water 2040, putting in place a new strategic transfer route to move water abstracted from the River Thames further north in our Central Region and will also be making improvements on a more local scale. These local improvements in connectivity are essential to delivery of sustainability reductions. This investment will also lay the foundation for future water transfers and trading.

We are also planning to reduce customer demand and are planning a range of measures to achieve this, including the continuation of our ten-year water saving programme and the use of fast data. This will combine data from Automated Meter Reading (AMR) meters with data from logging and network hydraulic models to provide customers with information about water use in their locality.

We are proud to be investing across our communities so that each continues to be resilient while ensuring water is used as efficiently as possible and the environment is protected and enhanced.

Our delivery will be efficient and innovative. We consider innovation to be essential in an ever-changing world as we deliver more for less in meeting our stretching Performance Commitments and delivering our Outcomes. We will need to be innovative to deliver our sustainability reductions, identifying and implementing innovative solutions to reconfigure our supply system and transfer replacement water to maintain resilience of supplies to customers. We will continue to invest in innovative technology to ensure the highest quality of drinking water, for example we lead the industry in using on-line monitoring for pesticides.



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## 6.1 Introduction

1. This Chapter summarises our AMP7 Wholesale Investment Plan to facilitate the delivery of our key statutory obligations. These include: developing and maintaining an efficient and economical system of supply; treating and supplying wholesome water to strict water quality standards; providing new connections services to facilitate development and economic growth; promoting water efficiency; maintaining the safety of reservoirs; and preparing plans for long term water resources, the management of drought and security and emergency events; and the statutory requirements set out in the Water Industry Strategic Environmental Requirements (WISER).
2. Our statutory obligations are aligned to our Outcomes and PCs and reflected in our AMP7 Wholesale Investment Plan, hereby referred to as the 'Investment Plan'.



3. Our Investment Plan will facilitate the delivery of our 19 PCs.

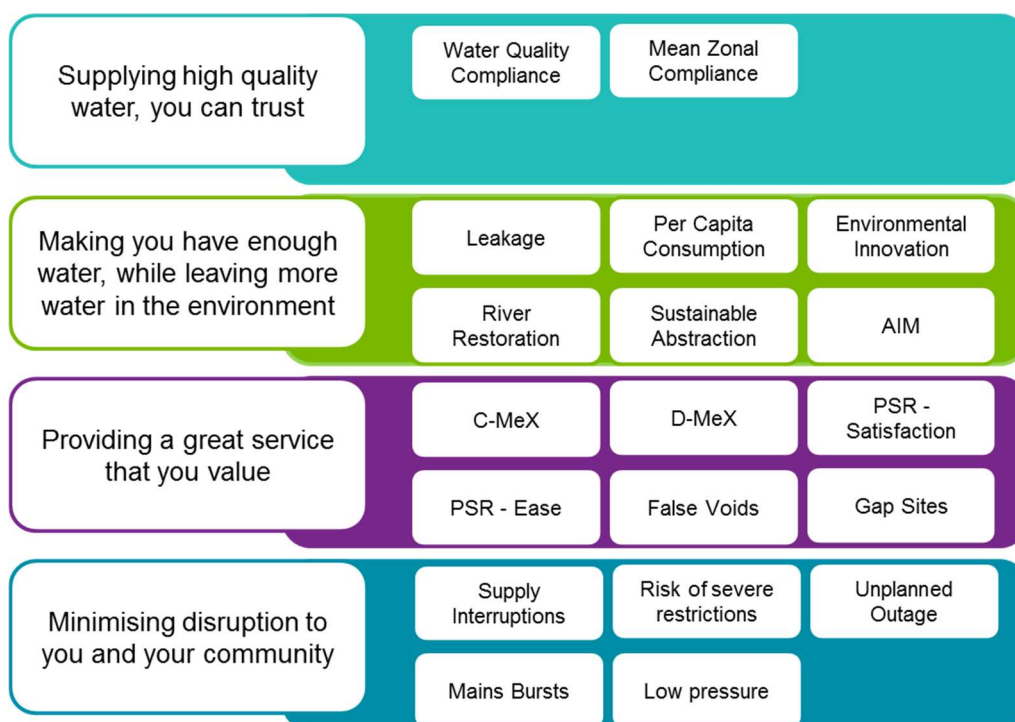


Figure 6.1: Our Outcomes and PCs

4. In AMP7 we plan to invest £1,373m in meeting our statutory and licence obligations and delivering our Outcomes and our PCs. The highlights of our Investment Plan are shown in the table below, and the proportion of Totex relevant to each Outcome is illustrated in the table below.

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Investment	Totex	Highlights	Outcomes			
Environment	£93.89m	25 investigations and options appraisals on the impact of our abstractions on water bodies	Making sure you have enough water while leaving more water in the environment	Supplying high quality water you can trust	Providing a great service that you value	
		36.31Ml/d of sustainability reductions				
		Six catchment investigations and 17 catchment improvement schemes				
		Improvements to 157km of rivers				
Non Infrastructure	£414.69m	Enhancing biodiversity at our landholdings	Supplying high quality water you can trust	Making sure you have enough water while leaving more water in the environment	Minimising disruption to you and your community	Providing a great service that you value
		Replacement of 11Ml of storage assets and disconnection of 18 disused storage assets				
		Nitrates removal treatment at 4 treatment works				
		Utilisation of full treated water import from Anglian Water under average and peak conditions				
		Production plant maintenance				
		Reducing PCC to 129 l/h/d by 2025				
		8 environmental community pilot schemes				
		10% reduction in energy consumption and 40% reduction in grid energy by 2030				
Infrastructure	£294.98m	Planning for regional reservoir	Minimising disruption to you and your community	Making sure you have enough water while leaving more water in the environment	Supplying high quality water you can trust	Providing a great service that you value
		117,000 meter replacements				
		Trunk main renewals				
		3 minute supply interruption PC				
		210km of distribution mains renewal				
		Replacing lead service pipes				
Business Improvement	£49.54m	Water 2040 – Strategic transfer of 17Ml of water in the Wey community and maintaining supply resilience	Supplying high quality water you can trust	Making sure you have enough water while leaving more water in the environment	Providing a great service that you value	Minimising disruption to you and your community
		80,000 new connections				
		15% leakage reductions				
		Future business planning				
Base Opex	£519.88m	IT maintenance				
Totex	£1372.98m	Business support and continuity				

Figure 6.2: Highlights of our Investment Plan

## 6.2 Delivering our Outcomes for Customers

### 6.2.1 Supplying high quality water, you can trust

1. Customers have told us they expect us to supply high quality water. Our Investment Plan includes:

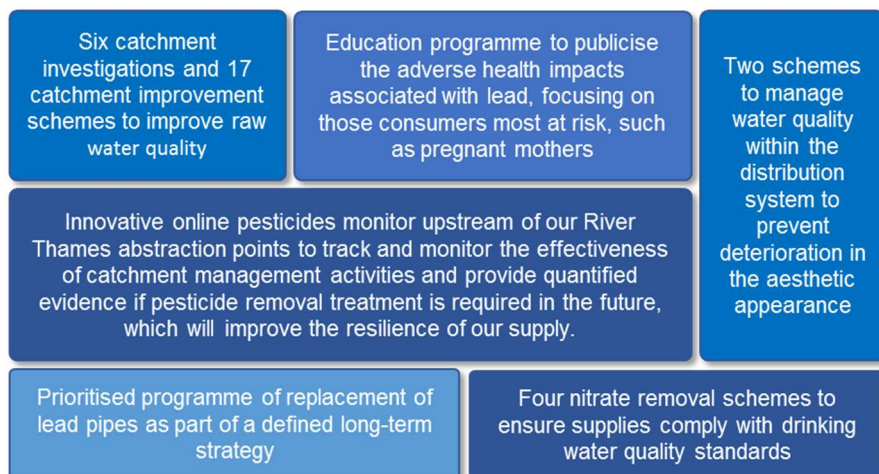


Figure 6.3: Plan proposals for Supply high quality water you can trust

### 6.2.2 Making sure you have enough water, while leaving more water in the environment

1. Customers have told us they want to play their part in saving water and safeguarding the environment, and they want us to reduce leakage. Our Plan includes:



Figure 6.4: Plan proposals for Making sure you have enough water, while leaving more water in the environment

### 6.2.3 Providing a great service that you value

- Customers have told us they want water to be affordable and they want to be communicated with in a personalised, relevant and timely way. Our Plan includes:



Figure 6.5: Plan proposals for Providing a great service that you value

### 6.2.4 Minimising disruption to you and your community

- Customers have told us they expect good water pressure and want to continue to experience an uninterrupted supply. They expect proactive, accurate and speedy responses to incidents. Our Plan includes:

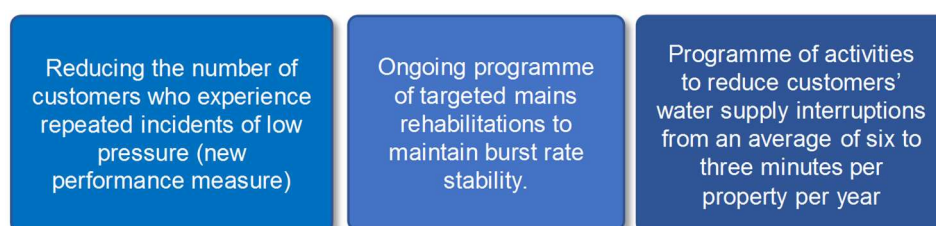


Figure 6.6: Plan proposals for Minimising disruption to you and your community

## 6.3 Total expenditure

### 6.3.1 Overview

- Our total costs to deliver the Investment Plan are £1,372.98m comprising the costs and developer contributions shown in the following table. Base opex is our core operational expenditure. Incremental opex is operating expenditure associated with delivering specific capital investment programmes or otherwise allocated to a specific investment programme.

Capex (£m)	Developer Contributions (£m)	Incremental Opex (£m)	Base Opex (£m)	Totex (£m)
776	(33)	110	520	1,373

Table 6.1: Wholesale Totex for AMP7

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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- Our Investment Plan comprises Totex relating to maintenance expenditure and Totex relating to enhancement expenditure as shown in the table below.

Totex	Description	Totex (£m)
Maintenance	Baseline expenditure required to maintain levels of service to our current customers. This includes maintaining our assets effectively, continuing to meet our existing statutory obligations.	946
Enhancement	Enhancement expenditure required to improve service and deliver new benefits to customers and the environment.	427
<b>Total</b>		<b>1,373</b>

Table 6.2: Wholesale Totex for AMP7

- Maintenance Totex for AMP7 is approximately 4% lower than for AMP6, while enhancement Totex for AMP7 is approximately 104% higher. While maintenance Totex is lower, we will deliver better outcomes and improved performance in 2020 to 2025 because of stretching and challenging efficiencies. The increase in enhancement Totex is being driven by the requirements of WINEP3 and our WRMP and ensuring future resilience. See Sections 6.6 and 6.7 below.

### 6.3.2 Price Control Allocation

- Allocation of planned expenditure is detailed in the table below. We have allocated expenditure in support of WRSE and work towards the development of the regional water resources plan in the Water Resources price control.

	2020/21	2021/22	2022/23	2023/24	2024/25
Water Resources (£m)	58	60	56	56	33
Network Plus (£m)	237	234	226	208	205
	AMP7 TOTAL				1,373

Table 6.3: Price control allocation

### 6.3.3 Investment Plan sub-portfolios

- Our Investment Plan and the associated Totex are divided into a number of sub-portfolios as shown in the following table:

Sub-portfolio	Description
Environment	Investment programmes relating to protection and improvement of the environment
Non-Infrastructure	Investment programmes relating to treatment works and other assets
Infrastructure	Investment programmes relating to our network of pipes
Business Improvement	Business planning, IT and spend to save
Wholesale Operating Costs	Operating costs not specifically allocated as incremental operating costs to the other sub-portfolios

Table 6.4: Wholesale Investment Plan Sub-Portfolios

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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### 6.3.4 Profile of expenditure

1. The profile of Totex is shown in the graph below. It is largely driven by the capital expenditure required to meet the delivery dates of the WINEP programme.

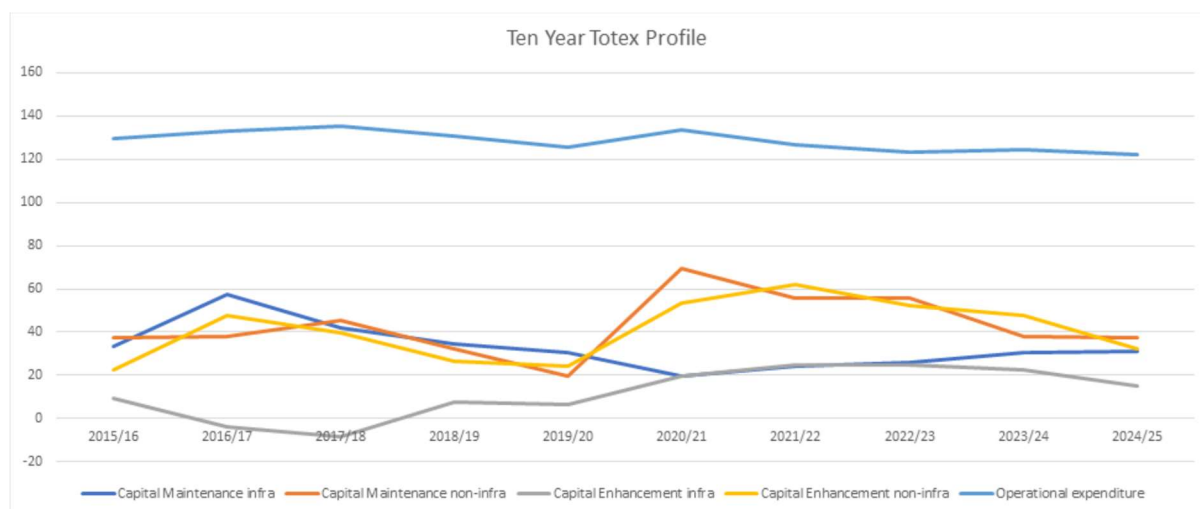


Figure 6.7: Expenditure high-level breakdown of expenditure for 2020 to 2025

### 6.3.5 Cost Adjustment Claims

1. Our cost adjustment claims are detailed in data table Wn6 and the supporting commentary. We have included £54.2m as cost adjustment claims that should be specifically allowed for in Ofwat's Totex baseline assessment: high average occupancy; treatment complexity; and regional wages. In our May 2018 submission, we included Sundon conditioning works as a cost adjustment claim but have removed this as a cost adjustment claim as this investment forms a central part of our wider enhancement programme to tackle the operational impacts of abstraction reduction to deliver WINEP3.

## 6.4 Maintaining our current service

### 6.4.1 Overview

1. We describe below the investment programmes that will enable us to maintain our levels of service. Our investment programme includes the following maintenance expenditure split across four sub-portfolios as follows:

Expenditure Type	Environment (£m)	Non-infrastructure (£m)	Infrastructure (£m)	Business Improvement (£m)	Total (£m)
Maintenance non-infrastructure Capex	0	220.68	0	35.27	255.93
Maintenance infrastructure Capex	0	1.57	129.79	0	131.36



Expenditure Type	Environment (£m)	Non-infrastructure (£m)	Infrastructure (£m)	Business Improvement (£m)	Total (£m)
Incremental Opex	0	5.27	60.97	0.72	66.96
Totex	0	227.52	190.76	35.99	454.25
Base Opex					491.88
Total Maintenance Expenditure					946.13

Table 6.5: Wholesale maintenance Totex

## 6.4.2 Non-infrastructure sub-portfolio

- Our £227.52m<sup>42</sup> of non-infrastructure maintenance expenditure will ensure we maintain our above ground assets, including reservoirs, water towers, boosters and water treatment works and is shown in the following table.

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
PIONEER	Modelled spend on existing asset maintenance	85.16	0	85.16
Storage	Refurbishment of storage assets to maintain structural integrity; provision of three new service reservoirs and disconnection of disused storage assets.	19.63	1.37	21.00
Treatment	Projects at our water treatment works to safeguard water quality.	54.81	3.9	58.71
Nitrates	Provision of nitrate removal.	7.47	0	7.47
Lab equipment	Purchasing and installation of specified equipment for our laboratory.	1.83	0	1.83
Vehicles	Purchasing of vehicles	0.35	0	0.35
Shared reservoir	Contributions for our shared reservoir that supplies our Brett Community	1.65	0	1.65
Energy strategy	Strategy to mitigate the risk of rising energy prices and secure resilient long-term supplies including delivery on-site	19.70	0	19.70

<sup>42</sup> This capex spend is made up of £220.68m of maintenance non-infrastructure and £1.57m of maintenance infrastructure for regulatory purposes. The maintenance infrastructure spend is associated with two specific treatment investments: management of aluminium at our EGHA WTW; and addressing single points of failure within our supply system. This results in incremental opex of £2.93m.

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
	electricity generation, for example using photovoltaic cells.			
Meter replacement	Replacement of meters on a reactive basis.	22.00	0	22.00
Ongoing asset management	Maintenance and improvements in data systems and reporting, maintenance of hydraulic models and assessment and analysis of asset health.	9.65	0	9.65
<b>Total</b>		<b>222.25</b>	<b>5.27</b>	<b>227.52</b>

Table 6.6: Non-infrastructure sub-portfolio maintenance Totex

### 6.4.3 Infrastructure sub-portfolio

1. We have allocated £190.77m to maintaining our network to enable continuity of supply of water and existing levels of service to customers. This is how we will keep leakage at the level reached at the end of AMP6 and maintain our network in its current condition. Our investment programmes are summarised below:

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Distribution Mains	Renewal of distribution mains and communication pipes to maintain asset health.	38.00	0	38.00
Trunk Mains	Renewal of trunk mains to maintain asset health.	33.74	0	33.74
Maintaining adequate pressure	Maintaining minimum pressure for our customers	1.25	0	1.25
Leakage	Managing, control and reducing leakage and replacing communication pipes, stop taps, valves, hydrants and washouts to reduce leakage.	54.17	0	54.17
Leakage	Operational “fix and find” to maintain leakage at levels achieved at the end of AMP6.	0	36.48	36.48
Interruptions to supply	Delivering improvements in supply interruptions through aligning of key skills and 24/7 working, providing for network service desk and ensuring availability of tools / equipment.	0	24.50	24.50

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
National infrastructure contributions	Contribution to works to facilitate construction of national infrastructure e.g. HS2 and Heathrow Extension.	2.63	0	2.63
<b>Total</b>		<b>129.79</b>	<b>60.97</b>	<b>190.77</b>

Table 6.7: Infrastructure sub-portfolio maintenance Totex

## 6.4.4 Business Improvement sub-portfolio

1. Our Business Improvement sub-portfolio encompasses business planning and other business-wide activities:

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Business planning	This includes developing our future business plan and drought management plan.	4.85	0	4.85
IT	Maintenance and replacement of essential IT infrastructure and enhancements for IT infrastructure.	20.42	0.72	21.14
Spend to save	Investments that will reduce our overall costs.	10	0	10
<b>Total</b>		<b>35.27</b>	<b>0.72</b>	<b>35.99</b>

Table 6.8: Business Improvement sub-portfolio maintenance Totex

## 6.5 Enhancement

### 6.5.1 Overview

1. We are planning to deliver an ambitious programme for securing long-term resilience of supplies and environmental enhancement. Our investment programme includes the following enhancement expenditure that splits across four sub-portfolios as follows:

	Environment (£m)	Non-infrastructure (£m)	Infrastructure (£m)	Business Improvement (£m)	Total (£m)
Enhancement non-infrastructure	51.01	160.71	19.58	8.55	<b>239.85</b>
Enhancement infrastructure	42.89	18.49	82.61	5	<b>149.00</b>

	Environment (£m)	Non-infrastructure (£m)	Infrastructure (£m)	Business Improvement (£m)	Total (£m)
Incremental Opex	0	7.99	35.51	0	43.50
<b>Total</b>	<b>93.90</b>	<b>187.19</b>	<b>137.72</b>	<b>13.55</b>	<b>432.35</b>
Developer Services Contribution					(33.49)
Base Opex					28.00
<b>Total Enhancement Expenditure</b>					<b>426.90</b>

Table 6.9: Enhancement Totex

- 1 In two cases these investments in enhancement have an associated incremental opex. We anticipate an increase in the cost of water from Grafham and additional site energy and waste disposal costs as a result of the changes we are making during AMP7, adding £28m to our base opex.

## 6.5.2 Environment sub-portfolio

1. This portfolio contains £93.9m of expenditure related to environmental projects. Other investments delivered through the non-infrastructure and infrastructure sub-portfolios are also essential to supporting achievement of Water Framework Directive objectives and WINEP3 measures and the requirements of WISER (see section 6.6 below).

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Sustainability reductions <sup>43</sup>	Enabling the local implementation of WINEP3 sustainable abstraction reductions.	58.42	0	58.42
Abstraction impact assessments	WINEP3 investigations and options appraisals	6.33	0	6.33
Catchment Management	Working collaboratively with farmers, regulators, water companies to identify, investigate and mitigate the rises of diffuse pollution.	7.11	0	7.11
River enhancement	Improving river flows and morphology to benefit habitats.	19.04	0	19.04

<sup>43</sup> The cost of local delivery of sustainability reductions is split between enhancement infrastructure (£42.89m) and enhancement non-infrastructure (£15.53m).

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Biodiversity	A mix of projects to enhance biodiversity on sites we own and manage and more widely.	3.00	0	3.00
<b>Total</b>		<b>93.90</b>	<b>0</b>	<b>93.90</b>

Table 6.10: Environment sub-portfolio enhancement Totex

### 6.5.3 Non-Infrastructure sub-portfolio

1. We are planning to make improvements to our Water Treatments Works, abstractions and water quality monitoring programmes. This includes installation of conditioning treatment at Sundon to condition treated water to enable us to supply water from Grafham WTW throughout our Central region, part of our long-term strategy to move water freely around our Central region.
2. Our non-infrastructure portfolio also includes development of a new regional resource, working with Thames Water (£18.49m), and our ambitious programme to reduce customer consumption of water (£140.23m). We also intend to invest £2m in environmental and resilience community pilot projects.

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Upper Thames regional reservoir <sup>44</sup>	First stages of Development of a new reservoir.	18.49	0	18.49
Pesticides	On-line pesticide monitoring	1.20	0	1.20
Nitrates	Provision of nitrate removal.	2.49	0	2.49
Sundon conditioning	Conditioning treated water received from Grafham so that it can distributed more widely in our Central region enabling us to use our full statutory entitlement.	11.22	2.12	13.34
Treatment	Treatment investment including improvements at Horsley Cross WTW and development of a new resource at RUNGS	9.44	0	9.44

<sup>44</sup> The cost of preliminary work to develop the new reservoir is allocated to enhancement infrastructure for regulatory purposes but this investment programme forms part of our non-infrastructure sub-portfolio.



Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Reducing customer consumption	Activities to reduce customer consumption including continuation of our water savings programme, the use of “fast data” to provide customers with surrogate information about their water use, implementing community water efficiency schemes, water re-use schemes, and contribution to national campaigns.	134.36	5.87	140.23
Resilience and Environment Community Pilot Projects	Eight pilot projects, one for each community, to consider aspects of water use and the water cycle.	2.00	0	2.00
<b>Total</b>		<b>179.2</b>	<b>7.99</b>	<b>187.19</b>

Table 6.11: Non-infrastructure sub-portfolio enhancement Totex

## 6.5.4 Infrastructure sub-portfolio

1. We are planning to invest £137.72m in improvements to our network to deliver our performance commitments for leakage and low pressure and to implement the first phase of Supply 2040, our long-term strategy to move water freely around our supply area laying the foundation for future water transfers and water trading.

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Supply 2040 <sup>45</sup>	Implementation of the first phase of a long-term strategy to move water freely in our supply area including a strategic transfer allowing 17 l/d of water to be moved from our Thames WTW further north in our Central Region.	36.67	0	36.67
Leakage	Operational fix and find to achieve leakage reduction of 15% over AMP7.	0	35.51	35.51
Lead	Refurbishment and replacement of lead communication pipes and educational programme.	9.2	0	9.2

<sup>45</sup> The cost of Supply 2040 is split between enhancement infrastructure (£18.33m) and enhancement non-infrastructure (£18.33m).

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Low pressure <sup>46</sup>	Reducing instances of poor pressure making use of data from our pressure loggers.	2.5	0	2.5
Developer services	The provision of services to customers, developers, NAVs and self-lay providers to enable the laying, connection and diversion of pipes.	53.84	0	53.84 <sup>47</sup> 20.35 (net)
<b>Total</b>		<b>102.21</b>	<b>35.51</b>	<b>137.72</b> <b>104.23 (net)</b>

Table 6.12: Infrastructure sub-portfolio enhancement Totex

## 6.5.5 Business Improvement

1. We plan to invest £13.55m in development of our next water resources management plan including a number of water resources feasibility studies to better understand the engineering challenges of meeting future resource needs, in particular water transfers and trading.

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Business Planning	Development of our Water Resources Management Plan 2024 ("WRMP24") <sup>48</sup> , membership of WRSE and water resources feasibility studies	13.55	0	13.55
<b>Total</b>		<b>13.55</b>	<b>0</b>	<b>13.55</b>

Table 6.13: Business Improvement sub-portfolio enhancement Totex

## 6.6 Delivering for the environment

1. We have included in our Investment Plan significant investment targeted at protecting and enhancing the water environment. This investment meets all environmental requirements included in WINEP3 and statutory obligations as identified in WISER (see Appendix B).
2. Much of this investment will contribute to achieving Water Framework Directive objectives but we are also intending to invest in a biodiversity programme and in resilience and environmental pilot projects. We will use natural capital accounting and ecosystem

<sup>46</sup> The cost of our low-pressure investment programme is split between enhancement infrastructure (£1.25m) and enhancement non-infrastructure (£1.25m).

<sup>47</sup> £53.84m is the estimated gross capital cost of the developer services function. Contributions of £33.49m are anticipated meaning that the net cost is £20.35m.

<sup>48</sup> The cost of developing our water resources management plan, which forms part of our business planning, is split between enhancement infrastructure (£5m) and enhancement non-infrastructure (£2m).

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services assessment to calculate the benefits of these projects. The table below sets out this expenditure on environmental enhancement in more detail:

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Sustainability reductions	Enabling the local implementation of 36.3 Ml/d WINEP3 sustainable abstraction reductions by improving the connectivity of our network.	58.42	0	58.42
Leakage	Operational fix and find to achieve leakage reduction of 15% over AMP7	0	35.51	35.51
Reducing customer consumption	Activities to reduce customer consumption including continuation of our water savings programme, the use of “fast data” to provide customers with surrogate information about their water use, implementing community water efficiency schemes, water re-use schemes, and contribution to national campaigns.	134.36	5.87	140.23
Supply 2040	Implementation of the first phase of a long-term strategy to move water freely in our supply area including a strategic transfer allowing 17 l/d of water to be moved from our Thames WTW further north in our Central Region.	36.67	0	36.67
Treatment	Development of new resource from the greensand aquifer.	5.54	0	5.54
Upper Thames regional reservoir	First stages of Development of a new reservoir.	18.49	0	18.49
Conditioning Treatment at Sundon	Conditioning treated water received from Grafham so that it can be distributed more widely in our Central region enabling us to use our full statutory entitlement.	11.22	2.12	13.34
WRSE	Participation in WRSE and WRE.	1.55	0	1.55
Resilience and Environment Community Pilot schemes	Eight pilot projects, one for each community, to consider aspects of water use and the water cycle.	2.00	0	2.00

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Catchment Management	Working collaboratively with farmers, regulators, water companies to identify, investigate and mitigate the rises of diffuse pollution.	7.11	0	7.11
Abstraction impact assessments	25 WINEP3 investigations and options appraisals	6.33	0	6.33
River enhancement	Improving river flows and morphology of over 157km of river to benefit habitats.	19.04	0	19.04
Biodiversity	A mix of projects to enhance biodiversity on sites we own and manage and more widely.	3.00	0	3.00
<b>Total</b>		<b>303.73</b>	<b>43.5</b>	<b>347.23</b>

Table 6.14: Environmental investment Totex

## 6.7 Delivering Resilience

1. Our investment programme adopts a twin-track approach to resilience with investment in improving the security of our supply for the future while at the same time seeking to reduce customer demand. The table below sets out this expenditure in more detail:

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Upper Thames regional reservoir	First stages of development of a new reservoir.	18.49	0	18.49
Business planning	Preparing for and attending a public inquiry into provision of the new reservoir.	5	0	5
Conditioning Treatment at Sundon	Conditioning treated water received from Grafham so that it can distributed more widely in our Central region enabling us to use our full statutory entitlement.	11.22	2.12	13.34

Investment Programme	Description	Capex (£m)	Incremental Opex (£m)	Totex (£m)
Supply 2040	Implementation of the first phase of a long-term strategy to move water freely in our supply area including a strategic transfer allowing 17 l/d of water to be moved from our Thames WTW further north in our Central Region.	36.67	0	36.67
Sustainability reductions	Enabling the local implementation of WINEP3 sustainable abstraction reductions by improving the connectivity of our network.	58.42	0	58.42
Reducing customer consumption	Activities to reduce customer consumption including continuation of our water savings programme, the use of “fast data” to provide customers with surrogate information about their water use, implementing community water efficiency schemes, water re-use schemes, and contribution to national campaigns.	134.36	5.87	140.23
<b>Total</b>		<b>264.16</b>	<b>7.99</b>	<b>272.15</b>

Table 6.15: Securing long-term resilience investment Totex

- Our supply-side investments include development of a new regional reservoir, working with Thames Water. They will also allow us to implement the first step of being able to move water freely around our supply area addressing potential barriers to future water transfers and trading; namely differences in the chemical qualities of water abstracted from different sources and the ability to move water around efficiently.
- Our investment at Sundon is to condition treated water to make the chemical composition of the final water closer to the chemical composition of water we abstract from our groundwater sources. This will allow us to supply this water anywhere in our Central region.
- We are improving the connectivity of our network through the first phase of Supply 2040. We will be putting in place a new strategic transfer route to move water abstracted from the River Thames further north in our Central region and will also be making improvements on a more local scale. These local improvements in connectivity are essential to delivery of sustainability reductions.
- We are also planning to reduce customer demand, with a range of measures planned to achieve this. These include:
  - Water Saving Programme – we will continue to deliver our ten-year water saving programme into AMP7, installing meters and offering customers water efficiency advice.



- Fast Data – this will use existing Automated Meter Reading (AMR) meters in combination with fast logging and live network hydraulic models to provide customers with surrogate information about their water use, to mimic the consumption data that would be provided by a smart meter. This provides customers with a much more detailed picture of their water use.
- Water re-use schemes – as an example, we are working with a retailer to install a rainwater harvesting system at an airport.
- National water efficiency campaign - working with others at a regional and national level to encourage water efficiency.
- Water efficiency schemes – making water efficiency schemes available to customers.
- Non-household metering –installing meters for non-household users that do not already have them.

## 6.8 Delivering for our communities

1. Our Investment Plan balances £1.373m Totex expenditure across our eight community areas.

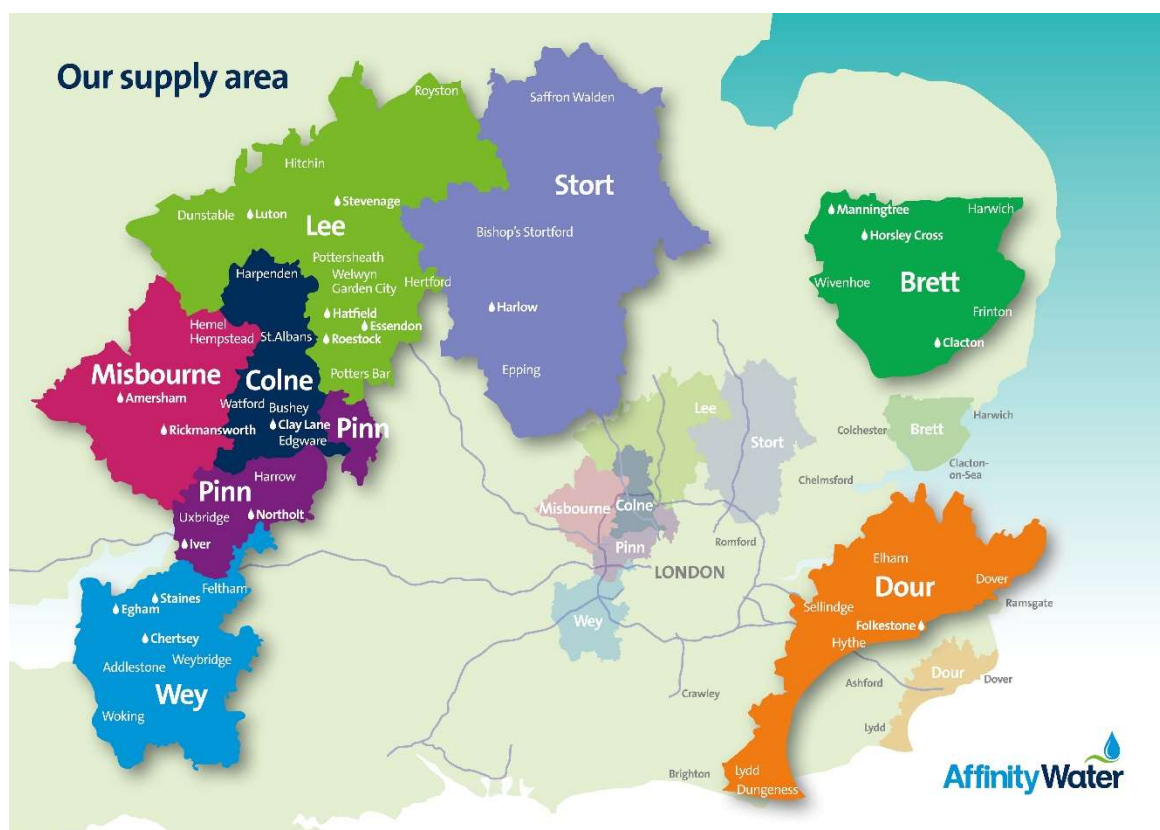


Figure 6.8: Our supply area shown by our eight communities

2. The following sections introduce each community. We have listened to what customers have said and illustrated the key investments we are going to make by 2025 on the community maps that follow.

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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### 6.8.1 Our Misbourne Community

1. Our Misbourne community is in the west of our supply area. It has a population of 326,000 with the highest demand across all our communities. Our biggest challenge in this community is the risk to supply posed by HS2 and facilitating sustainability reductions of 8.3 MI/d by 2025. Since 2015 we have installed over 42,000 new revenue meters, developed trunk mains to facilitate AMP6 sustainability reductions and renewed 53km of water mains.
2. Our planned investment in this community facilitates further sustainability reductions. We aim to undertake significant river restoration and habitat enhancement within this community by 2025. Our strategy is to import more water into this area from other parts of our network and reduce the impact to customers from supply interruptions. We will work closely with High Speed 2 Limited to mitigate risks arising from the construction of the railway. Our planned investments in this community from 2020 to 2025 are outlined on the Misbourne community map.

### 6.8.2 Our Colne Community

1. Our Colne community has a population of 464,800. In AMP7 we plan to facilitate sustainability reductions in the St Albans area while maintaining resilience and meeting the need for additional water to support population growth in areas such as St Albans, Bushey and Borehamwood. The catchment is prone to historic anthropogenic pollution risks because of agricultural and industrial land use practices. Since 2015 we have installed 54,000 new meters, made 4,700 new connections, undertaken 50km of mains renewal and reduced our abstractions by 5.8 MI/d.
2. Our planned investment mitigates the impact of the additional 9 MI/d of sustainability reductions and preserves resilience of supply within the community. We will construct a new 8km trunk main to move imported water from Lee into St Albans and a new booster to improve water transfer capabilities within the Colne community. In addition, we plan to undertake significant river restoration and habitat enhancement work in this catchment. Our planned investments in this community from 2020 to 2025 are outlined on the Colne community map.

### 6.8.3 Our Lee Community

1. The Lee community is in the north-west of our supply area. It has a significant proportion of agricultural land which has led to an increase in the level of nitrates and pesticides, such as metaldehyde, in our raw water sources. Historic anthropogenic pollution is observed in some parts of the catchment and treatment is in place to mitigate these risks.
2. From 2020 to 2025 we plan to facilitate further sustainability reductions of 15.9MI/d. This will alter local water supply arrangements in the areas of Luton, Welwyn Garden City and Baldock. To maintain resilience, we plan to increase the volume of treated water that we import from Anglian Water into this community. This requires a conditioning plant to be built to allow the additional imported water to be used across all our Central Region, at both peak and average demand conditions. We will be developing a new abstraction from the Greensands, (not the Chalk) along with a treatment facility. Our planned investments in this community from 2020 to 2025 are outlined on the Lee community map.

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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#### 6.8.4 Our Pinn Community

1. Our Pinn community is in the middle of our Central Region. It has relatively high per capita consumption and a relatively low number of metered properties. The expansion of Heathrow Airport will require us to undertake significant changes to our supply system. The community contains our largest water treatment works, fed from the River Thames. A large proportion of the river catchment upstream of this treatment works is used for agricultural purposes resulting in seasonal deterioration of raw water quality associated with agricultural activities.
2. We plan to complete our Water Saving Programme in this community to reduce per capita consumption and plan to undertake an exciting innovative grey water pilot project in this community. We will invest in an online pesticide monitor to be installed on the River Thames so that we can capture real time raw water pesticide data. This complements our catchment management and proactive treatment strategies to give us early warning of pesticides in the River Thames upstream from our water treatment works. Our planned investments in this community from 2020 to 2025 are outlined on the Pinn community map.

#### 6.8.5 Our Wey Community

1. The Wey community has a population of 551,800. It has a large proportion of agricultural and pastoral land in the River Thames catchment which results in elevated concentrations of pesticides, particularly metaldehyde in the river water. Low pressure is experienced in some areas and it has a relatively low number of metered properties. It has three large and complex surface water treatment works that abstract from the River Thames. We are investing to allow us to transfer treated water north to our other communities. This programme is central to maintaining our supply demand balance through to 2030 and beyond.
2. We are investing in our large water treatment assets to maintain resilience. This includes an upgrade of our waste water recovery systems. It also includes essential structural repairs on large water filtration assets. Our catchment management team will be undertaking investigations to raise awareness of pesticides with land managers to seek to reduce pesticides in raw water. We will be improving the efficiency of our treatment processes and flushing areas of the network. Our planned investments in this community from 2020 to 2025 are outlined on the Wey community map.

#### 6.8.6 Our Stort Community

1. The Stort community has a population of 285,000. The main characteristics of this community are that it also has a significant proportion of agricultural land and concentrations of nitrates in our raw water sources. The community is also a particularly water scarce area. We plan to reduce abstraction by 0.42 Ml/d in the Stort community by 2025. From 2020, this community will rely on imported water from our other communities. In particular, a new service reservoir cell and enabling works to move water east into our Royston supply zone will maintain resilience for this community.
2. We will significantly invest in trunk and distribution mains renewals. We aim to reduce per capita consumption by providing customers with comparative consumption data and working with retailers and commercial water users, such as airports to reduce demand. We will invest in a new nitrate treatment system alongside nitrate pollution investigations and catchment management activities across the community to address the increase in

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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concentration of nitrates in our raw sources. Our planned investments in this community from 2020 to 2025 are outlined on the Stort community map.

### 6.8.7 Our Dour Community

1. The Dour community has a population of 175,000. It is geographically separated from our other communities, being located on the South Coast of England near Folkestone and includes Folkestone and Dover. It has a high proportion of metered properties and low demand, compared to the company average.
2. Our planned investment for this community includes a new waste water waste water removal facility to end our reliance on third parties to discharge the waste stream from our treatment works. We are committed to carrying out environmental enhancement work in the SSSI and in the wider community. Our planned investments in this community from 2020 to 2025 are outlined on the Dour community map.

### 6.8.8 Our Brett Community

1. Our Brett community is to the East of England around the area of Harwich and Clacton-on-Sea. It is geographically separated from our other communities. It has a population of 153,500. Around 70% of properties are metered and there is lower per capita consumption than our company average.
2. We plan to reduce abstraction by 2.6 Ml/d in the Brett community by 2025. We also plan to undertake investigations to understand the potential impact of our current abstractions on river flows and ecological health. We will also invest to replace lead service pipes in this community and will investigate and trial innovative techniques to undertake this programme of work. Our planned investments in this community from 2020 to 2025 are outlined on the Brett community map.

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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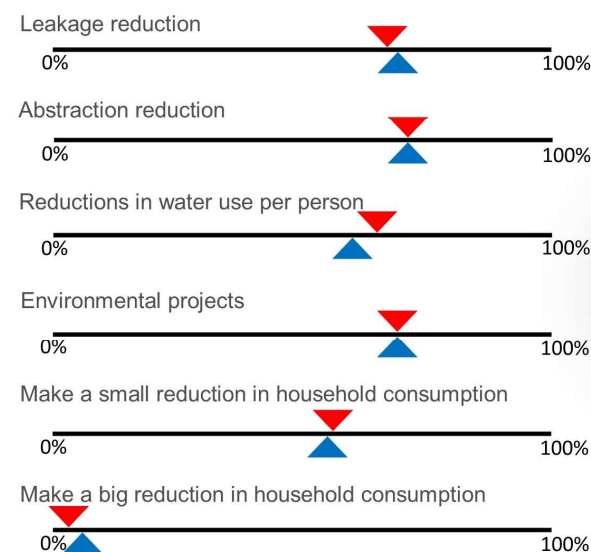
## Key Features

- Population: 326,000
- Population representative of UK national average<sup>4</sup>
- Vulnerable customers: 4,340
- 141,430 properties
- New properties by 2025: 3,800
- 39% of properties metered
- 2,000km of main
- 18 water treatment works
- 26 storage facilities
- 329 schools
- 14 hospitals
- SIM Score of 4.33<sup>1,2</sup>. Company average of 4.31
- Demand of 173.1 litres per person per day<sup>1</sup>. Company average of 151.7 litres per person per day
- Leakage of 157.3 litres per property per day<sup>1</sup>. Company average of 107.5 litres per property per day



## What Customers Have Said

We conducted an online customer engagement survey in the Misbourne community with 83 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each area.



River restoration in Upper Gadebridge Park on the River Gade in Hemel Hempstead. Photo by Affinity Water.



## Environmental Pilot Project

Comparing the effectiveness of different types of learning styles within lessons in either classrooms, chalk streams or both to convey the message of water conservation and valuing water as a natural resources.

1. Data from the year 1st May 2017– 30th April 2018
2. SIM is customer satisfaction score out of 5.0
3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*
4. Appendix 3. ONS data from 2011 census



## What We're Going To Be Doing By 2025

### Supplying high quality water you can trust

- Renew filter media at 18 of our water treatment works in the Misbourne community
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l
- Enhance our Catchment Management activities by undertaking a nitrate reduction scheme in the north-west of the Misbourne community
- Investigate a range of pollution risks, through land use assessments, in all groundwater catchments across the next five years
- Work with the Colne Catchment Action Network and Chiltern AONB Chalk Stream Project to protect rare chalk streams in the Misbourne community.

### Making sure you have enough water, while leaving more water in the environment

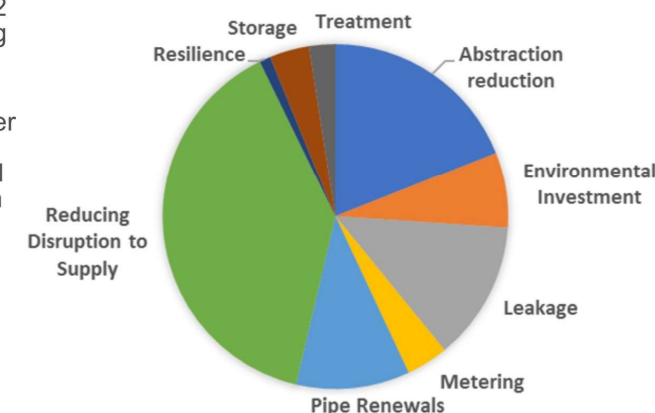
- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 3,100 leaks per year
- Actively replace 1,400 faulty meters a year with new advanced meters that can be remotely read
- Inspect and maintain our 26 storage facilities (reservoirs) within this community, which preserves the treated water
- Reduce our abstractions by 8.38 Ml a day across three pumping stations
- Investigate river flows in the Rivers Gade and Misbourne, allowing us to fulfil regulatory requirements and identify how to achieve 'good status'
- Continue river restorations, including restorations of the depleted regions of the River Misbourne and the River Gade in Hemel Hempstead and new restoration on the Bulbourne and Chess will be undertaken
- Work with the Herts and Middlesex Strategic Partnership with management plans at the Local Nature Reserves, Stockers Lake and Springwell Reedbed
- Undertake biodiversity surveys at key sites near Hemel Hempstead and Sarratt
- Implement biodiversity enhancement plans at key pumping stations.

### Providing a great service that you value

- Assist developers to provide a water supply to new developments mainly in Hemel Hempstead and Beaconsfield, 31km of pipeline will be constructed.


### Minimising disruption to you and your community

- Divert pipes that intersect the HS2 railway line at 62 locations moving 20km of pipelines
- In addition to continuing essential maintenance on our large diameter pipeline network of 236km we have installed or adapted 336 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night.



Breakdown of investment in the Misbourne Community between 2020 and 2025





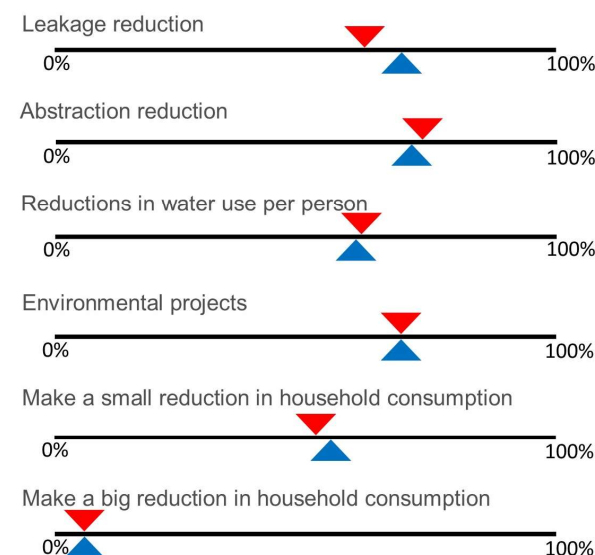
### Key Features

- Population: 464,800
- Population representative of UK national average<sup>4</sup>
- Vulnerable customers: 7,113
- 187,144 properties
- New properties by 2025: 6,700
- 38 % of properties metered
- 1,800km of main
- 11 water treatment works

- 19 storage facilities
- 441 schools
- 13 hospitals
- SIM Score of 4.29 <sup>1,2</sup>. Company average 4.31
- Demand of 162.1 litres per person per day<sup>1</sup>. Company average of 151.7 litres per person per day
- Leakage of 140.9 litres per property per day<sup>1</sup>. Company average of 107.5 litres per property per day

## What Customers Have Said

We conducted an online customer engagement survey in the Colne community with 135 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each area.



Stepping stones on the River Ver in Bricket Wood. Photo by Affinity Water.



### Environmental Pilot Project

We are focussing on affordable housing, working with social housing providers and councils to positively influence water using devices and white goods within homes.

1. Data from the year 1st May 2017– 30th April 2018
2. SIM is customer satisfaction score out of 5.0
3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*
4. Appendix 3. ONS data from 2011 census



## What We're Going To Be Doing By 2025 Supplying high quality water you can trust

- Renew filter media at 11 of our water treatment works in the Colne
- Install a treatment process at a treatment works north of Hatfield to improve water quality
- Install a waste water recovery process at a treatment works near Watford
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l
- Investigate a range of pollution risks, through land use assessments, in all groundwater catchments across the next five years
- Continue to work with Colne Catchment Action Network and Chilterns AONB Chalk Stream Project to protect the chalk streams in the Colne
- Enhance our Catchment Management activity by undertaking a pesticide reduction scheme in the Upper Colne Catchment using Payment for Ecosystem Services to reduce pesticides lost to water.

## Making sure you have enough water, while leaving more water in the environment

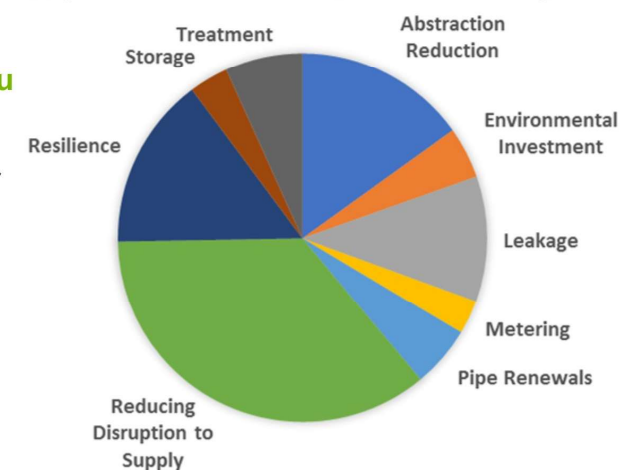
- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 3,100 leaks a year
- Actively replace 1,600 faulty water meters each year with advanced meters which can be read remotely
- Inspect and maintain our 19 storage facilities (reservoirs) within this community, which preserves the treated water
- Reduce our abstractions by 9.01 Ml a day across two pumping stations in St Albans
- Construct 8km of new trunk main to divert imported water from the Lee community to St Albans
- Investigate river flows in the River Colne, allowing us to fulfil regulatory requirements and identify how to achieve 'good status'
- Continue river restorations including depleted regions of the River Ver and the Upper Colne
- Options appraisals to allow us to identify mitigating measures
- Install a new booster to improve water transfer capabilities in this area
- Work with the Herts and Middlesex Strategic Partnership with management plans at the Local Nature Reserve Hilfield Park
- Undertake biodiversity surveys at key sites near Watford, St Albans and Radlett
- Implement biodiversity enhancement plans at key sites near Bushey and Northwood
- Bird box and bird ringing monitoring schemes across the community.

## Providing a great service that you value

- Assist developers to provide a water supply to new developments, we'll be installing 21km to serve new properties in Harpenden, St Albans and Watford.

## Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 271km we have installed or adapted 492 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night.



Breakdown of investment in the Colne Community between 2020 and 2025





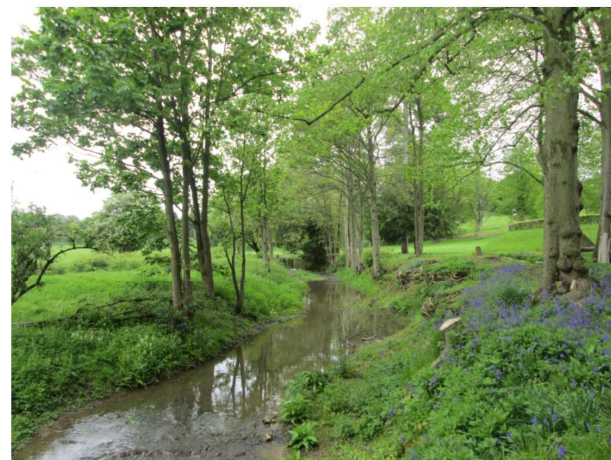
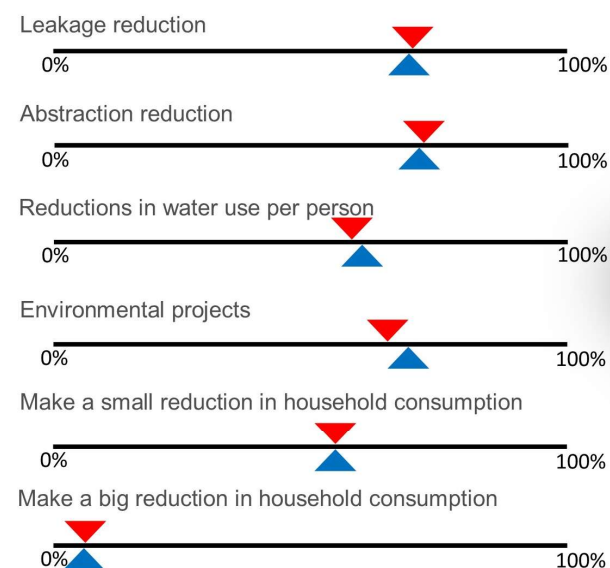
## Key Features

- Population: 689,500
- Population representative of UK national average<sup>4</sup>
- Vulnerable customers: 27,537
- 302,798 properties
- New properties by 2025: 19,900
- 64% of properties metered
- 3,200km of main
- 30 water treatment works
- 52 storage facilities
- 621 schools
- 27 hospitals
- SIM Score of 4.28. Company average of 4.31<sup>1,2</sup>
- Demand of 146.4 litres per person per day. Company average of 151.7 litres per person per day<sup>1</sup>
- Leakage of 109.5 litres per property per day. Company average of 107.5 litres per property per day<sup>1</sup>



## What Customers Have Said

We conducted an online customer engagement survey in the Lee community with 206 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each commitment.



The River Beane at Frogmore Hall. Photo by Affinity Water.



## Environmental Pilot Project

Investigating and influencing catchment scale water use, which includes looking at local water recycling of rainfall, the effect of abstraction reductions and catchment management.

1. Data from the year 1st May 2017– 30th April 2018
2. SIM is customer satisfaction score out of 5.0
3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*
4. Appendix 3. ONS data from 2011 census



## What We're Going To Be Doing By 2025

### Supplying high quality water you can trust

- Build a brand new conditioning plant near Luton to prevent discoloration of old galvanised iron pipes
- Renew filter media at our 30 water treatment works in the Lee
- Install a nitrate treatment process at our water treatment works
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l
- Work with the River Lee Catchment Partnership to protect rare chalk streams in this area
- Enhance our Catchment Management activities by undertaking nitrate reduction schemes, reducing nitrates affecting five pumping stations
- Investigate a range of pollution risks, through land use assessments, in all groundwater catchments across the next five years.

### Making sure you have enough water, while leaving more water in the environment

- Install innovative equipment detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 3200 leaks per year
- Actively replace 2,600 faulty meters a year with advanced meters which can be read remotely
- Inspect and maintain our 52 storage facilities (reservoirs) within this community, which preserves the treated water
- Replace an existing reservoir
- Reduce our abstractions by 15.9 Ml a day across five pumping stations

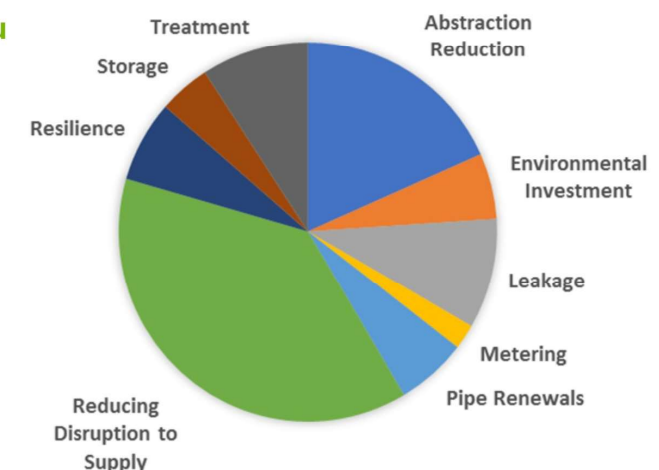
- Investigate river flows in the rivers Lee, Rib and Ivel
- Continue river restorations. This includes restorations of depleted regions of the rivers Beane, Lee, Mimram and Ivel
- Undertake biodiversity surveys at key sites
- Implement biodiversity enhancement plans at key pumping stations
- Install Barn Owl and Kestrel boxes at strategic sites across the community.

### Providing a great service that you value

- Assist developers to provide a water supply to new developments, constructing 112km of pipes mainly in Luton, Stevenage, Welwyn Garden City and Letchworth.

### Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 347km we have installed or adapted 668 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night.



Breakdown of investment in the Lee Community between 2020 and 2025



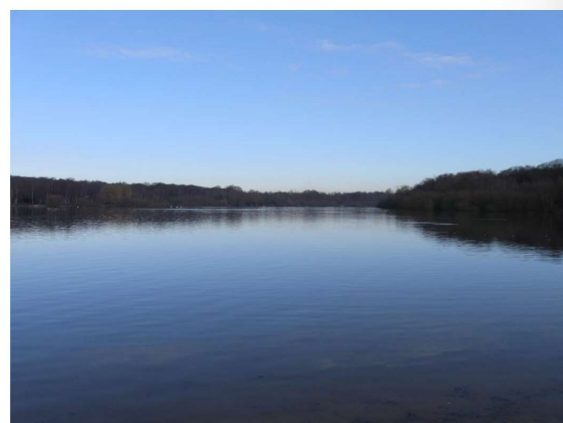
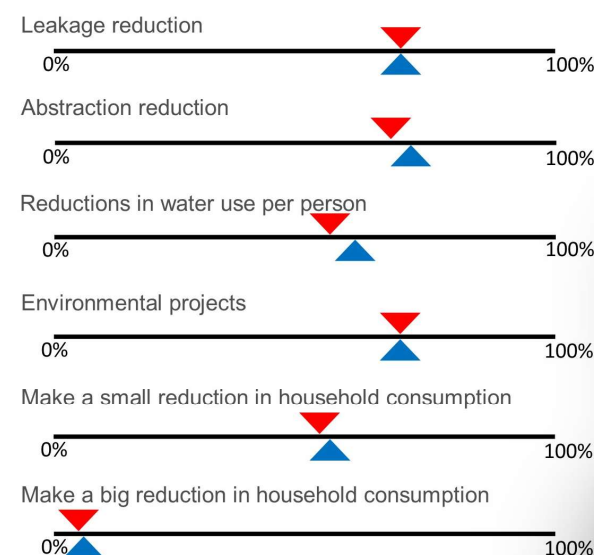
### Key Features

- Population: 1,072,400
- Higher BME population than UK national average or our other communities<sup>4</sup>
- Vulnerable customers: 11,885
- 381,451 properties
- New properties by 2025: 21,400
- 31% of properties metered
- Higher percentage of rented properties than national average or our other communities
- 2,700km of main

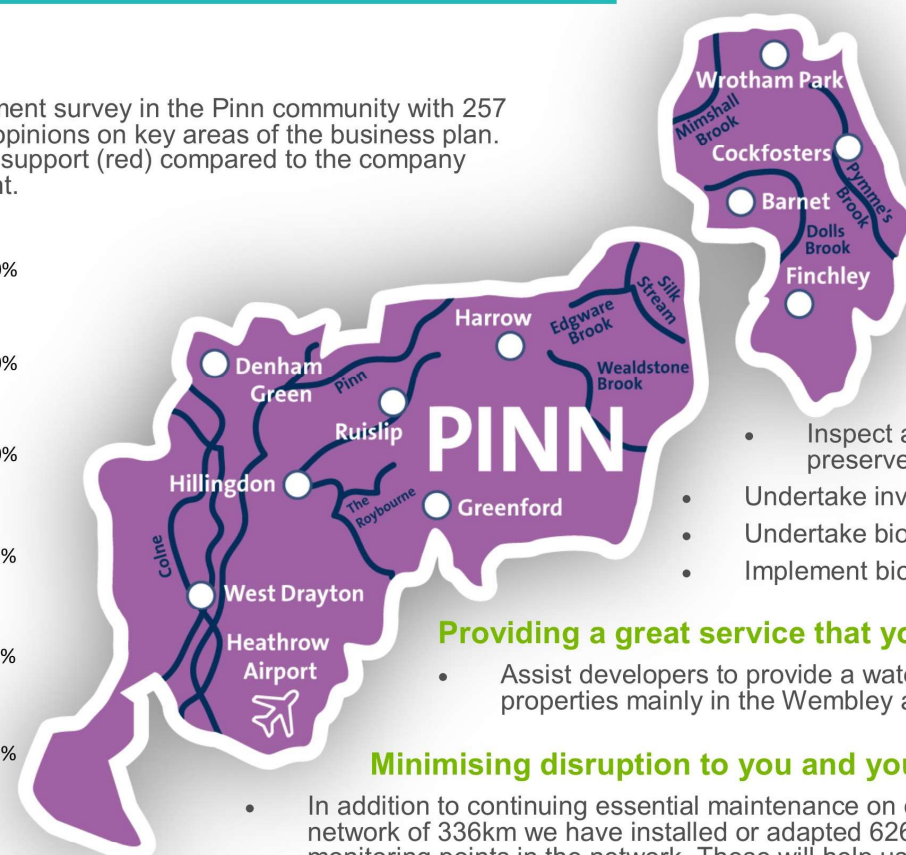
- Two water treatment works
- Nine storage facilities
- 780 schools
- 17 hospitals
- SIM Score of 4.19<sup>1,2</sup>. Company average 4.31
- Demand of 161.3 litres per person per day<sup>1</sup>. Company average of 151.7 litres per person per day
- Leakage of 124.3 litres per property per day<sup>1</sup>. Company average of 107.5 litres per property per day

### What Customers Have Said

We conducted an online customer engagement survey in the Pinn community with 257 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each commitment.



Ruislip Lido from Woody Bay. By Alex McGregor, CC BY-SA 2.0, <https://commons.wikimedia.org/w/index.php?curid=14461070>



### What We're Going To Be Doing By 2025

#### Supplying high quality water you can trust

- Renew filter media at two water treatment works in the Pinn community
- Refurbishment of ozone treatment at one of our water treatment works
- Replace the current treatment by-product silos with removeable skips and install an extra storage area at our largest water treatment works
- Install an analytical monitor on the River Thames to provide real-time water quality readings
- Upgrade primary treatment process to improve final water quality
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l
- Enhance our Catchment Management activities by investigating the source of pesticides affecting our groundwater sources
- Assess the risks to water quality, through land use assessments, in all groundwater catchments across the next five years.

#### Making sure you have enough water, while leaving more water in the environment

- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%, we'll repair over 4,800 leaks each year
- Heavily invest in metering, 160,000 advanced meters, the remaining properties to achieve 78% of properties metered over the next five years
- Actively replace 4,300 faulty water meters each year with advanced meters which can be read remotely

- Inspect and maintain our nine storage facilities (reservoirs) in this community, which preserves the treated water
- Undertake invasive species management and treatment at pumping stations that are infested
- Undertake biodiversity surveys at key pumping stations
- Implement biodiversity enhancement plans at key pumping stations.

#### Providing a great service that you value

- Assist developers to provide a water supply to new developments, we'll construct 84km of pipeline to serve new properties mainly in the Wembley and Edgware areas.

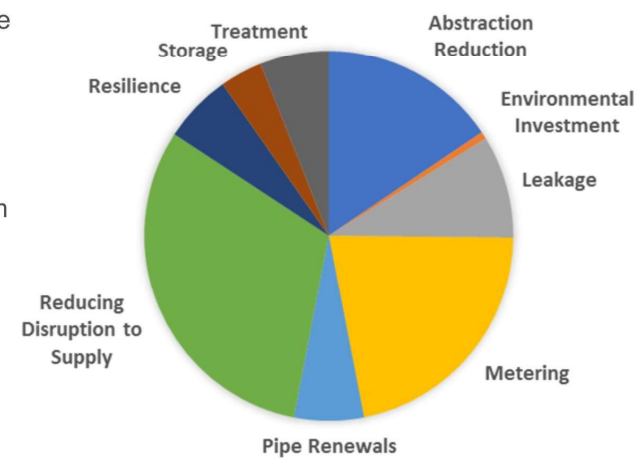
#### Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 336km we have installed or adapted 626 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night
- Install innovative technologies to actively reduce situations of low pressure
- Re-direct 20km of pipes that are affected by the Heathrow Airport expansion
- Divert pipes that intersect the HS2 railway line at 63 locations moving 10.7km of pipelines.

### Environmental Pilot Project

Grey water recycling and efficient water use at one of the largest, most influential mosques in North West London.

1. Data from the year 1st May 2017– 30th April 2018  
 2. SIM is customer satisfaction score out of 5.0  
 3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*  
 4. Appendix 3. ONS data from 2011 census



Breakdown of investment in the Pinn Community between 2020 and 2025



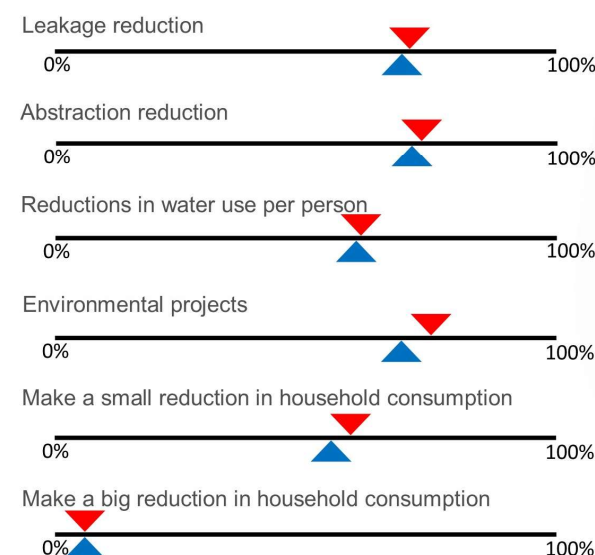
### Key Features

- Population: 551,800
- Population representative of the UK national average<sup>4</sup>
- Vulnerable customers: 7,532
- 214,800 properties
- New properties by 2025: 13,000
- 42% of properties metered
- 2,500km of main
- 5 water treatment works

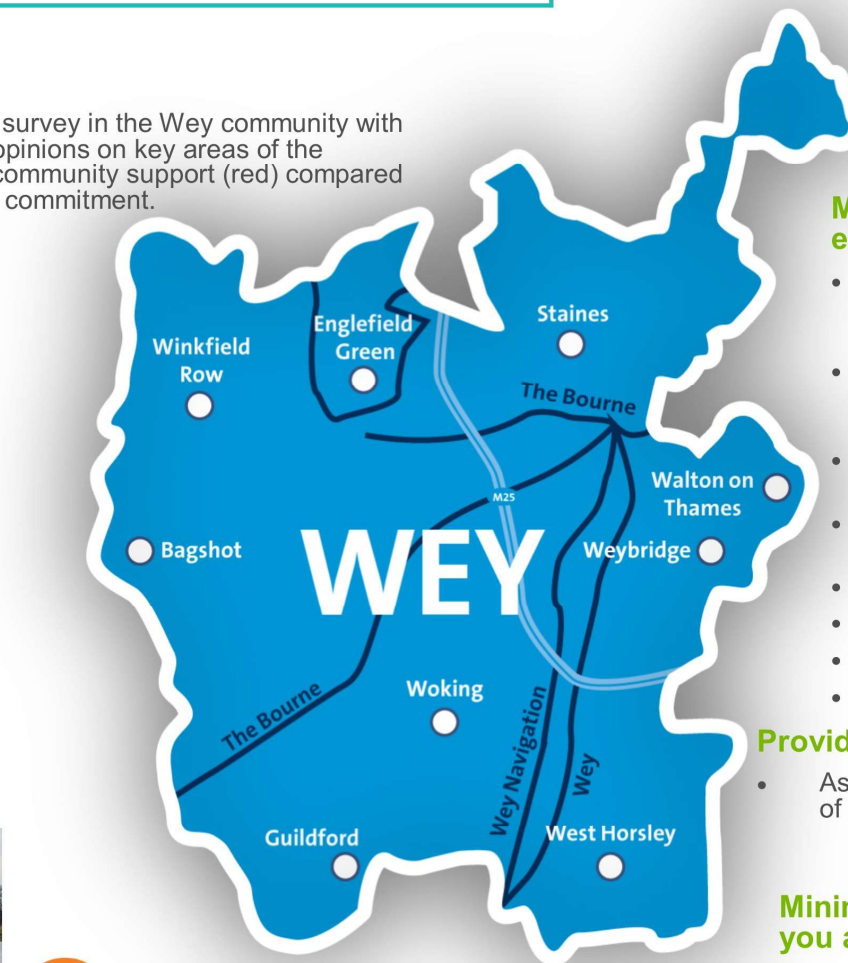
- 26 storage facilities
- 426 schools
- 73 hospitals
- SIM Score of 4.45<sup>1,2</sup>. Company average of 4.31
- Demand of 156.3 litres per person per day<sup>1</sup>. Company average of 151.7 litres per person per day
- Leakage of 97.6 litres per property per day<sup>1</sup>. Company average of 107.5 litres per property per day

### What Customers Have Said

We conducted an online customer engagement survey in the Wey community with 136 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each commitment.



Grazing cows at Wey Navigations. Photo by Affinity Water.



### Environmental Pilot Project

Delivering a targeted behaviour change campaigns by working with third-party organisations to change behaviour and encourage a reduction in water use.

1. Data from the year 1st May 2017– 30th April 2018
2. SIM is customer satisfaction score out of 5.0
3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*
4. Appendix 3. ONS data from 2011 census

### What We're Going To Be Doing By 2025

#### Supplying high quality water you can trust

- Replace three types of filtration media at our five water treatment works in the Wey
- Upgrade primary treatment process to improve final water quality
- Install waste water recovery systems at two treatment works and upgrade the system at a third
- Refurbishment of ozone treatment at our three water treatment works
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l
- Enhance our Catchment Management activity by undertaking a pesticide reduction scheme, seeking support from farmers to protect our water sources north of Guildford using a Payment for Ecosystem Service approach to reduce pesticide losses to water
- Investigate a range of pollution risks through land use assessments in all groundwater catchments across the next five years
- Continue to support the Surrey Wildlife Trust who work largely within this community
- Continue work with Wey Landscape Partnership to protect rivers in the Wey.

### Making sure you have enough water while leaving more in the environment

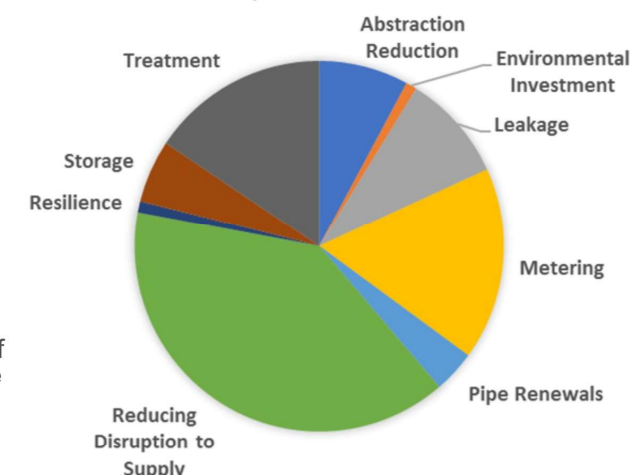
- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 2,000 leaks a year
- Invest in metering the remaining properties in the community to achieve 78% of properties metered by 2025, with around 79,150 new advanced meters installed
- Actively replace 2,600 faulty water meters each year with advanced meters that can be read remotely
- Inspect and maintain our 26 storage facilities (reservoirs) in this community, which preserves the treated water
- Replace an existing reservoir
- Deliver a management plan at Wraysbury SSSI to enhance biodiversity
- Undertake biodiversity surveys at key pumping stations
- Implement biodiversity enhancement plans at key pumping stations.

### Providing a great service that you value

- Assist developers to provide a water supply to new developments, constructing 28km of pipes to serve new properties in Southall, Woking, Walton and Ascot.

### Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 290km we have installed or adapted 460 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night
- Divert approximately 4km of pipes as part of the River Thames Flood Alleviation Scheme
- Install innovative technologies to actively reduce low pressure incidents.



Breakdown of investment in the Wey Community between 2020 and 2025



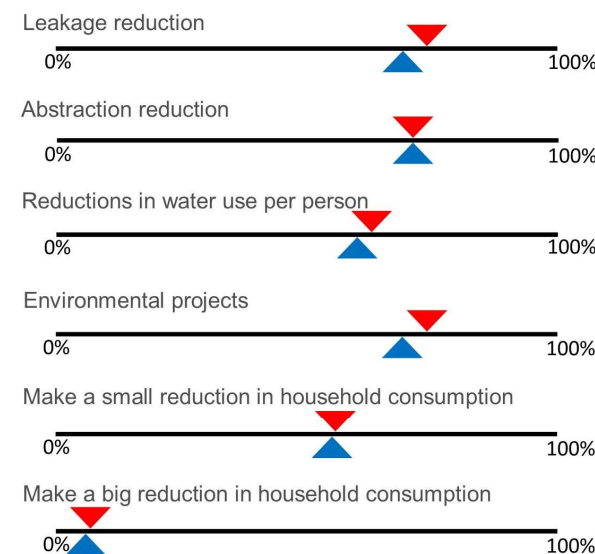
### Key Features

- Population: 285,000
- Population representative of UK national average<sup>4</sup>
- Vulnerable customers: 5,334
- 133,310 properties
- New properties by 2025: 9,300
- 64% of properties metered
- 2,000km of main
- 17 water treatment works

- 39 storage facilities
- 338 schools
- Eight hospitals
- SIM Score of 3.95. Company average of 4.31<sup>1,2</sup>
- Demand of 156.6 litres per person per day. Company average of 151.7 litres per person per day<sup>1</sup>
- Leakage of 123.1 litres per property per day. Company average of 107.5 litres per property per day<sup>1</sup>

### What Customers Have Said

We conducted an online customer engagement survey in the Stort community with 84 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each commitment.



River Cam. Photo taken by Affinity Water.

### Environmental Pilot Project

Working with councils, partners and developers to reduce water use per person from the current levels of domestic and commercial properties.

1. Data from the year 1st May 2017– 30th April 2018
2. SIM is customer satisfaction score out of 5.0
3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*
4. Appendix 3. ONS data from 2011 census

### What We're Going To Do By 2025

#### Supplying high quality water you can trust

- Install treatment to reduce nitrate concentrations and maintain water quality
- Renewal of filter media at 17 water treatment works in the Stort community
- Replace waste lagoons at one of our water treatment works
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l.
- Active member of the River Lea catchment partnership to support the protection of rare chalk streams in the Stort community
- Enhance our Catchment Management activities by undertaking a nitrate reduction scheme focussing on agriculture

- Investigate a range of pollution risks through land use assessments in all groundwater catchments across the next five years.



### Making sure you have enough water, while leaving more in the environment

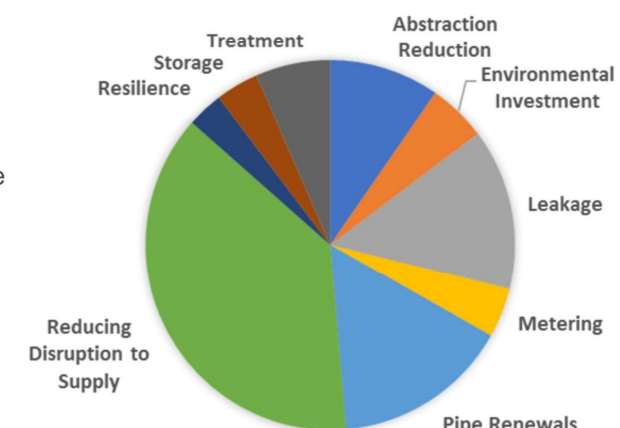
- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 2,500 leaks each year
- Actively replace 900 faulty water meters a year with advanced meters which can be read remotely
- Inspect and maintain our 39 storage facilities (reservoirs) within this community, which preserves the treated water
- Reduce our abstractions by 0.42 Ml a day across four pumping stations
  - Investigate river flows in the Rivers Stort, Ash, Chelmer and Bourne Brook, allowing us to fulfil regulatory requirements and identify how to achieve 'good status'
  - Continue river restorations. This includes restorations of the depleted regions of the River Cam
- Implement biodiversity enhancement plans at key pumping stations
- Regular ecological surveying to investigate and assess biodiversity at key sites
- Invasive species management and treatment at infested sites
- Installation of Barn Owl and Kestrel boxes at strategic sites.

### Providing a great service that you value

- Assist developers to provide a water supply to new developments, installing 122km of pipeline mainly in Dunmow, Bishops Stortford and Harlow.

### Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 242km we have installed or adapted 372 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night
- Install innovative technology to reduce instances of low pressures.



Breakdown of investment in the Stort Community between 2020 and 2025





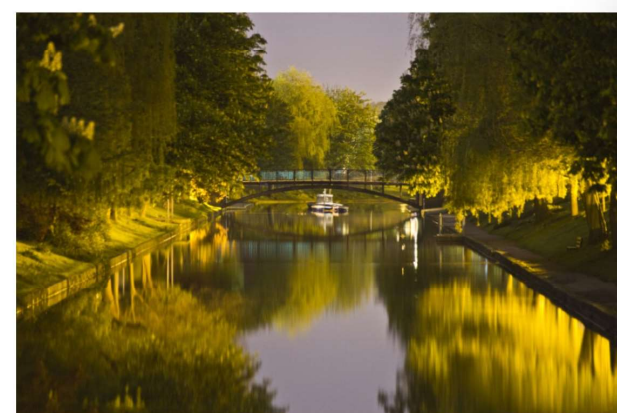
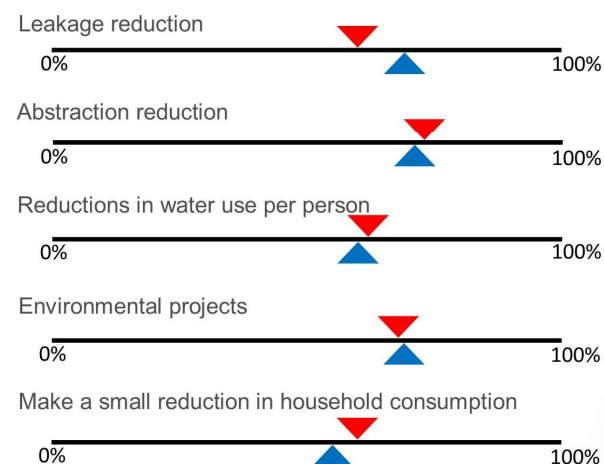
## Key Features

- Population: 175,000
- Higher percentage of over 55s than the national average and our other communities (excluding Brett)<sup>4</sup>
- Vulnerable customers: 1,879
- 75,791 properties
- New properties by 2025: 5,700
- 93% of properties metered
- 1,100km of main
- 16 water treatment works
- 18 storage facilities
- 162 schools
- Four hospitals
- SIM Score of 4.49<sup>1,2</sup>. Company average 4.31
- Demand of 119.6 litres per person per day<sup>1</sup>. Company average of 151.7 litres per person per day
- Leakage of 53.3 litres per property per day<sup>1</sup>. Company average of 107.5 litres per property per day

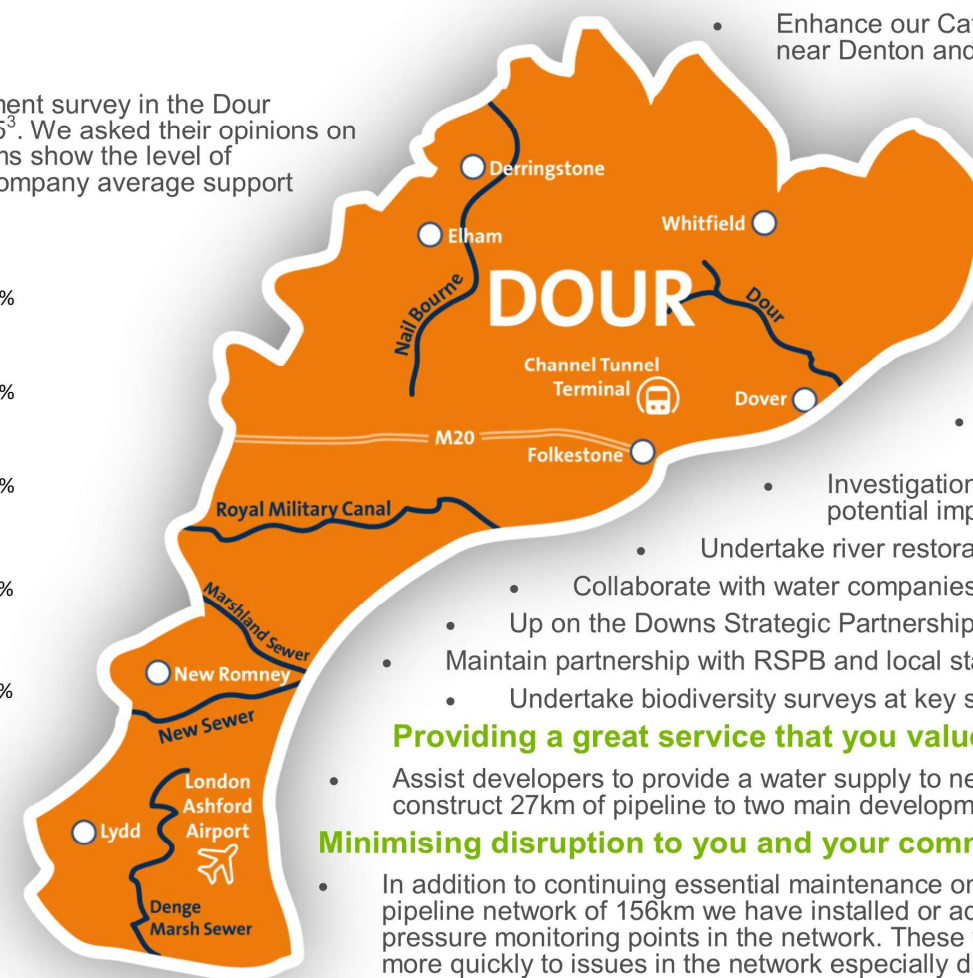


## What Customers Have Said

We conducted an online customer engagement survey in the Dour community with 54 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each commitment.



Twiss Road Bridge, over the Royal Military Canal in Hythe, Kent. Photo by Affinity Water.



## Environmental Pilot Project

Education with respect to smart meters including, the installation of smart meters within 10 schools and training staff and students to use them and monitor their water usage. We will also engage the students on water conservation as a whole school water saving initiative.

- Data from the year 1st May 2017– 30th April 2018
- SIM is customer satisfaction score out of 5.0
- Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*
- Appendix 3. ONS data from 2011 census



## What We're Going To Be Doing By 2025

### Supplying high quality water you can trust

- Renew filter media at the water treatment works in the Dour community according to our programme
- Install treatment process to reduce nitrate concentrations and to maintain water quality
- Install a waste water recovery plant at one of our water treatment works
- Replace lead pipes in customer properties where monitoring levels are above 5µg/l
- Active member of East Kent Catchment Improvement Partnership to protect the River Stour and Dour
- Support the Romney and Rother Catchment Partnership which includes the Dungeness Peninsula
- Investigate a range of pollution risks through land use assessments in all groundwater catchments across the next five years
- Enhance our Catchment Management activity by undertaking two nitrate reduction schemes near Denton and Kingsdown.

### Making sure you have enough water, while leaving more water in the environment

- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 1,200 leaks each year
- Actively replace faulty water meters with advanced meters which can be read remotely
- Inspect and maintain our 18 storage facilities (reservoirs) within this community, which preserves the treated water
- Replacing an existing reservoir
- Investigate river flows in the River Dour, allowing us to fulfil regulatory requirements and identify how to achieve 'good status'
- Investigation on River Stour at Cattawade to assess future abstraction and any potential impacts to ecology

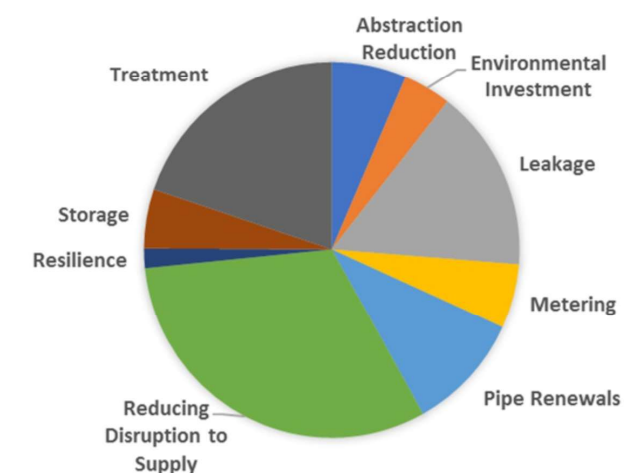
- Undertake river restoration on the River Dour
- Collaborate with water companies in the South East region to monitor the Little Stour
- Up on the Downs Strategic Partnership delivering ecological enhancement plans at a number of sites
- Maintain partnership with RSPB and local stakeholders to deliver ecological works at Dungeness
- Undertake biodiversity surveys at key sites across the community.

### Providing a great service that you value

- Assist developers to provide a water supply to new developments, we'll construct 27km of pipeline to two main development.

### Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 156km we have installed or adapted 241 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night
- Install innovative technology to reduce instances of low pressure.



Breakdown of investment in the Dour Community between 2020 and 2025



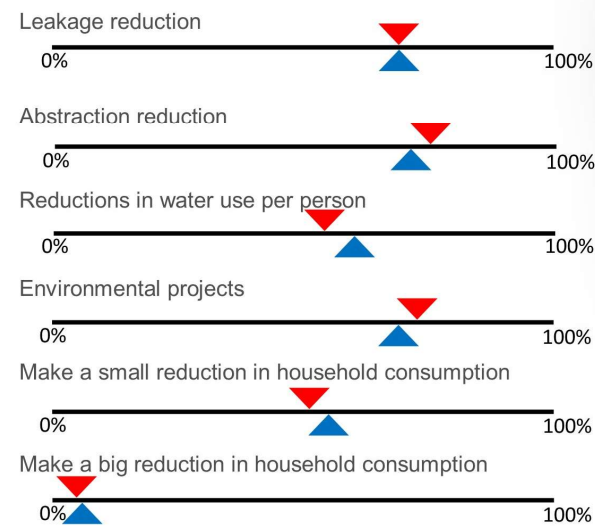
### Key Features

- Population: 153,500
- Higher percentage of over 55's than national average or other communities (excluding Dour)<sup>4</sup>
- Vulnerable customers: 2,269
- 74,139 properties
- New properties by 2025: 3,400
- 71% of properties metered
- 900km of main
- Three water treatment works

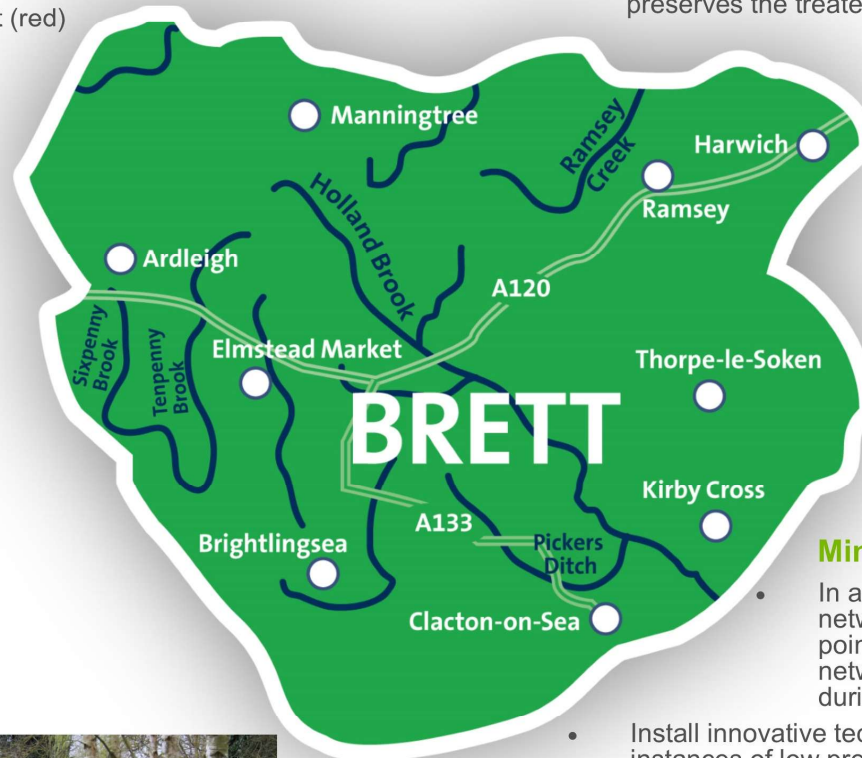
- Seven storage facilities
- 123 schools
- One hospital
- SIM Score of 4.53 <sup>1,2</sup>. Company average 4.31
- Demand of 132.1 litres per person per day<sup>1</sup>. Company average of 151 litres per person per day
- Leakage of 54.2 litres per property per day<sup>1</sup>. Company average of 107.5 litres per property per day

### What Customers Have Said

We conducted an online customer engagement survey in the Brett community with 45 customers aged 16 to 75<sup>3</sup>. We asked their opinions on key areas of the business plan. The diagrams show the level of community support (red) compared to the company average support (blue) for each commitment.



The Water Tower in Horsley Cross and two swans at Higham Bridge.  
Photos by Affinity Water.



### What We're Going To Be Doing By 2025

#### Supplying high quality water you can trust

- Renew filter media at three of our water treatment works in the Brett
- Replace or refurbish around 8,000 lead pipes in the Clacton and Frinton area in addition to lead piping leading up to customer properties
- Working with Anglian Water to investigate sources of pesticides impacting a reservoir that both Affinity and Anglian Water extract from in the River Colne catchment in Essex
- Investigate a range of pollution risks through land use assessments in all groundwater catchments across the next five years.

### Making sure you have enough water, while leaving more water in the environment

- Install innovative equipment to detect leaks much faster. This enables us to proactively fix leaks, reducing leakage by 15%. We will repair over 2,100 leaks each year
- Actively replace faulty water meters with advanced meters which can be read remotely
- Inspect and maintain our seven storage facilities (reservoirs) within this community, which preserves the treated water
- Reduce our abstractions by 2.6 Ml a day across four pumping stations
- Investigate river flows in the River Brett, allowing us to fulfil regulatory requirements and identify how to achieve 'good status'
  - Conduct river restorations on the River Brett
  - Implementation of Biodiversity Enhancement Plans at two of our sites
- Regular ecological surveying programme to assess biodiversity at our key sites
- Essential maintenance and environmental works for shared abstraction with Anglian water, as well as our treatment and storage facilities.

### Providing a great service that you value

- Assist developers to provide a water supply to new developments, constructing 3.5km of pipelines to serve new properties in the Clacton area.

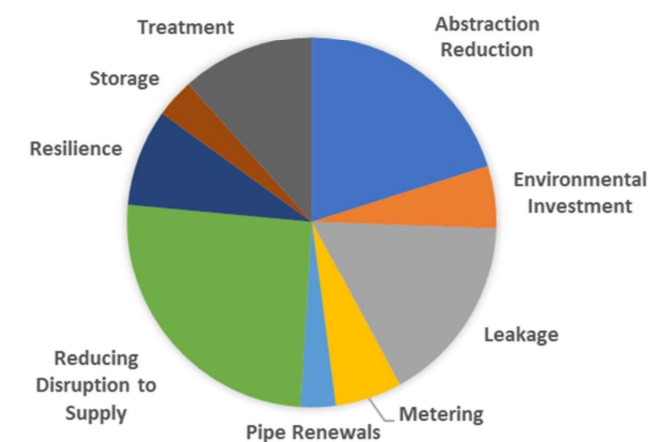
### Minimising disruption to you and your community

- In addition to continuing essential maintenance on our large diameter pipeline network of 185km we have installed or adapted 229 real time pressure monitoring points in the network. These will help us respond more quickly to issues in the network especially during the night
- Install innovative technology to reduce instances of low pressures.

### Environmental Pilot Project

Targeted campaigns alongside third-party organisations to change behaviour and encourage a reduction in water use.

1. Data from the year 1st May 2017– 30th April 2018  
 2. SIM is customer satisfaction score out of 5,0  
 3. Ipsos MORI, June 2018, *Draft Water Resources Management Plan (dWRMP) Research Report*  
 4. Appendix 3. ONS data from 2011 census



Breakdown of investment in the Brett Community between 2020 and 2025

## Innovating for customers, communities and the environment

### Our Approach to Innovation

Innovation is about putting new ideas into action and delivering enhanced business performance – put simply: **doing things better** to improve customer service, reduce costs, enhance resilience and improve efficiency. We consider innovation to be essential in an ever-changing world as we strive to **deliver more for less** in meeting our stretching Performance Commitments and delivering our Outcomes.

We measure and evaluate investment opportunities against five innovation criteria as shown below. We have established an Innovation Panel with representatives from across the business to oversee our work in this area.



Our business strategy has innovation at its core; enabled in the widest sense. We are continuing to shift our working practices to be more agile, more responsive and easier to do business with, as well as transforming customer experience. We will continue to be strategic with our investment, using tried and tested technologies where this is beneficial and pushing boundaries where required. We will continue to evolve and adopt with care, diligence and where beneficial.

### Practical Application

Continuous innovation is embedded in everything we do and is driven from our Board through our Executive Management Team, to all parts of our organisation. We promote research into real life problems that affect customers, the environment we live in and the efficient running of our business. We facilitate innovation through sharing information and active participation in wider research groups, such as the Water Regulations Advisory Scheme (WRAS) UK Water Industry Research (UKWIR) and Water UK standards and research groups.

We use science to overcome long-standing issues. A good example is the recent cleaning of 200kms of trunk mains using the ice pigging process. This process, developed from the petrochemical industry, uses a large crystallised hydrodynamic abrasive plug to remove pipe impurities in a safe and controlled manner.

Successful delivery of this innovative project has reduced customer dissatisfaction with discoloured water and we have shared the insight we have gained with UKWIR to help its UKWIR project on mains cleaning techniques.

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## Environmental Innovation

We will continue to innovate for the environment in AMP7. We have included an environmental innovation Performance Commitment to deliver eight innovative environmental pilot projects, one in each of our eight communities. Descriptions of these are given on the community investment maps in this Chapter and Appendix 4.

We continue to be highly innovative in delivering sustainability reductions. By April 2018, we had delivered the 42 Ml/d abstraction reductions we committed to implementing by 2020. We achieved this by;

- identifying and implementing innovative solutions to reconfigure our supply system and transfer replacement water to maintain resilience of supplies to customers
- prioritising our Water Saving Programme and focusing our leakage reduction and customer education programmes to those areas most affected.

Our strategy is increasingly to adapt our water treatment processes to maximise the generation of renewable energy with 40% of our energy coming from renewable and alternative energy sources by 2030. This will support achievement of the government's emission reduction targets.

## Scientific Innovation

Science features heavily in the solutions needed to ensure we maximise our treatment capability and move water optimally within and across our communities while maintaining the resilience and quality of water supplies. We lead the industry in using on-line monitoring for pesticides, enabling us to be alerted to their presence in raw water before arrival at our treatment works, helping us to maintain compliance with water quality standards

The need to move water extensively across our network to implement sustainability reductions has led us to research the management and treatment of bulk transfers of treated water between different areas of water quality. We will be sharing our research with other companies to support the trading of supplies on a regional basis.

## Innovation for Customers

We are working to provide customers with the ability to connect with us in the way that suits them, through multiple channel options including digital, webchat, SMS, phone and Amazon Alexa. We continuously evolve our approach to meet the changing needs and demands of customers and stakeholders. Our communications strategy is informed by real-time insight so we can give customers what they want, when they want it. By overlaying an agile approach to digital development, we have been able to realise a continuous cycle of development, benefit realisation, customer feedback and improvement (see Appendix 7.2). We will continue to adopt these leading approaches in our dealing with customers. Our customer service teams will become increasingly 'lean' trained and encouraged to use our innovation platform Tap-4-Ideas (see Appendix 7.2) to identify possible improvements – this will empower our teams to champion and deliver service improvements.

We have implemented for our network community and support teams a best in class works management tool with Maximo and Mobile GIS. This, together with our mobile working strategy, enables our teams to be better informed by having access to real-time information so they can provide better service to customers and retailers.

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## Innovating in Asset Health

Maintaining the health of our assets is essential, so we invest in tools and equipment to measure and record their condition. Our industry leading pipe laboratory allows us to measure the condition of pipe samples taken from our network and to use this data for deterioration modelling and targeting of mains renewal.

We are working with our peers and third parties on research into the failure of critical pipes and the use of pipe stents to mitigate the impact on customers of supply interruptions.

We are promoting an industry wide workshop on the health of trunk main assets. This will provide support for the UK Water Partnership bid for funding as part of their “rejuvenating the underworld” submission to the Industrial Strategy Challenge Fund Wave 3.

We have successfully trialled technologies to monitor and warn of degradation of our mechanical plant enabling us to implement more widely across our asset base.

We have installed 20,000 permanent acoustic loggers across our network to help us identify and repair small leaks early in their life before they grow and become hidden within the overall noise of night flow analysis. Our approach to leak detection has become much more targeted as a result.

We are investing in our Control Vison programme (which includes our Situational Awareness software integration of spatial and operational tools) to help us manage our 16,000km network of pipes, booster stations and service reservoirs and ensure optimal use and response to incidents and failures. We have already installed over 650 real time loggers in all leakage zones to retrieve pressure data every 15 minutes.

## Innovation and Information Management

Our Advance Metering Infrastructure (AMI) in Folkestone, one the largest installations in the UK, allows us to assess consumption data and formulate consumption reduction strategies for different communities. We are currently undertaking trials with suppliers of this technology and exploring the use of the wide area network to retrieve more granular information to help us promote water efficiency with users.

### Some of our innovation

Using “fast data” to provide customers with information about water use in their local community

Installing 20,000 acoustic loggers on distribution network to locate leaks earlier and more accurately

Using ice pigging technology to clean manganese deposits from 200km of trunk mains to remove discolouration from treated water

Using stent technology to isolate the flow of water from a leak while allowing water to continue to flow to maintain customer supplies

Adapting water treatment processes to save energy - 40% of our energy from renewable and alternative energy sources by 2030.

Using online pesticide monitors to give real time and early warning of pesticides in raw water

Partnering with Brunel University to determine the technical strategy for conditioning imported water at Sundon

Amazon Alexa deployed on website for customers to interact a virtual customer advisor

Using virtual reality technology to visualise network assets before they are built

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Chapter 2:  
Our  
Track Record

Chapter 3:  
Listening to  
Customers &  
Stakeholders

Chapter 4:  
Our Outcomes  
& Performance  
Commitments

Chapter 5:  
Managing Water  
Resources in the  
Long Term

Chapter 6:  
Delivering our  
Investment  
Plan

Chapter 7:  
Delivering  
Great Customer  
Service

Chapter 8:  
Developing Our  
Community  
Approach

Chapter 9:  
Ensuring  
Long Term  
Resilience

Chapter 10:  
Ensuring  
Affordability &  
Financeability

Chapter 11:  
Board  
Assurance

## Innovation and Data Strategy

A key part of our future strategy is to better use data to inform decision making by making more use of Cloud technologies. By bringing all our data into one place on one platform, we will improve our operational decision making and reduce costs. We are already putting in place intelligent data management, machine learning, robotics and artificial intelligence in preparation for 2020. Further information on our Data Strategy can be found in Chapter 9 and Appendix C.



### Deliverability Statement

*“We have developed a Totex plan to deliver the Outcomes and Performance Commitments that are priorities for our customers. This means maintaining a level of performance they expect to receive, the resilience that is required to maintain service continuity and the assessment of our assets’ health and the environment in which they operate. We are planning to deliver ambitious levels of performance in demand management and improvement in interruptions to supply. Our Plan includes the delivery of our WISER programme as well as expenditure needed to meet our legal and statutory obligations. We have optimised our Plan to maximise the benefits it will deliver, building on the innovative lead we have taken in automation, environmental protection and Cloud-based data share and setting ourselves challenging efficiency targets. A collaborative and innovative approach is essential if we are to create next practice. We will be ready for the challenge and our recent track record proves that we can be trusted to deliver.”*

**Director of Asset Strategy and Managing Director Wholesale Operations**

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## 6.9 How our investment proposal for AMP7 addresses Ofwat's four Price Review themes

### Great customer service

Our investment proposals have been developed to meet Outcomes and deliver our Performance Commitments, which will improve our customer service in many areas.

### Affordable bills

Our thorough and robust approach to investment planning ensures that every penny spent is necessary and provides best value for customers now and in the future. We have set ambitious efficiency targets to ensure that our water bills remain fair and affordable, especially to those who are most vulnerable.

### Innovation

Our Plan proposes a wide variety of solutions to meet customer needs and meet legal and regulatory requirements. Some of these involve cutting edge solutions such as the online pesticide monitor that we will install on the River Thames and partnering with housing associations to promote water efficiency to residents.

### Long term resilience

We will invest in our assets at the right time and in the right places to ensure that resilience is maintained in the long term. In AMP7 we will implement the first stage of a 20-year strategic supply transfer scheme designed to improve interconnectivity in our Central region and maintain long term supply resilience despite sustainability reductions.

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## 7 Delivering Great Customer Service

Delivering great Customer Service is at the heart of our business.

Our vision is to be the leading community focused water company. For customer service, this means continuing to develop an innovative and inclusive offering, leading the way in our industry. Our customer service will be underpinned by a deeper relationship with, and understanding of, customers and communities including helping to reduce water consumption.

We listen to customers' needs in addition to developers, new appointees and self-lay providers and invest in the right technologies to deliver great customer experiences and increase their engagement with the water sector.

We are striving to become a more insight-driven business where data is seamlessly collected, and analysed, enabling us to better understand communities and customers and meet their expectations.

We will provide personalised service for all customers, including those with temporary or permanent affordability issues or those in vulnerable circumstances. As such, leveraging the expertise and best practices of others within and outside the industry will be increasingly important.

We plan to use our affordability assistance measures to help and support more customers in between 2020 and 2025. These measures have been designed following feedback from customers, challenge from our CCG and using best practice from other sectors. We estimate that c.100,000 (excluding PSR) or 6.8% households will benefit of the following measures in AMP7:

- An additional 30,000 customers will benefit from our social tariff, bringing the total to 82,000
- We aim to increase the number of customers on our Priority Services Register by to 92,000
- Direct debit usage will increase to 68% of all customers and up to 91,000 customers (880,000 or 60.3% in total) will be using the Affinity Water standard plan to budget payments. This supports a reduction in our bad debt charge.
- Up to 12,000 customers will benefit per year from breathing space, payment breaks or reduced payments following an assessment of income and outgoings
- Up to 3,500 customers per year will benefit from moving to a metered tariff
- We will provide support with bills via our Customer Assistance Fund through payment matching or bill reduction.
- We are setting up a Trust Fund which will be available for customers in severe financial hardship.

We will also target our performance for C-MeX and D-Mex to be in upper quartile and reduce our void properties to 2.3%



**BOARD ASSURED**

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## 7.1 Who are our Customers?

1. We serve a diverse and wide range of customers across our communities. At the highest level, our customer groups are customers who we bill for our service, customers who we provide the water service for, developers, New Appointees, self-lay providers and retailers. This chapter considers how we will deliver for all types of customer groups.

### 7.1.1 Defining financial and non-financial vulnerability

1. Vulnerable circumstances can be diverse and complex, with customers often having multiple vulnerabilities or needing extra help for short periods at a certain time in their life (e.g. times of illness, unemployment, bereavement and relationship breakdown). Research using data from credit and other organisations in our region suggests that:
  - approximately 500,000 customers in our region could be eligible for non-financial vulnerability support<sup>49</sup> and we currently have 26,731 households (2% of our base) registered on our Priority Services Register (PSR) (March 2018)
  - approximately 280,000 households (19% of our base) in our region are financially stretched with a gross income under £20,000p.a.<sup>50</sup>. This represents as much as 29% and 25% in the Lee and Stort communities, (see Appendix 7 section 7.5). Currently we have more than 50,000 eligible households supported by our Social Tariff (LIFT and Watersure).

### 7.1.2 Affordable and valuable services

1. We are committed to ensuring our bills remain affordable and offer good value for money for all customers. We currently undertake a quarterly research survey using a third party to understand the percentage of customers who 'worry about being able to afford my water bill' (See Appendix 7 section 7.8). During 2017/18 our research told us 76% did not worry about being able to afford their water bill. Additionally, the CCWater research report<sup>51</sup> showed that 58% of customers agreed that their water charges were fair., Research conducted by Ipsos MORI<sup>52</sup>, on our behalf, also showed that 87% of customers surveyed said they 'do not have problems paying their water bill', therefore supporting that for the majority of customers are affordable.
2. There are, however, around 5% of customers who reported that they struggle: 3% of customers state that they found it difficult to pay but paid; and 2% found paying their bill difficult and never paid it on time. These results closely mirror our current percentage of households over 30 days in arrears (4.01%) and households in arrears and not on a payment plan (2.41%, subset of the previous percentage). Affordability is affected by changing external economic factors; hence we will continue to monitor customers' sentiment in our Value for Money survey (See Chapter 7 section 7.8).

## 7.2 Our Customer Service Story

1. We are committed to providing great service to customers and have taken steps since 2015 to improve the service we provide. This has resulted in our SIM score improving year-on-year since and a reduction in complaints of 58% and unwanted contact by 37% over the same period. This has been achieved through our Customer Experience Improvement Programme. We have improved customer satisfaction from an average of

<sup>49</sup> RNIB data for long term illness or disability

<sup>50</sup> 2013 Acorn data

<sup>51</sup> CCW Research – Water Matters 2017/18

<sup>52</sup> Ipsos MORI Affinity Water Business Plan Acceptability Survey, June 2018

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4.24 to 4.67 out of 5 via our external customer feedback partner and won several customer service awards.

2. Our Developer Services performance has historically been below the expectations of our developer customers and regulatory bodies. During 2015-2020 we committed to improve our processes. We therefore took the opportunity presented by a period of significant change in regulation related to Developer Services to review and align our internal processes. Since April 2015, water and sewerage companies in England and Wales have been reporting on their levels of service (LoS) for developer customers in relation to a range of activities to support the provision of new infrastructure. Our approach to driving improvements has led to a consistent upwards trend with us reaching our highest level of 98.5% against the LoS, the detail of which is outlined in Appendix 7.
3. We are transforming our delivery approach and adopting both a mindset and methodology that recognises that customer interactions are never complete, but rather continuously evolving. We have recently implemented user-centred design and lean delivery approaches as used by leading organisations including IBM, Government Design Services and Google Ventures. This has helped to quickly validate whether products under development are intuitive, meeting needs and leading to the desired outcomes.
4. Great customer service applies across the business and since market opening, our Wholesale Service Desk has listened to feedback and ensured collaborative relationships with Retailers and was awarded the best performing company in 2017/18 (see Appendix 7 section 7.11). We have invested in technology to support customer service across our wholesale activities, including new video calling functionality to facilitate tasks in work areas, replacing our ageing wholesale works management system with a new solution (Maximo) and online asset mapping.
5. We recognise part of modernising our service to meet increasing customer expectations is about creating a more flexible workforce, and having strategies in place to ensure resilience in this area (see Appendix 7 section 7.12).
6. We have developed and deployed several successful innovations, including a new 'My Account' self-service platform and a new Developer Services on-line portal with simplified usability and advanced functionality – household online accounts have more than doubled since 2015/16. We have also initiated targeted email campaigns and observed email rates of 43% (almost double of industry standards) (see Appendix 7 section 7.3).
7. We have started using advanced business visualisation tools, such as QlikView and Power BI to improve accessibility of the many customer insights we have and will continue to tailor and share these more widely across the business. We also have a speech analytics tool, which is used both reactively and proactively to analyse customer calls and provide valuable insights on key words and phrases used to flag customers potentially needing additional support. This not only helps us assure quality within the contact centres, support coaching conversations and the analysis of call trends but also enables the creation of alerts used to identify future opportunities to provide additional services to customers, where needed, through either our PSR or affordability support.
8. We recognise that whilst we have won numerous awards and our customer service across SIM, quantitative and qualitative aspects have improved year on year during AMP6, our service needs to improve further. Our industry position on SIM and the trials for D-MeX and C-MeX is not as good as we would like it to be. We are striving to do much more and have built solid foundations to deliver brilliant service to all our customers.

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## 7.3 Customers at the heart of our business

1. We need to become a more customer centric business and to develop that mindset across all of our business areas.
2. We held our first Customer Excellence Day during 2016, with business-wide attendance and have since held these twice a year (see Appendix 7 section 7.1). These events have given us new perspectives on how excellent customer service is managed in other industries through the engagement of guest speakers from companies such as OVO Energy and The Institute of Customer Service, with customers having played an active role in these successful events.
3. We recognise the importance of attracting and developing customer service focused employees, focusing on satisfying customers, as in competitive retail businesses. Our collaboration across the business with the training, people and project delivery teams, has culminated in a culture programme to respond to this change. Some of the initiatives are included below.

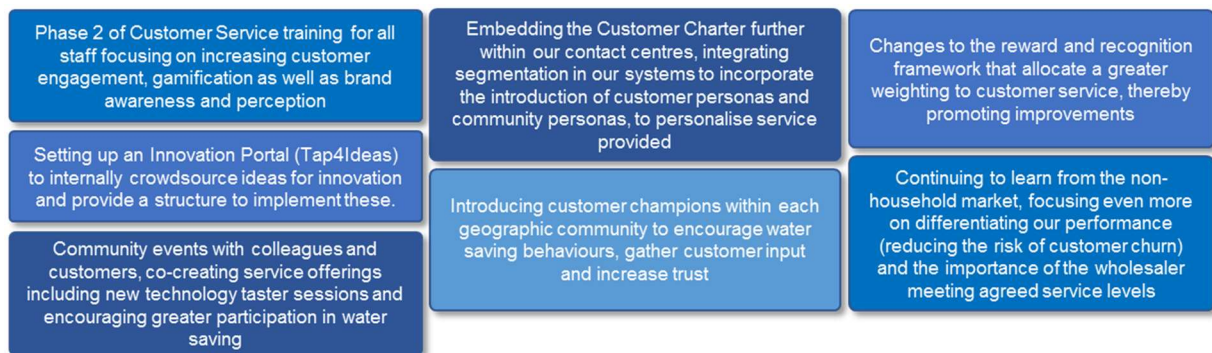


Figure 7.0: Summary of Customer Culture Change Initiatives

4. Our Plan is supported by the communities we serve. Alongside operational customer feedback, to develop our Plan for 2020 to 2025, we have engaged with over 15,300 customers including some that are in vulnerable circumstances or harder to reach. This has helped us to ensure we have developed a truly representative view of what matters to customers today and what they want to see from us in the future. Customer engagement activities undertaken for our Plan are detailed in Chapter 3.

## 7.4 Understanding customers' expectations

1. Extensive customer and community engagement has been undertaken to define what we mean by delivering great customer service. Over 286,000 customers have given feedback as part of business as usual interactions with us, and we continue to analyse the data collected to uncover trends and opportunities for improvements. This analysis has shaped our Plan and informed the prioritisation of our initiatives.
2. Several key themes have emerged from our research which identify what customers, developers, new appointees and self-lay providers regard as important. These key topics have shaped this Plan for 2020 to 2025:

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Key Themes	What customers and stakeholders said	What we will do
Customers want to know more about the service we provide <sup>53</sup>	From our engagement with customers, we understand they would like to know more about how to save water. Therefore, we will provide a new dedicated team to help customers reduce their consumption and save money on their water bills. As we move to C-MeX, we will be increasing engagement with non-contacting customers to ensure we meet their expectations.	During 2020 to 2025 we will play an active role in educating customers and increasing their awareness of our service offering through tailored contact across channels and platforms, with information relevant to them as identified through data analysis.
Customers want to be communicated with in a personalised, relevant and timely way	Customers increasingly want to use online methods of contact and would like improved communication <sup>54</sup>	In response, we are evolving our channel strategy and investing more in online digital channels including 'MyAccount' and enhancing our Developer on-line Portal. In parallel, we will overhaul our communications strategy to ensure it is more proactive, relevant and personalised based on data insight.
Customers want water to be affordable; and bill pricing transparent	Encouragingly, 87% of household customers generally see water as affordable; and when compared to other utilities, 29% see it as better value; 57% same value. <sup>55</sup>	Our customer assistance measures incorporate best practice from the debt industry and have been specifically designed to address customer feedback. A key initiative in AMP7 is to decrease our cost to serve whilst offering more flexible payments. Additionally, the proactive communication will help all customers to reduce water bills where metered tariffs are more appropriate and, for those who are already metered, to provide an early warning of potential leaks where abnormal consumption is observed. Separately, we will proactively connect with customers who are struggling to pay, offering help and support with their bill.
Customers want to support those who need extra help	75% of customers support us in providing additional assistance to those who need it most, through bill reductions, flexible payment plans and bill management <sup>56</sup> . 63% are in favour of us spending more on the Social Tariff to support a greater number of customers and 47% of customers are in favour of increasing overall bills to support more people <sup>57</sup> .	In response to these favourable insights, we plan to grow our successful Social Tariff which now supports circa 51,000 customers to 85,000, and set up a Customer Assistance Fund (£0.4m pa) and Trust Fund (£0.1m pa) to help those in hardship.

Table 7.0: Delivering our Plan

<sup>53</sup> Phase 0 ethnographic interviews, signpost focus groups, Phase 1 community – water service survey, Phase 2 dWRMP survey and focus groups, Phase 2 Future customers schools survey

<sup>54</sup> Phase 1 community – customer service survey, Phase 2 BP focus groups

<sup>55</sup> Phase 0 ethnographic interviews, Phase 0 – signpost focus groups; value for money survey, Phase 1 customer community – omnibus survey; Phase 2 BP acceptability survey

<sup>56</sup> Phase 1 social tariff survey



<sup>57</sup> Phase 2 BP acceptability survey

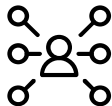
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## 7.5 How we will evolve and improve our service and deliver outcomes to customers

1. The initiatives to continue to improve the service to customers, developers, New Appointees and Self-Lay providers are consistent based on all feedback. The themes are more functionality on-line, such as Moving Home end to end for household customers, an on-line payment option for developers alongside fast response times and first-time resolution. Our plan addresses this feedback across all customers enabling an improved C-MeX and D-MeX outcome.
2. We are confident the transformation being delivered during 2015-2020 has built and will continue to build the foundations that underpin our planned investments for 2020 to 2025, to enhance our services in response to customers. We have developed initiatives that will ultimately reduce our cost to serve and provide greater value to customers, as summarised below under 3 areas.

Areas	Initiatives and Actions
<b>Modernising our business</b> 	Establish agile delivery and customer-centric design: We will: <ul style="list-style-type: none"> <li>• shift our culture and ways of working to continuously improve our service</li> <li>• co-create with customers to deliver customer interactions faster</li> <li>• reduce our cost to serve from £31.94m in 2018 to £26.47m in real terms (excluding inflation and customer base growth) throughout 2020 to 2025</li> </ul>
	Multi-channel growth: We will: <ul style="list-style-type: none"> <li>• enhance the functionality of 'MyAccount', to balance existing and new channels of communication, whilst encouraging a cost-effective approach towards digital engagement</li> <li>• increase customers registered to 'MyAccount' from 25% to 50% by 2020</li> <li>• ensure inclusive practices within traditional channels</li> </ul>
	Extend automation for customers: We will: <ul style="list-style-type: none"> <li>• increase automation and invest in strategic partnerships to introduce the right supporting technology e.g. Virtual assistants and Artificial Intelligence</li> <li>• automate 60% of our customer interactions by the end of 2020</li> <li>• automate 80% automation of all digital interactions by the end of 2025</li> </ul>
	Create a strong brand perception: We will: <ul style="list-style-type: none"> <li>• introduce gamification (on-line tool to encourage engagement)</li> <li>• increase community engagement at the same time as digital presence</li> <li>• educate customers on the value of our service</li> <li>• encourage water saving practices to increase brand awareness and customer trust, reflected in improving C-MeX</li> </ul>
<b>Building an insight-driven business</b> 	Advance customer segmentation and community profiling: We will: <ul style="list-style-type: none"> <li>• integrate internal and external data at customer, postcode and community level to support customer insight generation and predicted probability of default (POD)</li> <li>• use speech analytics to identify potential vulnerability on calls</li> <li>• create customer personas</li> <li>• embed segmentation within customer systems to understand specific customer needs and alignment with our customer strategy</li> </ul>
	False voids and gaps identification: We will: <ul style="list-style-type: none"> <li>• empower local representatives to flag gaps and the use of increasing volumes of meter data to identify and pursue false voids</li> <li>• reduce residential false voids from 2.62% to 2.3% by the end of AMP7 and identification of 50 gap sites per year</li> </ul>
	Create high-quality, inclusive services: We will:

 <p><b>Delivering an inclusive and personalised customer experience</b></p>	<ul style="list-style-type: none"> <li>introduce third-party alerts in event of incidents</li> <li>secure BSI accreditation, dementia friendly organisation certification, C-Sat and Ease of Effort performance commitments</li> <li>signpost customers to specialised organisations who may assist them further</li> </ul>
	<p>Tailor engagements using data-driven insights: We will:</p> <ul style="list-style-type: none"> <li>tailor contact channel and content to drive behavioural changes in water usage</li> <li>develop inclusive communications</li> <li>target email campaigns and services with local relevance</li> </ul>
	<p>Affordability assistance through reduced tariffs and bills: We will :</p> <ul style="list-style-type: none"> <li>establish Social Tariff support tiers</li> <li>use our water saving programme to assess bill reduction benefits from metering</li> <li>support financial vulnerability with an additional £0.4m per year through the Customer Assistance Fund and £0.1m per year through the Trust Fund between 2020 and 2025 (in addition to support from our social tariffs)</li> <li>enhance other affordability support assistance measures to reduce bad debt by £1m</li> </ul>
	<p>Affordability signposting and support awareness: We will:</p> <ul style="list-style-type: none"> <li>develop a holistic affordability view, with warm transfers to relevant organisations</li> <li>create Benefit Champions</li> <li>extend training through our partners for frontline staff</li> <li>provide comprehensive information regarding support to customers online</li> </ul>
	<p>Facilitate affordable payments: We will:</p> <ul style="list-style-type: none"> <li>provide tailored payment plans based on customer affordability</li> <li>provide payment breaks to recover from transient difficulty and sufficient time to put together repayment plans or flexibility in payments</li> </ul>
	<p>Financial assistance for customers struggling to pay: We will:</p> <ul style="list-style-type: none"> <li>introduce the Customer Assistance Fund for reducing debt through one-off and matching payments, and the Trust Fund for extreme poverty assistance</li> <li>improve the quality of affordability assistance to achieve 82% of customers satisfied with the Priority Services Register (PSR) and financial support services, and a rating of 4.8 out of 10 for ease of effort and accessibility (where 1 = easy and 10 = hard)</li> </ul>
	<p>Enabling flexible payments: We will</p> <ul style="list-style-type: none"> <li>increase the total number of households on Affinity Water's Standard Payment Plan (10-month instalments) to 60% and those paying by Direct Debit/Secure Payments to 68% by the end of 2025 while increasing the number of customers in debt with a repayment plan in place to 53%</li> </ul>
	<p>Pre-emptive and personalised debt collection contact: we will:</p> <ul style="list-style-type: none"> <li>use financial and payment data to tailor customer engagement for those in debt, using POD insights to engage customers before they go into debt and re-engagement of customers in historical debt. Reduction in bad debt in the AMP, as a percentage of revenue, to upper quartile through segmentation and targeted engagement</li> </ul>
	<p>Enable Priority Services Register (PSR) data share and efficient maintenance: We will:</p> <ul style="list-style-type: none"> <li>create a new PSR database</li> <li>provide data share arrangements across energy and water companies to align customer need codes</li> </ul>
	<p>Leverage partner networks and expertise: We will:</p> <ul style="list-style-type: none"> <li>build a web page for partners to gather information</li> <li>seek input for training</li> <li>create a vulnerability panel to evaluate Ease of Effort to use services</li> <li>improve internal processes and proposals</li> </ul>

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	<p>Grow awareness and facilitate PSR sign-ups: We will:</p> <ul style="list-style-type: none"> <li>• build a community team application</li> <li>• support PSR growth targets</li> <li>• extend training for community teams</li> <li>• train more vulnerability champions</li> <li>• increase the volume of households in the PSR to 92,000 by end of 2025</li> </ul>
	<p>Enhanced customer satisfaction monitoring: We will:</p> <ul style="list-style-type: none"> <li>• ensure proactive engagement following feedback</li> <li>• provide quality tracking of services via surveys</li> <li>• track of customer satisfaction metrics to evaluate impact of other PR19 initiatives i.e. low pressure and interruption issues.</li> </ul> <p>All of the above to feed into our continuous improvement journey</p>

Table 7.1: Summary of Changes since 2015

## 7.6 How our initiatives enable the delivery of our PCs

- There are six PCs which relate to the level of service we provide to customers, developers, New Appointees and self-lay providers, they are:
  - C-MeX (customer measure of experience)
  - D-MeX (developer measure of experience)
  - Customer Survey - customers in vulnerable circumstances satisfied with our service
  - Customer Survey – ease of effort for customers in vulnerable circumstances
  - PCC
  - Number of occupied properties not billed (False Voids - % of total properties)
- We have set two bespoke PCs for our inclusive service. We have engaged extensively with the CCG and other stakeholders to shape these commitments (see Appendix 7 section 7.10). Further information on each bespoke PC is included in Appendix 4 and summarised below.
  - Customer feedback is integral to our success and as such we will listen, learn and continually develop our Inclusive Services. A satisfaction survey will be conducted via appropriate channels (e.g. text, online services), tailored to reach customers who are on our PSR or receiving financial support through our social tariffs or flexible payment plans. The survey will be both reactive and proactive in measuring satisfaction and the commitment will be set at a yearly reportable target of 82% satisfied (see Appendix 7 section 7.10).
  - Working with our stakeholders who provide financial and non-financial support services we have solicited feedback on how we can measure ease of effort across our customer interactions, for customers in vulnerable circumstances. Acting on this feedback we will introduce an audit conducted by representatives from our partners to test our ease of effort. The audit will be conducted twice yearly and is currently a measure that is used in the financial sector as best practice from our audit insights, an ambitious and stretching target for this commitment is an Ease of Effort score of 4.8.
- Both CCG and CCWater reviewed and challenged the bespoke PC proposals put forward, and CCWater considered them in line with other industry proposals. Further detail on the stakeholder engagement carried out for shaping these commitments can be found in Appendix 7 section 7.10. These performance commitments reflect the flexible nature of our strategy to assist customers in vulnerable circumstances, as they will help monitor the quality of our support to help us identify and therefore react to changing needs or expectations. This will ensure that our services remain relevant, sensitive and inclusive.

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## 7.7 C-MeX and D-MeX

1. Our new channel strategy will assure customers have wide-ranging, accessible options for interacting with us. Research conducted in partnership with Ember, (in December 2016), confirmed customers also expect quick and effective customer service support. Our existing programme will have introduced automation in almost 60% of customer journeys by 2020, placing us in a leading position<sup>58</sup> across sectors.
2. Our agile approach to project delivery has allowed us to deliver incremental changes quickly and to prioritise based on impact and urgency and reconfigure our strategy and processes as required to harness the opportunities new technologies provide. Automation is one of the key enablers to deliver the efficiency challenges, as we estimate significant value can be unlocked through further development of Robotic Process Automation (RPA). Our ambition is to achieve 80% automation of all digital interactions by the end of 2025.
3. In line with our strategy to continually reduce cost to serve and improve satisfaction through innovation and automation, we have begun exploring the use of chatbots and artificial intelligence, including the introduction of our Amazon Alexa capability in February 2018, which was a water industry first, gaining exceptional feedback from customers and designed in line with our inclusive service strategy. The new on-line developer services portal has also had great feedback and improved response times.
4. Our customer service solutions will deliver a leading experience for those customers contacting us, but we recognise that our brand perception requires development, especially amongst customers who interact with us infrequently. Customer Experience research from June 2018 (see Appendix 7 section 7.8) identified that only 64% of customers surveyed correctly identified us as their water provider. Our community strategy will be used as vehicle to deliver targeted brand campaigns to reach all customer segments.
5. Cross-sector leading practice shows companies are investing in gamification<sup>59</sup> to enhance customer engagement and loyalty, by rewarding customers for certain behaviours, resulting in overall improvements to engagement and potentially reduced operational costs where behaviour changes lead to cost efficiencies (e.g. adoption of e-billing and behaviour change by reducing PCC).
6. We have significantly advanced our data and analytics capability since 2015, enabling deeper and broader insights. Central to our success is the use of merged internal, operational data. We will be investing approximately £1 million during 2020 to 2025 to segment customers into specific groups to target the most appropriate approach.
7. The greater insight from this data will ensure that customer support provided through contact centres and online, as well as proactive engagement, is tailored to resonate best with the audience. Our August 2017 Ipsos MORI research confirmed customers are increasingly looking for water companies to maximise the use of available data to improve their services<sup>60</sup>.

<sup>58</sup> PwC Ofwat Retail Services Efficiency Report

<sup>59</sup> Gamification is the process of taking something that already exists – a website, an enterprise application, an online community, and integrating game mechanics into it to motivate participation, engagement and loyalty

<sup>60</sup> Ipsos MORI PR19 Engagement, Pre-SDS Focus Groups Research Report (August 2017)

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8. Analysis of current data shows certain customer segments have greater tendencies to contact us than others. For example, the segment “Urban Adversity” has the most frequent contact, particularly related to billing, whereas the largest proportion of unwanted calls are from “Affluent Achievers” (see Appendix 7 section 7.5).
9. We have identified services relevant to our customer base and the types of transactions household and developer services, self-lay and new appointee customers have with us, e.g. they told us they want a “basic and simple” solution, with clear sign-posting of how to complete transactions. We undertook external benchmarking as part of this to identify best practice elsewhere, based on customer feedback, usage and capability (see Appendix 7 section 7.3). Our Ipsos MORI research undertaken in 2017 has confirmed strong customer demand for improved channel offerings (see Appendix 7 section 7.3).
10. Research by McKinsey<sup>61</sup> confirms customers expect to be able to interact with suppliers at any time, on any device, with over half of all customer interactions taking place during a multi-channel, multi-event journey (see Appendix 7 section 7.3). Since 2015 an increased number of users are successfully interacting with us through online self-serve, webchat and social media (Figure 7.2).

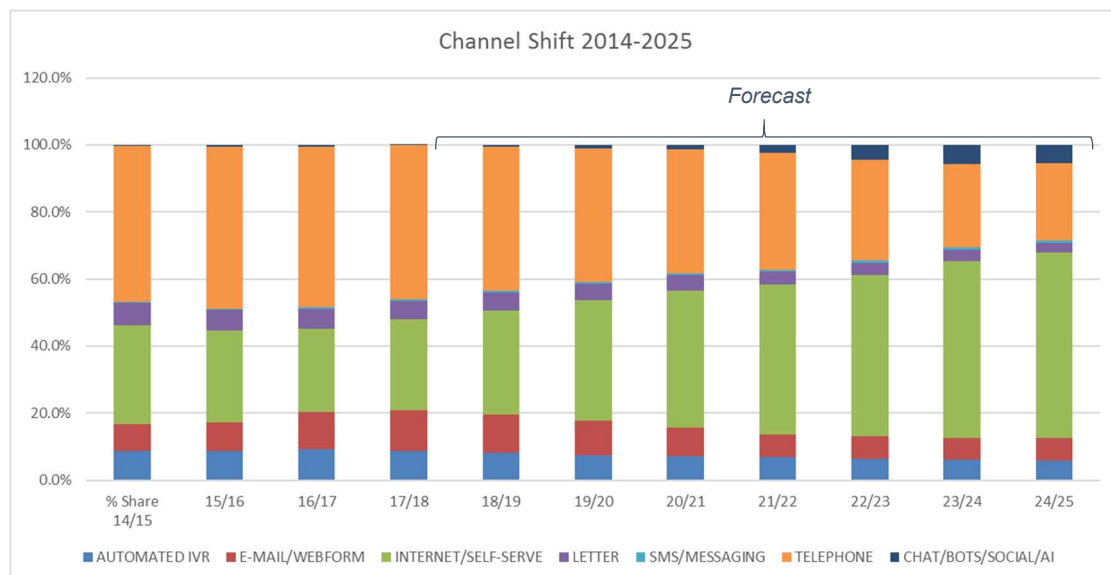


Figure 7.1: Summary of Culture Change Initiatives

11. We are exploring opportunities to improve both customer engagement and experience by segmenting and personalising service. We will be adopting relevant messages about services that resonate most with customers and target communications around these, avoiding a one-size-fits-all approach (see Appendix 7 section 7.5 and 7.6 for examples of shared characteristics recognised as part of our customer engagement exercises).
12. The introduction of D-MeX will provide an opportunity to measure and benchmark service satisfaction enabling improvements that matter to developers, self-lay providers and new appointees.

<sup>61</sup> McKinsey and Company: CX:Customer Journey Transformation presented in Harvard Business Review

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13. We will increase our focus on a customer centric Developer Services, which will be achieved by leveraging our enhanced data management capabilities to provide greater support and transparency. This will include building developer surveys to enable us to act on any feedback.
14. We embrace the introduction of C-MeX, supporting increasing engagement with non-contacting, ensuring we place greater emphasis on customer trust and pushing the business forward into potential readiness for the possible Retail competitive market.
15. With the transition from SIM to C-MeX, it is vital that our customer insight and engagement broadens to include non-contacting customers. We have tracked Net Promoter Score (NPS) this AMP, which measures the willingness of customers to recommend a company's products or services to others. This was part of our Value for Money index (see Appendix 7 section 7.8). We have also tracked brand awareness within the index and in research conducted in June 2018 (see Appendix 7 section 7.8), indicating consistently that awareness is in line with previous work undertaken. Recognising the broader approach C-MeX will bring, we will use targeted website, email and SMS surveys and where appropriate new techniques to ensure we are capturing a plethora of rich data.
16. We believe that the initiatives and actions in our plan should result in continuing our improvement in the delivery of service and align with our ambition to achieve upper quartile performance in service.

### 7.7.1 PCC

1. Achieving sustainable reductions in customers' consumption of water is a challenging and stretching objective in our plan. Delivering the reductions to meet our performance commitment for PCC requires a broad programme that goes beyond our metering programme. The initiatives to deliver this are outlined below in Figure 7.4 along with making full use of the data and tools that we have outlined in this chapter.

#### Driving a reduction in Per Capita Consumption (PCC) through our colleagues, customers and partners:

	Motivation	Method	Outcome
Colleagues	<ul style="list-style-type: none"> <li>Upskilling opportunity</li> <li>Professional recognition &amp; rewards</li> <li>Become leaders in the water saving movement</li> </ul>	<ul style="list-style-type: none"> <li>Create awareness through training</li> <li>Reinforce through prompts and by factoring in rewards &amp; recognition processes</li> </ul>	<ul style="list-style-type: none"> <li>Colleagues act as water saving ambassadors at work and in their communities</li> </ul>
Customer	<ul style="list-style-type: none"> <li>Reduce their bills</li> <li>Understand their environmental footprint</li> <li>Active role in protecting the environment</li> </ul>	<ul style="list-style-type: none"> <li>MyAccount info</li> <li>Proactive contact</li> <li>Increase knowledge of consumption and impact</li> <li>Gamification</li> </ul>	<ul style="list-style-type: none"> <li>Customers reduce their water usage and spread the message of water saving importance and good practices</li> </ul>
Partner	<ul style="list-style-type: none"> <li>Partnership recognition</li> <li>Leveraging of Affinity Water's brand and expertise</li> </ul>	<ul style="list-style-type: none"> <li>Use Hubbub, Waterwise etc. to provide extensive public information and run campaigns at national level</li> </ul>	<ul style="list-style-type: none"> <li>Partners independently drive behavioural change, shift social norms to make this centre of mind</li> </ul>

Figure 7.2: Initiatives to reduce PCC

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## 7.7.2 Vulnerability and Affordability PC

1. We plan to use our affordability assistance measure to help and support more customers in AMP7, and where possible prior to 2020/21. These measures are specifically designed following feedback from customers, CCG and using best practice from other sectors (see Appendix 7 section 7.9 & 7.10). We estimate that c.100,000 (excluding PSR) or 6.8% of households will benefit from these measures by the end of AMP7.
  - Social tariff. An additional 30,000 customers will benefit from the start of AMP7, bringing the total to 82,000 by the end of AMP7. A further 3,000 customers will also benefit from Watersure
  - PSR. We aim to increase the number of customers registered by 65,000 to 92,000 by the end of AMP7
  - Simple payment solutions for all. Direct debit usage will increase to 68% of all customers
  - Affordable reduced payments. Up to 12,000 customers per year will benefit from payment breaks or reduced payments following an assessment of income and outgoings, from 2019/20
  - Metered tariff assessment. Up to 3,500 customers per year will benefit from moving to a metered tariff following a review of usage, from 2019/20
  - Customer Assistance Fund. £0.4m per year from 2019/20 will provide support with bills through payment matching or bill reduction. We expect 2,400 customers to benefit from payment matching and 580 customers to benefit from bill reduction
  - Trust Fund. Up to £0.5m for AMP7 will be available for customers in severe financial hardship. An independent panel will be created to authorise payments from the Trust Fund based on referrals from third party debt charity partners
  - Sign-post debt advice. Proactively sign-post customers to appropriate debt advice organisations who are best placed to provide support. Use of our 'benefit champions' to offer simple guidance to customers regarding financial support
  - Affordability Home Visits. Up to 5,000 customers will benefit from a home visit where we can assess customer affordability or needs (such as adding to PSR or DWP/social tariff).
2. As part of a £1M investment in an advanced segmentation and personalisation solution during AMP7, we plan to roll out several data sharing and analysis initiatives relevant to vulnerability and efficient debt management.
3. We have used internal (e.g. PSR) and external (e.g. Credit bureau, RNIB, Acorn) sources to identify the potential needs of customers and will deliver services to better support them (see Appendix 7 section 7.5). Further insights<sup>62</sup> and data analysis have helped shape our debt management strategy and our customer affordability measures, and enable a step change in our engagement with customers in arrears.
4. From the external non-financial vulnerability data, we now understand the most prevalent needs in our region and have built a forecast of customer support requirements surrounding our ambition to increase PSR volume to 92,000 customers by the end of 2025. We have used this to help forecast budget and resource requirements (see Appendix 7 section 7.10). External research has helped to frame our approach, e.g. Ofwat vulnerability focus report 2016, Frontier Economics Sustainability First, Samaritans, CCWater vulnerability report.

<sup>62</sup> from PwC Ofwat: Retail Services Efficiency report

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5. We plan to enhance our services based on the BSI framework (BSI 18477:2010 Inclusive Service Provision). This standard provides a framework to help us and our employees understand the underlying factors involved in customer vulnerability. We aim to have this accreditation by 1st April 2020 and each year we will be audited by BSI to ensure levels of inclusive services are maintained and improved on.
6. We are working proactively with our CCG and partner debt charities to continuously develop our support for customers who are struggling to pay their water bills. Our affordability assistance measures for customers struggling to pay have been reviewed and challenged by our CCG. Key to our approach to affordability is delivering a step change in affordability support and providing a fair outcome for every customer through our current and future affordability assistance measures detailed in Appendix 7 section 7.8.
7. Customer research, insight and lessons learned from the financial services and energy sectors have helped shape how we support customers who are struggling to pay. A Sheffield Hallam University study, July 2016, provides guidance on good practice and this has been incorporated into our approach and we plan to introduce several customer assistance measures in AMP7 (see Appendix 7 section 7.9).
8. By promoting our current affordability assistance measures, we have provided £4.15M of support to customers in 2017/18 (in the form of tariff discounts through our LIFT and Watersure tariffs). We have incurred a cost of £0.58m for providing these measures, including the staff required to administer the tariffs and home 'affordability' visits. Further analysis shows 63% of customers on discounted (social) tariffs have been able to clear historic debt and have also paid at least 81% of their current bill<sup>63</sup>.
9. We will use internal and external financial data to identify our hard to reach customers and predict which customers are likely to struggle with future payments as detailed in Appendix 7 section 7.9. Once identified, we will segment and deploy three distinct processes to tailor our content more effectively:
  - engage customers not currently in debt but identified through data as likely to miss payments
  - re-engage customers already in debt, but currently disengaged
  - continue to support customers who are proactively contacting us for help

Segmenting customers will enhance our revenue collection contact strategy. We will externally benchmark our performance vs. our sector and non-sector peers (see Appendix 7 section 7.11), to learn and measure best practice
10. Partnerships are a vital element to deliver mutual benefits for customers and our bottom line cost efficiency. For example, as part of our research into how we can provide an inclusive service, we facilitated two workshops with key stakeholders to tap into their expertise (see Appendix 7 section 7.10). These stakeholders included:
  - Financial advice - non-profit organisations: StepChange, Money Advice Trust
  - Local authorities: Watford community housing, Herts county council
  - Charities: Samaritans, Alzheimer's Society, Support 4 Sight

<sup>63</sup> Further detail on our affordability assistance measures and the cost benefit analysis is shown in date table App4, lines 7 & 8

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- Investing in our front-line teams is also vital to ensure they have the skills to further assist us in becoming more empathetic and customer centric. We are helping advisors to identify and tailor their approach to customers in vulnerable circumstances to provide an inclusive service. The TEXAS<sup>64</sup> protocol supports frontline teams to manage disclosure effectively. Bespoke training from our partners will be rolled out to office and community-based teams to continuously expand their knowledge on vulnerability affecting customers. (see Appendix 7 section 7.10).

## 7.8 False voids

- Analysis from Economic Insight, shows that we have the second highest transient population in the industry (based on ONS data at local authority level) and a relatively high number of tenants at 39% [Census 2011]. This makes managing void properties challenging and creates significant effort in tracking occupiers and billers accurately.
- The average residential false void performance since 2015 is 2.62% (based on internal analysis) and we are targeting 2.3% by the end of AMP7 against our ODI (Table 7.2) - see the appendix for a breakdown of historical performance and forecast by metered and unmeasured properties.

	2020/21	2021/22	2022/23	2023/24	2024/25	Total ODI
Performance Commitment (000s of void properties)	34.699	34.441	34.124	33.795	33.453	N/A
Performance Commitment (expressed as % void rate)	2.48%	2.44%	2.39%	2.35%	2.30%	N/A
Penalty if false void rate 0.1% over target rate (£m)	0.464	0.469	0.474	0.478	0.483	2.367
Reward if false void rate 0.1% under target (£m)	0.243	0.245	0.248	0.250	0.252	1.238

Table 7.3: Average residential false void performance

## 7.9 Deliver an efficient service

- Customer needs and technology have been evolving at an increasing pace. The emergence of game-changing, customer-centric brands such as Airbnb, Uber and Amazon have pushed customer expectations to new levels. Research conducted by Accenture shows that 33% of consumers globally have higher service level expectations than they did 12 months ago<sup>65</sup>.

<sup>64</sup> Introduced in 2010, TEXAS represents an industry-standard tool for handling disclosures not only of mental health problems, but a wide range of vulnerable situations. See: <https://www.hcegroup.co.uk/2017/05/09/texas-vulnerability-training/>

<sup>65</sup> “33% of consumers globally say their customers’ service expectations are higher than 12 months ago. When asked how expectations had increased, 31% expect traditional providers to offer the same kind of experiences as non-traditional providers like Airbnb (Accenture, Global Consumer Pulse Survey 2017)

2. In projecting the costs and benefits targeted for 2020 to 2025 we have used our current retail household costs for 2017/18, which are £31.9m<sup>66</sup> and applied the changes and investment outlined earlier in this Chapter. Each of these initiatives has been selected based on the merits of its benefits and enabling effect on our customer service strategy.
3. Initiatives underway will deliver annual savings of £2.16m and initiatives in the pipeline for 2020 to 2025 are projected to deliver additional efficiencies of approximately £3.63m annually. Modernising the service will deliver £1.2m worth of cost savings by 2025. The details of planned efficiencies are set out in Chapter 10. These efficiencies are partly enabled by the innovative plans outlined earlier in this chapter, which account for annual investments of approximately £0.3m, and changes to existing processes.
4. Through ongoing and planned efficiencies, we will reduce the cost to serve per customer (as detailed in Chapter 10), from £23.41 down to £21.95 by 2024/25. The outcome is that we see a reduction in real terms of the household retail costs of approximately £5.47m by the end of 2025. With the current and planned efficiencies in the business, we are committed to delivering a cost-effective service for customers and building a resilient retail operation that continues to deliver great experience while embracing growth and the impact of inflation. The table below represents the cost drivers impacting the overall residential retail costs.
5. We recognise the overlap between affordability and efficient debt management, and plan to align our affordability initiatives with efficient debt management practices from the wider industry to reduce our overall bad debt to the upper quartile performance of 2.4% as a percentage of revenue by the end of 2023/24 (see Appendix 7 section 7.9). Specific initiatives are planned to deliver this improvement:
  - Data segmentation to ensure a targeted approach to debt collection, focusing resource and collection tools on 'high risk' customers, including accelerated collection actions for those customers who have ability to pay but currently choose not to do so, including litigation and enforcement, and the registering of payment default with credit reference agencies
  - A drive to increase the number of customers making secure payments from 60% to 68% by the end of AMP7. This will use both direct debit and flexible card payments to ensure customers make manageable payments each week or month
  - Improving the service we offer to vulnerable customers. Following customer support, we aim to expand the number of customers on discounted social tariffs by 30,000 during the period 2020 to 2025.
  - Continue with our home affordability visits, ensuring disengaged customers are aware of our affordability assistance measures, agree to sustainable payment plans or sign-post further recovery action as appropriate.

Cost drivers	Annual costs in £m
2017/18 cost	31.94
AMP6 (2015 to 2020) efficiencies	(2.16)
AMP7 (2020 to 2025) efficiencies	(3.63)
Innovation costs	0.32
Impact to customer in real terms	26.47

<sup>66</sup> Includes £0.2m of pension deficit recovery costs not included in our regulatory accounts

Growth	2.72
Inflation	2.78
Projected 2025 costs	31.97

Table 7.4 Average residential false void performance

6. Figure 10.12 in Chapter 10 illustrates how changes in residential retail costs translate to the evolution of cost to serve per customer split by measured and un-measured customers.



### Deliverability Statement

*“As we look ahead to AMP7, our four Outcomes remain priorities for customers. We will continue to work closely with customers through co-creation, giving the opportunity for them to influence the design of the service they receive. This includes improving the use of digital channels to meet customers ever increasing expectations. We will continue to focus on providing value for money by being more efficient and innovative. We have an ambition to be brilliant at customer service. It’s an exciting time to get closer to customers through increased engagement and participation to deliver what really matters to them”.*

**Director of Customer Relations**

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## 7.10 How our plans for great customer service address Ofwat's four Price Review themes

### Great customer service

Great customer service includes technology, culture, ways of working, quality monitoring, customer engagement and 2-way dialogue. We have detailed plans for a range of initiatives to continue to improve Customer Service and key targets for AMP7.

### Affordable bills

Our approach to providing inclusive services (non-financial and financial), will mean we are providing an enhanced offering, and plans for engagement with customers in need of support. We provide detail on data and analysis, assistance plans, partnerships, training, BSI certification and quality management through the bespoke Performance Commitments.

### Innovation

We believe innovation is essential to delight customers and respond to growing expectations, including the use of cutting edge technology on customer touchpoints to improve interactions (e.g. voice assistants, co-creation with customers for new customer portal functionality), and back-office processes (e.g. automation to improve efficiency)

### Long term resilience

Our talent strategy has been developed to ensure workforce resilience and we will introduce efficient debt management practices, BSI certification for Inclusive Services Provision, and an agile work approach to continue to adapt and prioritise new initiatives to meet evolving customer expectations.

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## 8 Developing our Community Approach

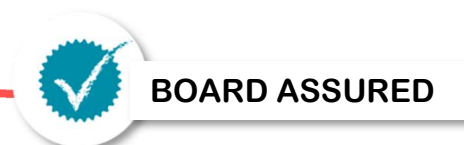
We are refreshing our more traditional approach to communities of geography based on our Water Resource Zones and believe that communities can be communities of place and communities of interest. We have clarified what we mean by 'leading' – it's about impact and the achievement of shared goals. Our own Community Model has evolved to help create healthier communities, engaged communities, resilient environments and sustainable economies.

Since introducing the concept of community at the last Price Review, we have been focussed on establishing the foundations of providing information at a community level so that customers can better understand how we are performing and the challenges we face in their local areas. Our presence has increased, holding more frequent customer and stakeholder engagement events in our communities. The last three years have been about learning what does and doesn't work and we are using this knowledge to evolve our strategy and approach.

Moving from an understanding of communities on our terms, for example on a purely geographical basis, to an understanding of the communities of place and communities of interest valued by the people we serve is a key element in the development of our approach. We must focus on impacts, the biggest of which is to reduce demand therefore creating a resilient water future.

Developing a shared understanding of the kind of future customers and communities wish for and how we work together to bring it to life, is about putting customers at the heart of our business. We have made a step-change in our Community Strategy and drafted a delivery model and measurement framework which will allow us to measure how we are performing, monitor successes and identify areas for improvement. It will also allow customers to hold us to account. We will test, refresh and finalise the model and framework in partnership with our communities in late 2018.

Our community approach supports our initiative to target interventions designed to address challenges within each of our communities. We will be running some Community Trials later in 2018 to test the models we're planning to roll out. We're adopting more of a partnership approach with our communities, understanding that we are not always best placed to drive change or influence behaviours and should draw on the skills of others. Our role is to promote and encourage collaboration, supporting joint working with experts and making better use of existing community platforms.



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## 8.1 Our community approach

1. Our communities form the building blocks of the way we live and work. They are diverse, unique and special. They are where we have our affinities. Communities give us our sense of place and value and are the hub for our connection to others.
2. What all communities have in common is the need for water. Whatever the location or interest, being able to use the water from our local landscape is as essential to our existence today as it has been throughout history:
  - for drinking, keeping clean, cooking, manufacturing and power generation
  - for sustaining our local environment
  - for the parks and waterways we visit.
3. We hold a privileged position as custodians of this resource and have a responsibility to support the ongoing protection of the environment. We are part of your local community and will continue to do more to understand dependency on water. We will tap in to our shared sense of place and communities of interest, to understand requirements for the future and continue to sustain generation after generation by meeting water needs.
4. Together, we share the potential risks of too much or too little water, the benefits of the positive impact of our operations and the progressive behaviours we demonstrate. Together, we will agree the actions we can each take, individually and collectively to help ensure the future for our communities.

## 8.2 Key learning

1. At PR14, we set out our vision to be the UK's leading community-focused water company with a view to better understand and respond to the needs of our different communities. In this way, we said we could help customers connect with the service they receive and help achieve a more resilient future for water in the region. We have made real progress in the last few years. We have delivered a range of measures across our eight communities of place to maintain security of supplies, reduce the environmental impact of our operations and improve resilience. This has been done on a geographical community basis by reflecting the different needs of different areas.
2. We have extended and refreshed our community activity programme, focusing efforts on three core branches activities:
  - investing in STEM and future skills
  - developing community partnerships

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## 8.3 Our journey and drivers of change

### 8.3.1 Our community-specific commitments at PR14 and our progress

1. In our 2015 to 2020 Business Plan, we set out our vision to be the UK's leading community-focused water company. To achieve this, we made a number of internal commitments specifically linked to the delivery of our community vision, largely around the provision of more relevant and timely information to customers so that they could better understand performance and challenges within their local communities. These would also ensure that engagement is carried out consistently as part of business as usual activity. A list of those commitments and our performance against them is included in Appendix 8.
2. We are already actively promoting joint working within our communities, making the best use of established networks and relationships and existing community platforms and will be increasing this activity year on year. A summary of our activities is shown in Appendix 8, alongside some of our highlights since 2015. This includes a list of some of our key community partnerships.

### 8.3.2 Customer and stakeholder insight

1. Our vision is to be the leading community-focused water company so that we can help customers better understand the value of water, in turn reducing consumption and helping to support the ongoing protection of the environment. Our underlying community strategy is guided and influenced by the feedback we receive from our people and customers, both from day to day business activities and as part of the specific engagement programme we have been running to support our business planning process. For more detailed engagement feedback highlighting customer support for our vision, community strategy and approach, please refer to Appendix 3 and 8.

### 8.3.3 Drivers of change

1. Whilst we have made strong progress in driving change through more operational interventions, we know we need to make a step change in our approach to meet both the needs of the company and customers in a changing environment. We will continue to do more to involve customers in future delivery, moving from passive to active participation. This will allow our communities to help identify the benefits they wish to see, in addition to what we hope to achieve. To do this we must create a movement and foster partnerships with others in our communities.
2. We are operating in an ever-changing environment. The effects of climate change, population increase and further pressure on water resources in the South East of England, make it increasingly important that we, as companies and communities, work together. We need to set challenges and goals with our communities so that we work together towards shared objectives. Some of the external factors which are constantly changing the environment within and outside our communities include;
  - A projected population increase of 8% and an increase in the number of households we serve by 11% by 2025
  - Climate change and extreme weather events resulting in droughts and floods
  - A renewed focus on affordability
  - Economic and social change, including Brexit and Welfare Reform
3. We are a monopoly provider to households and custodian of a precious resource, so customers and stakeholders, quite rightly, continue to expect transparency and legitimacy from us and our peers. To enable customer behavioural change, we will need to understand

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demand in much more detail than before, making better use of the data we gather. This means we are looking to gather and analyse data at a much more granular level than previously (for example, capturing PCC on a more local level, rather than only being able to understand it at a community level, our existing eight communities of place - as we do today). We also need to provide data to customers in a more meaningful way, rather than continue to 'push' the information that we think they want and need to know. To do this, we must work with customers to understand the data they want to see and the way in which they want to see it (i.e. online, stated on their bill etc).

## 8.4 Our ambition for our community strategy

1. We have retained our ambition to be the UK's leading community-focused water company and we believe it is critical that this not only serves the needs of customers, but also aligns with more global aspirations for the future of water. Our actions can, do and will continue to help to address some of these global challenges on a local basis and therefore, in developing our community approach, we have looked to the 'UN World Water Development group's Vision 2050 for water in a sustainable world.' Please refer to Appendix 8 to view the UN vision statement in full.

## 8.5 Changing how we define our communities

1. At PR14, we used our eight Water Resource Zones as a starting point for our community approach, which resulted in eight separate geographical areas. This has allowed us to report using more local information and allowed customers to view our performance within their specific community. This approach works for us operationally. However, feedback from customers has told us that some struggle to relate to the eight communities we have identified for them. As individuals, we tend to identify more with our street, village or local authority area. That means they do not feel they're able to take an informed view of the service they are receiving in relation to other communities that we serve.
2. Today, we are more fluid in how we define our communities externally, and that allows us to give our people flexibility within a framework when delivering community activities. We recognise that customers tend not to associate with a single community and targeting interventions based on geographical areas alone does not go far enough. We have therefore refined our definitions of communities to allow better segmentation. We now define community as:
  - Communities of place: defined by location (a street, ward, borough or village)
  - Communities of interest: defined by a shared characteristic, interest or affinity (life stage, age group, customers in vulnerable circumstances, gardeners etc).
3. What communities have in common is a sense of belonging, a formal or informal structure, shared beliefs, a common agenda and a sense of communication and connection.

## 8.6 What do we mean by leading?

1. Only with a clear definition of what we mean by "leading" can we monitor how we are meeting our vision and share our progress with communities. We have looked at best practice examples in other sectors and industries to shape our own approach. As a result, we have identified five principles of leadership. These principles have shaped our chosen approach.
  - Strategy: Our approach is aligned to our strategy, core purpose and capabilities
  - Human: Our approach is human, understands people and communities, uses their language and aligns to their priorities
  - Impact: We can show how our strategy achieves real change

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- Participation: Our approach engages local people, involves them and gives them power and ownership
  - Sharing: We work together to achieve shared objectives and goals and to share what we have learned with others.
2. We intend to play an even more active part in our communities. We believe this will ensure that they hear, share, engage in and partner with us to make things happen. Later this year, we will be testing these definitions with customers to ensure that we have a shared understanding of what a leading company looks like.

## 8.7 What is the Affinity Water Community Model?

1. We have created our own Community Model to illustrate our strategy, based on four key pillars. In creating it, we have drawn on three main sources (cited in Appendix 8); This year, we will be testing the model with customers so that it reflects a shared view before we finalise it.





2. We have identified five key enablers of our approach which are pre-requisites for bringing our Community Model to life which we continue to work towards. These are as follows:

- We need to have a deep understanding of the communities in our region
- Employees should have an understanding of the challenges faced by the company and by communities and actively embrace this new approach to community. They are our advocates and we must recognise the value that their work in the community brings
- We should recognise the benefits of increased community activities for our employees and do more to embrace learning and development opportunities (e.g. employee volunteering, involvement in existing community groups, charitable support etc)
- We need to embed working in collaboration with others to achieve shared benefits as the company norm
- We need to succeed in raising awareness of the fundamental value of water to sustain customer and community lifestyles.

3. The four elements of our Community Model strongly align with our Outcomes and PCs. To monitor the success of our community approach, we must implement a set of measures which will help us understand how we are progressing and what, if any, changes are required as we move through delivery. Our measurement framework will include a mixture of measures incorporating, where appropriate, existing PCs. The following table shows our current thinking on potential measures. As with the model itself, we intend to discuss and finalise this framework in collaboration with customers later this year, ensuring that we come up with a final set of measures that resonate with all involved.



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Our AMP7 Commitments		Draft Community Model				Integrated Reporting
Outcomes	AMP7 Performance Commitments	Community Strategy		Key Measures	Influencing Measures	Capitals
Supplying high quality water you can trust	Water Quality Compliance, Compliance Risk Index (CRI)	Healthier Communities	Providing a continuous supply of high quality and affordable water to meet people's needs	Unplanned outage (PC) Water quality compliance CRI (PC)	Bill acceptability	  <b>Our Sites &amp; Assets</b>
	Mean Zonal Compliance		Increasing the confidence, skills and organisational abilities of communities to create a positive future for their local areas	Number of active, community-led groups	Affinity Days - volunteering hours	
Making sure you have enough water, while leaving more water in the environment	Leakage (MI/d)	Resilient Environments	Improving resilience to water-related risks including drought and flooding	Risk of severe restrictions in a drought (PC)	Biodiversity programme	  <b>Our Environment</b>
	Per Capita Consumption (PCC)					
	Environmental innovation		Creating resilient environments in harmony with the natural water cycle and the ecosystems that support it	Environmental Innovation (PC)	River Restoration (PC) Sustainable Abstraction (PC)	
	River restoration					
	Sustainable abstraction, average annual reduction					
Abstraction Incentive Mechanism						
Providing a great service that you value	Customer measure of experience (C-MeX)	Engaged Communities	Guaranteeing core water needs for customers in vulnerable circumstances	Customers in vulnerable circumstances satisfied with our service (PC)	Customers in vulnerable circumstances who found us easy to deal with (PC) Social tariff take up	  <b>Our Customers &amp; Communities</b>
	Developer measure of experience (D-MeX)					
	Customers in vulnerable circumstances satisfied with our service		Increasingly working in collaboration with other organisations and communities of interest	PCC (PC) Trust of partners and stakeholders in AWL	Education Centre outreach programme Employee time spent with community stakeholders	
	Customers in vulnerable circumstances who found us easy to deal with					
	Number of occupied properties not billed Number of properties wrongly classified as unoccupied					
Minimising disruption to you and your community	Water supply interruptions >3hrs	Sustainable Economies	Increasing community belief in the value of water in all its forms in support of food, energy, environmental products and services Contributing to stronger local economies through employment, skill-building and a sustainably financed business	Perceptions - value of water	C-MeX (PC) D-MeX (PC)	  <b>Our Finances</b>
	Risk of severe restrictions in a drought					
	Unplanned outage (flow rate) Mains Bursts					
	Properties experiencing longer/repeated instances of low pressure					

Note: (PC) notes that the measure is already a proposed Performance Commitment for AMP7.

Table 8.1: Mapping our community model to our AMP7 Performance Commitments

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## 8.8 What does success look like?

- **Healthier Communities:** We understand the needs of customers in vulnerable circumstances in households, care homes, hospitals, businesses and communities and act to meet them.
- **Resilient Environments:** We create resilient environments in harmony with the natural water cycle and the ecosystems that support it – including actions to improve biodiversity, and we improve resilience to water-related risks including drought and flooding.
- **Engaged Communities:** We succeed in raising awareness of the fundamental value of water to sustain customer and community lifestyles. As a result, customers, communities and stakeholders value water and act to reduce PCC.
- **Sustainable Economies:** We contribute to stronger local economies by understanding the dependency of regional businesses on water for their economic success, acting to secure their future needs, providing direct and indirect employment, skill building (with a focus on STEM skills) and by ensuring our business is sustainably financed.

## 8.9 How will customers benefit from our new approach?

- We will look at communities from the **customer perspective as well as our own** so that we ensure we can consider the views of all stakeholders.
- Our new Affinity Community Model **focuses on impact** - improving water resilience, local environments, local economies and support for people in vulnerable circumstances.
- Customers and communities will be **active participants in delivery**, actively influencing the delivery of benefits.

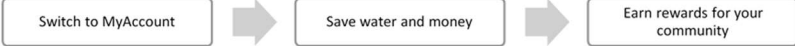

## 8.10 Delivering our new approach – community trials

1. We are currently exploring three different community trials with a view to starting these later in 2018/19. Each of the trials will allow us to test various aspects of our community approach in a specific community of place before wider rollout to other communities in AMP7. It will also allow us to test some delivery models, including:
  - **Resilient community model:** One community where we focus on supporting that community's ambition
  - **Water collaboration model:** One community where there is an existential water issue, i.e. flooding, low flow rivers etc
  - **Empowered community model:** One community where we empower and support, but they act.
2. Through these trials, we aim to engage customers where they live and work, community by community. As a part of this we also improve community ownership and the skills they need to achieve real change. We hope to secure employee buy-in to and participation in our new approach and ensure they have the knowledge and skills to deliver it. Employees will have an understanding of the challenges faced by the company and by communities and actively embrace this new approach.
3. By keeping everyone in touch with progress we will have a continuous conversation about how we learn and improve what we do so that we can develop a deeper understanding of the communities in our region. We will co-imagine and co-create community projects and continue to work in collaboration with others to achieve shared company/community benefits as the norm.


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## Community Trial 1: Customer Incentives - MyAccount Switch, Save, Earn

<b>Summary</b>	<p>This trial aims to drive behavioural change through community-led interest and engagement. It would encourage customers to:</p> <div style="text-align: center;">  </div> <p>Community beneficiaries would be selected by customers, rather than by us.</p>
<b>Community</b>	<p>We're planning to run this trial in our Dour community where we have</p> <ul style="list-style-type: none"> <li>- Strong existing relationships and partnerships</li> <li>- High employee presence</li> <li>- High levels of meter penetration and one of the lowest PCCs across our eight communities, which tells us that further reductions must be driven by behavioural change</li> </ul>
<b>Model &amp; Delivery</b>	<p><b>Empowered Community:</b> The aim is to produce a delivery model that can be replicated across different communities in the future (both communities of place and communities of interest).</p>
<b>Measurement Framework</b>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <p><b>Sustainable</b></p> <p><b>Engaged</b></p> </div> <p>We would explore the proposed measurements listed against these areas in the measurement framework table in Appendix 2, as well as:</p> <ul style="list-style-type: none"> <li>- Number of new customers signing up to MyAccount (online)</li> <li>- Value of rewards given to local community projects / groups</li> <li>- Per Capita Consumption</li> </ul> </div>
<b>Expected Benefits</b>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <ul style="list-style-type: none"> <li>- Increase in number of customers self-serving on MyAccount which could contribute to an overall reduction in average cost to serve, benefits of which could be passed through to customers</li> <li>- Positive contribution to local community groups</li> <li>- More engaged communities who are jointly taking ownership of shared objectives</li> <li>- Reduction in the amount of water used which could reduce bills for metered customers</li> </ul> </div>

## Community Trial 2: Holistic Water Management

<b>Summary</b>	<p>Our proposed bespoke Environmental Performance Commitment sets out several innovative pilot projects which we be delivered in AMP7. One of these is Holistic Water Management in the Lee community. The overall project aims to bring together physical water savings tools and initiatives at a domestic scale, with community outreach programmes implemented.</p>
<b>Community</b>	<p>We're planning to run this trial in our Lee community where we:</p> <ul style="list-style-type: none"> <li>- have strong existing relationships and opportunities to develop partnerships further</li> <li>- are facing water shortages as well as experiencing local flooding issues</li> <li>- have a high Per Capita Consumption</li> <li>- have a strong employee presence, both living and working in the area</li> <li>- are experiencing population growth</li> </ul>
<b>Model &amp; Delivery</b>	<p><b>Water Collaboration Model:</b> The aim is to produce a delivery model that can be replicated in future AMPs across different communities. We will utilise existing stakeholders and partners, bringing together charities, sector experts, councils, environmental and community groups, working to deliver a multi-party project.</p>
<b>Measurement Framework</b>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <p><b>Healthier</b></p> <p><b>Engaged</b></p> <p><b>Resilient</b></p> </div> <p>We would explore the proposed measurements listed against these areas in the measurement framework table in Appendix 2, as well as:</p> <ul style="list-style-type: none"> <li>- Per Capita Consumption</li> <li>- Environmental innovation</li> <li>- River restoration</li> <li>- Sustainable abstraction</li> <li>- Risk of severe restrictions in a drought</li> <li>- Biodiversity</li> <li>- Perceptions: value of water</li> </ul> </div>
<b>Expected Benefits</b>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <ul style="list-style-type: none"> <li>- Reduction in Per Capita Consumption</li> <li>- Reconnecting communities with their local environment</li> <li>- Improved micro-component, consumption and network data</li> <li>- Environmental data and increased levels of evidence gathering</li> <li>- More engaged communities who are jointly taking ownership of shared objectives</li> </ul> </div>

## Community Trial 3: Policy Development – Social Housing

<b>Summary</b>	<p>This trial focuses on further building and strengthening partnerships based on our new Community Model. We will work with key stakeholders to jointly develop policy change recommendations and provide guidance on best practice. Following research we have conducted, we know that social housing is important in terms of reducing consumption across our communities and social housing is approximately 20% of the housing mix by tenure in the UK and is much higher in London.</p> <p>We have worked with several social housing groups to understand how their tenants use water. Social housing tenants have been proven to use more water than average. A study by Waterwise said that the majority of London social housing at the time had baths but no shower. We know that replacement of baths with showers can significantly reduce consumption of water. We also know that social housing landlords retrofit bathrooms on a cyclical basis and such fittings come at zero or little marginal cost.</p>	
<b>Community</b>	<p>We will explore options across a number of communities of place, particularly where we see relatively high Per Capita Consumption. We have existing relationships with local housing authorities and associations, particularly through our advanced care team, and believe we can do more together to address the affordability issue as well as help customers reduce their consumption.</p>	
<b>Model &amp; Delivery</b>	<p>Resilient Community Model: We will work to directly advise on water efficient retrofits. We are also setting up a taskforce in partnership with Registered Social Landlords (RSLs) to explore the policy barriers and incentives for RSLs to introduce more water efficient measures. We will draw on models using both in other parts of the UK and globally.</p>	
<b>Measurement Framework</b>	<div> <div>Healthier</div> <div>Engaged</div> <div>Sustainable</div> <div>Resilient</div> </div>	<p>We would explore the proposed measurements listed against these areas in the measurement framework table in Appendix 2, as well as:</p> <ul style="list-style-type: none"> <li>- Per Capital Consumption</li> <li>- Number of meters installed</li> <li>- Impact on C-MeX</li> </ul>
<b>Expected Benefits</b>		<ul style="list-style-type: none"> <li>- Reduction in Per Capita Consumption</li> <li>- Reconnecting communities with their local environment</li> <li>- More engaged communities who are jointly taking ownership of shared objectives</li> <li>- A positive impact on affordability issues (assuming lower consumption by metered customers results in a reduction in bills)</li> <li>- We would also look to drive key policy changes within the sector which could drive future behaviours</li> </ul>

- To develop a truly community-focused model, we must co-create with our communities. The strategy detailed above sets out our direction of travel based on our views, feedback from customers to date and key learning since 2015. We are already in the process of going one step further and testing our approach. Our final community model will reflect the shared aims and goals of us and our communities.

## 8.11 Governance

- As our community approach has evolved, so has the way in which we have governed and prioritised the programme of work. In March 2018, our Board established a formal Community Committee which maintains overall responsibility for the development and delivery of our community strategy. The Committee is chaired by our Chairman and members represent our shareholder companies. In line with the governance structure that we follow with our more 'traditional' objectives, such as delivery of our PCs, Executive-level responsibility for the implementation of the community strategy sits with our Director of Regulation and Corporate Affairs and dedicated resources are responsible for its delivery. A cross-company working group has been established to ensure the approach is further embedded in our day to day activities.

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## Deliverability Statement

*“Our vision is to be the leading community-focused water company and our Plan sets out clearly how we define community and what we mean by leading, considering all that we have learned following the introduction of our vision at the last price review. Our approach is to target interventions to address challenges within communities to achieve shared goals particularly around creating a resilient water future and helping customers manage and reduce demand. Our approach recognises the importance working with experts and existing community partners to deliver our proposals. We have developed a delivery model and measurement framework to assess how we are performing and to make it easier for customers to hold us to account.”*

**Director of Customer Relations and Director of Regulation & Corporate Affairs**

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## 8.12 How our community approach addresses Ofwat's four Price Review themes

### Great customer service

We are embedded in our communities, allowing us to react and adapt to meet differing customer expectations. We engage with customers on their terms and work towards shared outcomes. We foster stronger relationships with customers to ensure we can proactively offer the support they need.

### Affordable bills

We are creating stronger links with our communities to allow us to tailor services to better meet the needs of individuals, helping us to address issues of affordability and vulnerability.

### Innovation

We are moving towards more of a partnership approach, creating shared goals with our communities and working together to achieve them. We plan to do more work with established community groups, ensuring we can better leverage the skills of others.

### Long term resilience

We plan to test our approach with our communities and finalise our strategy together. We will continue to involve our CCG, Community Committee and Board to provide challenge and assurance. We will set out clear co-created plans, giving our communities confidence that we will deliver.



## 9 Ensuring Long-Term Resilience

In recent years emphasis in resilience has moved away from a traditional infrastructure-based approach to focus on resilience outcomes for customers and the environment. As we grew through the amalgamation of smaller companies, we have maintained and developed our resilience to a range of shocks and stresses experienced. The pace of change is accelerating with new emerging risks such as the potential economic impact of severe drought. Our stakeholders and customers expect us to be well-prepared to mitigate the impact of those risks and want us to invest now for the future.

Our strategy covers the resilience of customers and community, the environment, our assets and sites as well as financial and corporate aspects. This ensures that we continue to provide customers with dependable, high quality and affordable water. We commissioned an independent assessment of our 'Resilience in the Round' and used it to inform our Plan, continuing to celebrate our strengths and consider ways in which to continually improve. The assessment process shows we have a good approach to risk management and resilience. This was borne out in the Freeze Thaw event last winter and the long hot dry summer, where we continued to provide a good service to customers. The review points out our industry leadership in collaboration and long-term outlook in water resources management planning. Our financial viability was found to be sound, following the stress and scenario tests that we undertook to demonstrate this.

Our investment in 2020 to 2025 will be key to maintain resilience whilst delivering sustainability reductions requiring our assets to work harder. Our enhancement programme contributes to ensuring resilience by delivering new access to water, improved demand management and increased flexibility in movements of water. We need to develop additional supply resilience, since we cannot rely solely on demand management. We have led work with other water companies in WRSE and WRE to encourage best use of existing resources with new transfers, which will enhance our role as a key trading hub in the South East water grid. In addition, we propose to enhance drought resilience beyond 1 in 200-year drought by accelerating a new regional reservoir in partnership with Thames Water to 2037.

Beyond maintaining great service performance, resilience is needed in our communities to support the successful delivery of HS2, respond to drought risks and enable population growth.

Looking ahead we will review regularly our long-term strategic direction in the face of resilience challenges and report our progress in our Annual Report. We have already taken steps towards this by further enhancing our community-focused approach, which will help to deliver resilience not just for the company, but for customers and the environment too. The next stages of planned improvement in our corporate resilience include actions specifically in respect of talent acquisition, retention and succession planning. Our action plans for further improvement are presented in this chapter and Appendix 9.



**BOARD ASSURED**

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## 9.1 Context

### 9.1.1 Introduction

- 1 This chapter sets out the general context of why resilience matters, our journey over time in building resilience and the response from consultation with customers. Section 9.5 of the chapter provides a summary of the results of an independent assessment of our 'resilience in the round' and actions we will take to improve our maturity. The full report is attached in Appendix 9. Finally, the chapter describes in section 9.7 the actions we have in place in 2015-2020 and in sections 9.8 and 9.9 the actions we will deliver in the future to address effectively resilience risks.

### 9.1.2 Global trends and uncertainty

1. We operate in an increasingly fast-paced and changing environment where global trends, including climate change, environmental degradation, economic and social change, technological transformation, population growth and demographic shifts are shaping business and society worldwide<sup>67</sup>. Cities are also exposed to a greater diversity of risks than ever before, including rapidly emerging cyber threats and terrorism<sup>68</sup>.
2. Many of these trends are fundamental in shaping the service that the water industry will need to deliver in future. We have assessed our key resilience challenges and carried out a comprehensive risk assessment for each. Some are existing issues we are already addressing and we include a summary of actions we are taking to build resilience as well as plans for the future. We take a long-term view of resilience. Our plans beyond 2025 are outlined in this chapter as well as an example of what good resilience could look like.
3. Understanding trends help to inform our decisions now to ensure that we are best placed to deal with long-term stresses, alongside short-term acute shocks, while protecting the environment and continuing to provide a great service to customers. Whilst these trends will present significant strategic challenges, we recognise the opportunities they may bring.

## 9.2 Our resilience journey

### 9.2.1 Our resilience challenges

1. Water sources supporting a unique ecology - our main water supply is from groundwater and many water sources are considered as globally rare chalk streams, supporting a unique ecology, and are often referred to as the jewel in the crown for the UK environment.
2. Enabling population and economic growth - our area is witnessing a large population and economic growth, including 100,000 new properties since 2001 and a 20% population increase predicted by 2045<sup>69</sup>. As a wholesaler, we supply water to critical national infrastructure sites, such as airports, power stations, large industry, health and emergency services, for which water is essential. We are also affected by or dependent on national infrastructure projects developed in our supply area – expansion of Heathrow and Luton airports, HS2 construction and the River Thames Flood Scheme.

<sup>67</sup> World Economic Forum (2018) Global Risks Report 2018: 13<sup>th</sup> Edition

<sup>68</sup> Lloyd's, 2015

<sup>69</sup> Population forecast in our dWRMP, based on data from Experian (2016)

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3. Demand management challenged by exceptional events and behaviours - Most customers believe they are already efficient with water and are genuinely surprised when we show them the high average consumption in our region<sup>70</sup>.
4. We abstract to meet demand, with little bankside and treated water storage, and our operational teams have a record of managing sources and our network under the most challenging of circumstances, including pollution by third parties. Customers are not aware of the source of their water supply and why this is important.
5. All these factors are taking away operational headroom and mean that great operational resilience is becoming the 'new normal'. Achieving a "new normal" means reflecting, learning and doing things differently – in short, transforming into a new and more resilient state<sup>71</sup>. Our ability to think and act innovatively to rise to this challenge will remain critical.

## 9.2.2 Our track record

1. Over the last 30 years we have faced shocks and stresses that have impacted on our service to customers (Figure 9.0). Over this time, we have developed an adaptive, transparent and collaborative approach to resilience ensuring that we learn from events to further strengthen our resilience, while addressing existing resilience issues. We are also increasingly dependent on customer behavioural change, and we recognise this is an area where we need to work collaboratively with our communities to contribute effectively to the management of sustainable water resources.



Figure 9.0: Historical shocks and stresses that shaped improvements to community resilience

<sup>70</sup> Blue Marble (26<sup>th</sup> July 2018) Additional Resilience Investment - Qualitative Customer Research Report

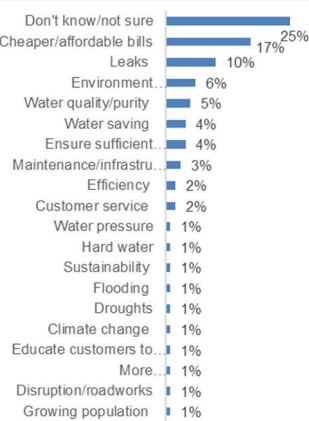
<sup>71</sup> Future Cities: Building water infrastructure resilience, Lloyds and Arup 2017

## 9.3 What customers say

### 9.3.1 A dialogue on resilience

1. Communicating with customers on resilience is best done by framing it in a broader way, asking about long-term priorities and helping them to understand possible risks and trade-off priorities. Another way of representing the future and the long-term is to engage with future customers. This was a target group for us during our engagement for this price review, and is part of our ongoing engagement through our Education Centre.
2. We engaged on future and long-term issues in several ways, described in Chapter 3 and Appendix 3. This section sets out the key activities as part of our day-to-day operations and throughout the phases of our customer engagement programme at this price review.
3. Our customer engagement programme for this price review was iterative and phased. It started with a focus on qualitative market research, starting with the customers' view point and more quantitative research focused on specific propositions towards the end of the programme.

### 9.3.2 What customers told us

We asked	Enabling - Pre-SDS Outcomes survey <sup>72</sup>	
<p><i>"as Affinity Water is making its plans for the future what issues do you think it should be thinking about?"</i></p>	<p>A quarter of customers were unable to spontaneously think of any issues.</p> <p>Following this the top issues were:</p> <ul style="list-style-type: none"> <li>- reducing bills (17%),</li> <li>- leakage (10%) and</li> <li>- environmental issues (6%).</li> </ul> <p><b>Key learning:</b> Most customers (71%) felt reassured of our future plans once they had reviewed the PR14 four Outcomes. Customer value the environment and think that Affinity has a role to protect it.</p>	
We asked	Drought Management Customer Surveys <sup>73,74</sup>	
<p><i>Acceptability of levels of service, balance between upfront investment and more frequent supply restrictions</i></p>	<p>Respondents supported temporary use bans (56%) but wanted all other options to be exhausted first such as better water management and reducing leakage. 72% of them did not think that we should spend more to reduce the likelihood of temporary use bans and would rather experience them than see their water bill increase. Those who did suggested investment in infrastructure and education of customers</p> <p><b>Key learning:</b> Participants were generally happy with the current levels of service, although several agreed that they would not be greatly impacted if temporary use bans occurred more frequently.</p>	

<sup>72</sup> Blue Marble, July 2016, Pre-SDS consultation on-line survey

<sup>73</sup> OPM, April 2017, Affinity Water Drought Management Plan Survey

<sup>74</sup> OPM, October 2017, Drought Management Plan Engagement Event. Customer and Stakeholder Engagement Report to Affinity Water



<b>We asked</b> <b>Signpost focus groups and ethnographic interviews<sup>75</sup></b>	
<i>Trade-off between different long-term risks and challenges and dialogue on three key themes: bills, supply and service.</i>	<p>Many customers said that ‘the right balance between today and tomorrow’ was one of the most important to tackle - keeping the bills low for current customers, while having an eye on the challenges of the future.</p> <p>Affordability was raised as the most significant challenge to plan for, with future planning and weather also mentioned by some. Some felt we should be putting money aside now, to allow for investment in future generations. However, many found it difficult to think of how the water service might look different for future generations</p> <p><b>Key learning:</b> Customers didn’t have immediate concerns about resilience, and, unprompted, were more focused on the here and now. This shaped how we engaged with customers on longer-term issues in the rest of the programme.</p>
<b>We asked</b> <b>“More about you” survey<sup>76</sup>, 2020 Community of customers</b>	
<i>Questions about resilience, drought and service interruptions</i>	<p>Nearly all agree that their water supply is reliable, but interruptions to supply remains the highest cause of complaint and unwanted customer contact. Most customers have not had any restrictions on water in the last year, and those that did were caused by leakage, water pressure, water meters and in some cases the weather.</p> <p><b>Key learning:</b> Customers want to continue to experience uninterrupted supply and expect good water pressure. They do not perceive that water will run out or that water supply will be an issue.</p>
<b>We asked</b> <b>Testing and valuing: dWRMP survey, BP acceptability research<sup>77</sup></b>	
<i>About trade-offs between different propositions and long-term bill impacts up to 2080</i>	<p>The focus groups in support of the dWRMP covered a range of themes, including long-term issues and challenges. We also carried out focused research with future customers to give voice to future and long-term issues.</p> <p><b>Key learning:</b> Nearly 70% supported investment in local environment pilots.</p>
<b>We asked</b> <b>Online survey and workshops<sup>78</sup></b>	
<i>Support for bringing forward investment in long-term supply-demand resilience</i>	<p>A range of options were discussed to invest in the future. The least controversial of which were to move more water locally, where needed and a new regional reservoir</p> <p>42 out of 44 participants rated it vital or very important that we invest more for the longer-term. There was widespread acceptance of increases of both £2 and £5 a year on the average bill.</p> <p><b>Key learning:</b> Climate change, population increase and ageing infrastructure were seen by workshop participants as being the greatest challenges.</p>

Figure 9.1: Resilience consultation results

<sup>75</sup> Ipsos MORI, July 2017, PR19 Customer Engagement Phase 0 Ethnographic Interviews Research Report

<sup>76</sup> Affinity Water, January 2018, Triangulation and Validation of our phase 1 Customer Engagement

<sup>77</sup> Ipsos MORI, May 2018, Affinity Water Business Plan Qualitative Research and Ipsos MORI, June 2018, Affinity Water Business Plan Acceptability Survey and Ipsos MORI, June 2018, Affinity Water Draft Water Resources Management Plan (dWRMP) Research report

<sup>78</sup> Blue Marble, August 2018, *Affinity Water Resilience Investment, Full Report and Blue Marble July 2018, Qualitative Research Additional resilience Investment Report*

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## 9.4 Our resilience maturity – Resilience in the Round

1. In order to test our resilience maturity to shocks and stresses we commissioned an independent resilience assessment by consultants Arup using the framework of 'Resilience in the Round'<sup>79</sup> published by Ofwat in September 2017. The framework is broadly designed to assess maturity in three areas: financial resilience, corporate resilience and operational resilience.
2. Arup's methodology is further informed by global good practice and years of research carried out with the Rockefeller Foundation to support the development of the City Resilience Index currently used by 100 Resilience Cities. This provides us with a useful benchmark and an insight into current best practice.
3. The maturity assessment gauges our awareness of resilience issues that are relevant to our operations. It also gathers information on our plans to increase its understanding of resilience over time in a systematic and comprehensive way.
4. Maturity scores are allocated against a set of predefined criteria using evidence provided in documentation and interviews with staff. Scores range from 1: unaware to 5: leading. It should be noted that the 'future scores' are not reflective of the Company's ambition but are based on the evidence provided or available at the time of the assessment to achieve this ambition.
5. We understand that, our scores are broadly in line with industry. In general, the lower scoring areas are ones that the industry has been challenged by. We will need to look for opportunities to share good practice within the industry and beyond. Having developed a Data Strategy (see the summary at the end of this Chapter and Appendix C), there is a real opportunity for us to further embed a data driven approach, informing both short-term emergency decisions and strategic planning for the longer term. Clearer long-term planning can then feed into financial planning, to make future investment more resilient to key challenges.
6. Building on the findings of the independent assessment we have established action plans for the improvement of our knowledge and maturity for all areas of corporate, operational and financial resilience. The actions plans have been signed off by the Executive Management Team and are included in sections 9.4.2, 9.4.4 and 9.4.6 below.
7. Our Board has reviewed the Resilience in the Round assessment and action plans that we are proposing. With support of our Board, we will implement a process of regular updates to the assessment to support continuous improvement. Once updated, scores and findings of the assessment will be published in our Annual Report, thus providing a great level of transparency to customers and stakeholders.
8. The high-level findings of the independent assessment are summarised below as current and future scores. A detailed report of the independent assessment is attached in Appendix 9.

<sup>79</sup> Resilience in the Round: Building resilience for the future, Ofwat, September 2017

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### 9.4.1 Corporate resilience results

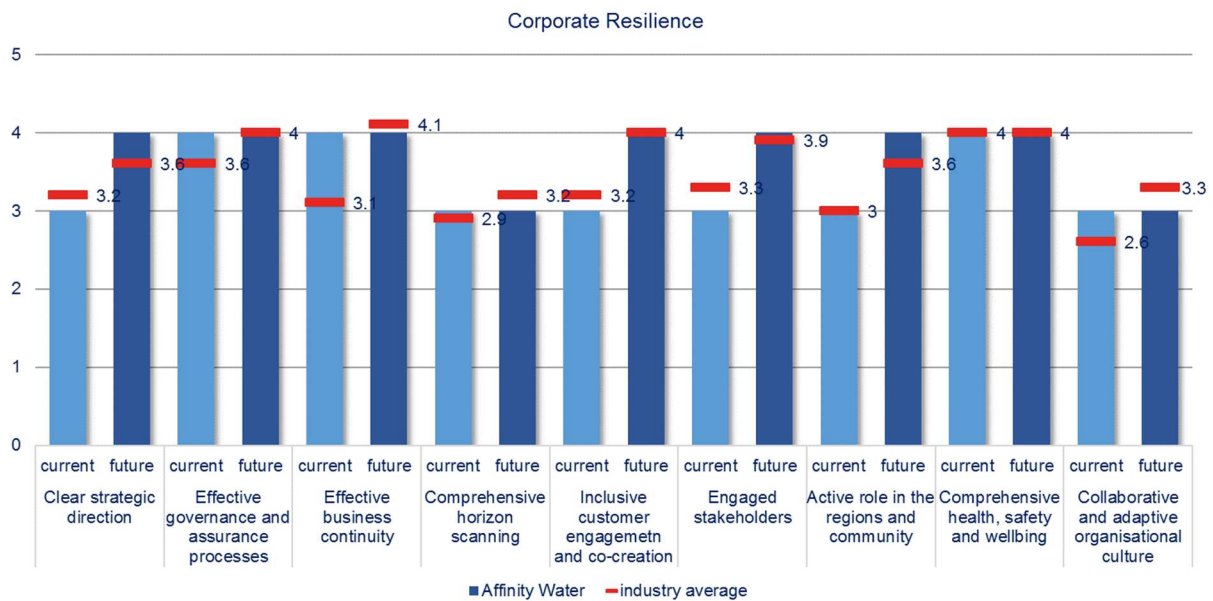


Figure 9.2: Corporate resilience maturity assessment

### 9.4.2 Corporate resilience action plan

- The following actions will be implemented to improve our corporate resilience maturity. More detailed actions are documented in Appendix 9.

Theme	Sub-Theme	Short-term actions (by 2020)	Medium-term actions
Corporate Resilience	Clear strategic direction	Develop Community Strategy Revise Strategic Direction Statement (SDS)	Commitment to regular SDS update
	Effective governance and assurance processes	Align all management information reporting with performance commitments Embed regulatory business planning as an ongoing process rather than focusing on it only every five years for Price Review process Ensure topics such as innovation, resilience, assurance, trust and confidence are regular agenda items for board meetings Externally facilitated assessments of board effectiveness are also planned, to drive continuous improvement.	
	Effective business continuity	Deliver emergency incident exercise	
	Comprehensive horizon scanning	Water balance improvements, regional collaboration (WRSE) Revise maturity assessment scores and monitor progress (Board)	Improve and tailor maturity assessment Define what good resilience looks like
	Inclusive customer engagement and co-creation	Home Water Efficiency Checks, Hubbub BSI Accreditation	Environmental Innovation Schemes Customer communication plans
	Engaged stakeholders	Collaboration on Research, Development and Innovation work	Working with local catchment partnerships on Environmental Innovation Schemes

Theme	Sub-Theme	Short-term actions (by 2020)	Medium-term actions
	Active role in the regions and community	Development of Community Strategy	Community trials Regional collaboration - coordination and cooperation between water companies in the South East through WRSE, WRE
	Comprehensive health, safety and wellbeing	Great Day at Work and Wellbeing programmes	
	Collaborative organisational culture	Workforce planning Building leadership capability	

Table 9.0: Our Corporate Resilience Action Plan

### 9.4.3 Operational resilience results

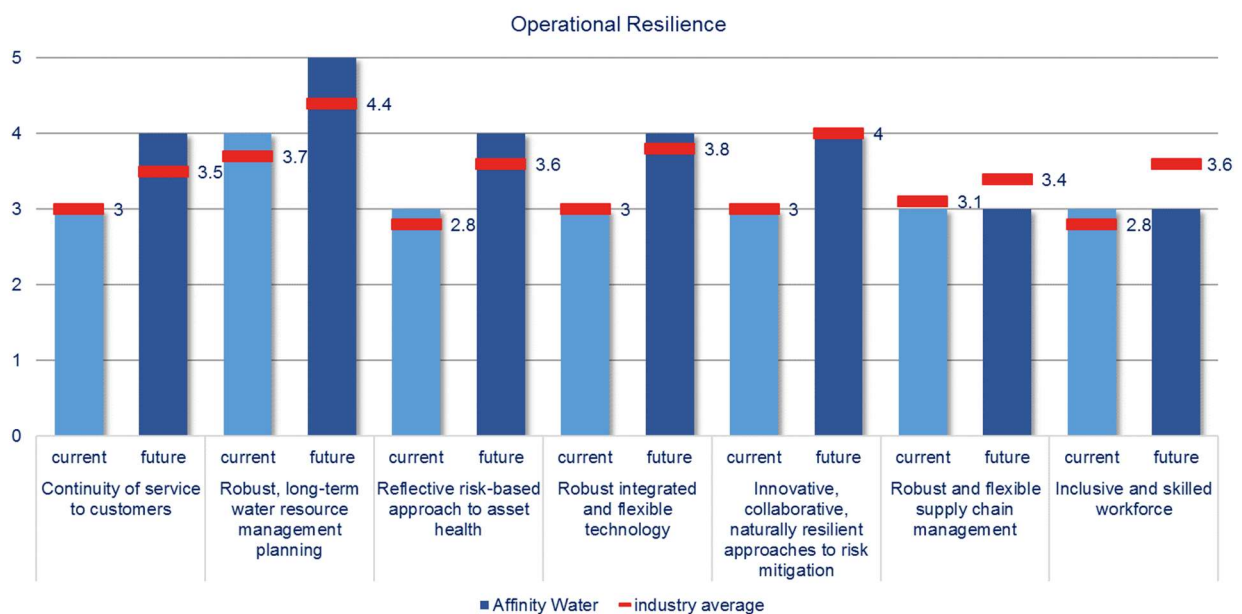


Figure 9.3: Operational resilience maturity assessment

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#### 9.4.4 Operational resilience action plan

- The following actions will be implemented to improve our operational resilience maturity. More detailed actions are documented in Appendix 9.

Theme	Sub-Theme	Short-term actions (by 2020)	Medium-term actions
Operational Resilience	Continuity of service to customers	Embedding Network Control Desk Delivering data strategy Establishing partnerships with energy companies on understanding location of vulnerable customers Extended working window	
	Robust long-term water resource management planning	Water balance improvements, Integrated infrastructure planning across sectors, Developing extreme drought scenarios	Identifying opportunities for water reuse Provision of eco-services to local stakeholder groups and communities Demand management programme - Fast data project
	Reflective risk-based approach to asset health	Compliance with ISO 55001 in 2018 Strategic Asset Management Plan developed	Better understanding of asset health through asset care optimisation
	Innovative, collaborative, naturally-resilient approaches to risk mitigation	Establish innovation strategy and innovation portal TapChat, Hubbub, collaboration with WRSE, WRE, other water companies, Ofwat, EA, Defra, GLA	Innovative environmental pilot schemes to support PR24 options
	Robust and flexible supply chain management	Deliver supply chain strategy	
	Inclusive and skilled workforce	Workforce planning Building leadership capability	Workforce Plan and resource plan, improving people skills (competency, training, succession planning, mitigation measures)
	Robust, integrated and flexible technology	Control Vision programme, Situational Awareness tool, Network control desk, Telemetry Replacement Project Data strategy	

Table 9.1: Our Operation Resilience Action Plan

### 9.4.5 Financial resilience results

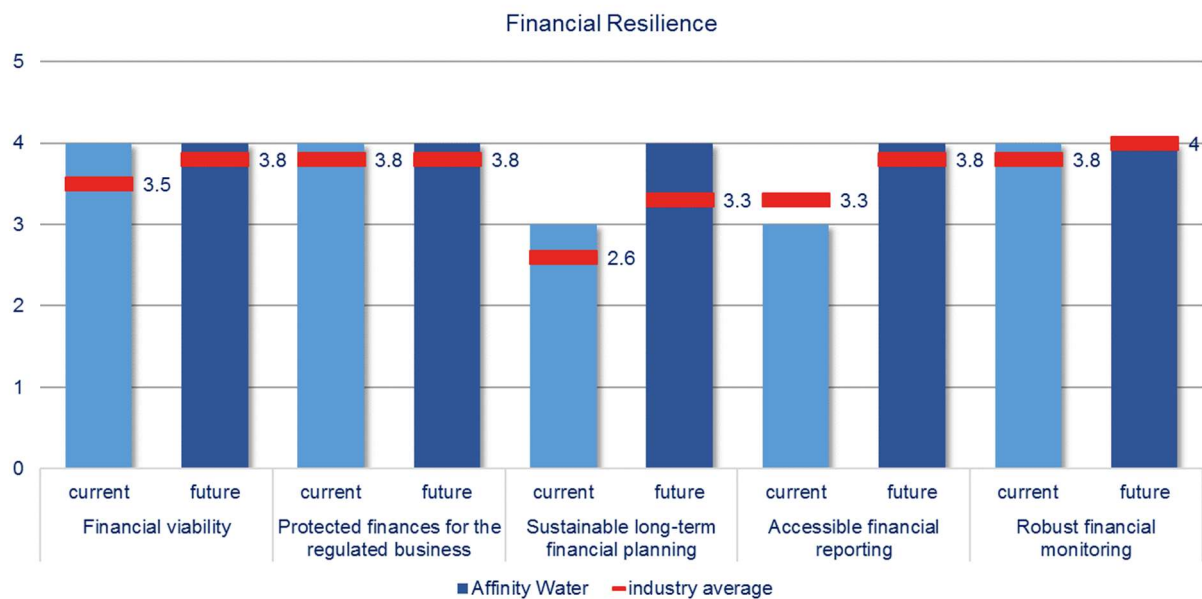


Figure 9.4: Financial resilience maturity assessment

### 9.4.6 Financial resilience action plan

- The following actions will be implemented to improve our financial resilience maturity. More detailed actions are documented in Appendix 9.

Theme	Sub-Theme	Short-term actions (by 2020)	Medium-term actions
Financial Resilience	Sustainable long term financial planning	Formulating a comprehensive long-term expenditure plan on a year-by-year basis in the short term for robust financial modelling, ensuring that by the end of each AMP the overall health of our assets is improving to avoid step shifts in Totex requests.  There is no requirement for funding for the remainder of the AMP but we will monitor the market.	Formulating a comprehensive long-term expenditure and investment plan on a year-by-year basis in the medium term and on an AMP-by-AMP basis for the longer term for robust financial modelling to ensure that any water bill changes between AMPs are maintained within manageable boundaries.  Having transacted a CPI linked bond already we are in a good position to add more. Any debt raised in our operating company will have some element of CPI linkage to match the regulatory switch to CPI.
	Accessible financial reporting	Substituting of our Cayman Island entity with a UK entity.  Further simplification of our legal structure and remove Holding Company entities in the vertical structure.  Successful application of the Fair Tax Mark.  Improve the accessibility of our financial reporting to customers and stakeholders on our website.	Continue to improve the accessibility of our financial reporting to customers and stakeholders through different media channels.

Theme	Sub-Theme	Short-term actions (by 2020)	Medium-term actions
	Financial viability	<p>Strengthening our operational resilience by establishing a 24-hour Network Control Desk to improve how supply interruptions are dealt with directly improving financial resilience.</p> <p>Operationally being able to deal with multiple 'severe but reasonable' events increases our financial resilience and reduces the risk of possible Ofwat penalties for breaching ODI thresholds.</p> <p>The investment strategy of our pension plan will continuously be looked at together with the Pension Trustee, with the attempt to crystallize gains as they arise.</p> <p>We should have arranged facilities that will be available for most of AMP7 but will renew in advance.</p>	<p>Our objective will continue to be to maintain our lookout period at 5 years rolling even if this will take us into AMP8 from 2022 with little guidance likely to be available at that time.</p> <p>Continue to improve our monitoring and mitigation activities.</p> <p>Implement our intention to reduce gearing.</p> <p>The investment strategy of our pension plan will continuously be looked at together with the Pension Trustee, with the attempt to crystallize gains as they arise.</p> <p>Adapt financing policy to take advantage of lower cost and more flexible funding structure.</p>
	Robust financial monitoring	Continue to respond promptly to Ofwat's Financial Monitoring Framework queries and maintaining robust monitoring procedures.	

Table 9.2: Our Financial Resilience Action Plan

#### 9.4.7 From risk to resilience

1. Risk assessments and mitigation continue to play an important role in responding to business challenges. However, the rate and magnitude of technological innovation and climate change means there is increased future uncertainty. This reduces the effectiveness of traditional risk management and requires us to have a more adaptive and flexible approach to prepare for and manage our challenges. To create a truly resilient and mature organisation, in the face of growing uncertainty, risk management need to be supplemented with a broader consideration of resilient systems.
2. Resilience itself reflects the 'overall capacity of individuals, communities, institutions, businesses and systems to survive, adapt and thrive no matter what kinds of chronic stresses or acute shocks they experience'<sup>80</sup>. Strengthening our resilience as an organisation, through consideration of the resilience qualities set out in the figure below, will enable us not only to survive, but to thrive and improve and provide an improved service to our communities and customers, and contribute to an improving environment.



Figure 9.5: Resilience qualities or characteristics (Source: City Resilience Index)

<sup>80</sup> Arup (2015) City Resilience Index

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## 9.5 Resilience risk assessment results for 2015 to 2020

1. For ease of consultation with our communities and customers, these shocks and stresses were grouped together into 12 categories based on their impact on customer outcome delivery. Table 9.3 below summarises the interventions we have carried out to improve resilience in recent years.

Current shocks and stresses	What we have achieved so far
Ageing water infrastructure leading to critical asset failures [1, 2, 4]	Accelerated mains renewals to achieve stable AMP5 serviceability Automated all our production sites, improved resilience of our key sites by removing single points of failures, and installed standby generation at critical sites Rolling out a new telemetry system in 2018-19 Compliance with ISO55001, Asset Management Assessment
Widespread IT failure [1], cyber-attacks [10] and data loss/theft	Upgraded ageing IT infrastructure, moved 60% to Cloud computing, Complied with data protection and GDPR regulations Achieved Level 3 NCC assessment and awarded UK Government's Cyber Security Essentials+ certification in 2017
3 <sup>rd</sup> party event - large fire [7], plane crash on our site, [16] nuclear incident, pandemic	Set up an Emergency Response Team, developed and tested Business Continuity Plan
Terrorism, vandalism and malicious damage [9]	Developed our Emergency Response, SEMD measures, Reservoir isolation plans, Physical site security upgrades, Mutual Aid, Alternative water supply
Climate change and extreme weather conditions resulting in severe winters [3], heatwaves [8], droughts [15] or floods [17]	Implemented flood mitigation for our 35 high priority sites <sup>81</sup> Reviewed our drought management plans, planned for 1 in 60-year drought event Planning for a 1 in 50-year severe winter / heatwave event
Environmental degradation and impact on water quality [5, 12, 13, 14, 15,]	Delivered industry-leading catchment management, biodiversity and river restoration schemes. Reduced abstraction by 42Mld Installed pollution monitoring systems at intakes/sources and new treatment plants for pesticides and nitrates Developed land management programme to protect wildlife and enhance biodiversity on our sites <sup>82</sup>
Changing regulations and governance [5]	Compliant with Board Leadership, Transparency and Governance Principles (2014). UK Corporate Governance Code (2018) Annual Assurance Plan, Ofwat's Company Monitoring Framework Certification of Management Systems.
Increased reliance on our supply chain [6]	Transformed our operating model, insourcing key elements (M&R, DS, Asset Delivery, IT), Key framework contracts Using ultraviolet disinfection and producing some chemicals onsite
Sector skills gap and digital revolution [11]	Developed apprenticeship and graduate programme for all departments, developed Leadership training, promoted STEM
Economic and social change leading to limited finances for the business [18]	Applied financial modelling and stress testing, long bonds and self-funded pension scheme

Table 9.3: Financial resilience maturity assessment

<sup>81</sup> Adapting to Climate Change, Affinity Water, August 2015

<sup>82</sup> Working with the Environment (website), Affinity Water, 2017

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## 9.6 Resilience risk assessment results for 2020 to 2025

- We carried out a comprehensive risk assessment to resilience. The methodology is described in Appendix 9. The interventions required to address high risks are summarised in the Table 9.4 below. These interventions were selected after going through a robust cost benefit analysis using our Service Measure Framework (SMF), which considers our direct costs and benefits but also the wider social and environmental impact.
  - Common PCs (5):
    - Asset health (2) – Mains bursts and unplanned outage
    - Long term resilience (1) – Risk of severe restrictions in a drought
    - Day-to-day resilience (3) – Interruptions to supply, Leakage and PCC
  - Bespoke PCs (2):
    - Day-to-day resilience (1) - Low pressure
    - Long term resilience (1) – Environmental innovation projects (including the Lee Community Pilot)

Resilience risks	Description	Highlights from our mitigation plans
Critical asset failures	Interruptions and low pressure is a key concern for customers Vulnerability of our larger sites Impact of national infrastructure projects and abstraction reductions on the criticality of our assets	Water Always On - reducing significantly the length of supply interruptions and low pressures by 2025 Maintaining current level of serviceability through continued infrastructure and non-infrastructure investments Replacing storage cells and build new cells
Widespread failure of IT and telemetry	Mitigating external dependencies such as reliability on other service providers	Cloud computing (100% by 2021), Software and Infrastructure as a Service (SaaS, IaaS, XaaS)
Terrorism and Cyber-attacks	Physical resistance to terrorism Information security failure	Cyber-security and SEMD measures
Infiltration	Ensuring water reaching customers' tap is of high quality	Continuation of reservoir inspection programme, DWSP, DOMS, network regulation inspections
Supply unavailability (or constrained)	Decreasing supply base due to drought, abstraction reductions and legislation Lack of interconnectivity and water trading in the South East	Resilience tested WRMP - Planning for 1 in 200 years drought event, development of extreme drought scenarios, Leakage and demand reductions Regional collaboration - coordination and cooperation between water companies in the South East through WRSE / WRE Acceleration of regional investment - new resource (UTRD from 2035)
Flooding of our sites	Impact of national infrastructure projects such as HS2 and abstraction reductions on the criticality of our assets	Monitoring and prioritising investment and asset replacement Completion of Thames relief channel by the Environment Agency in 2025
Environmental degradation impacting on raw water quality	Managing catchments to ensure the natural environment is more resilient	Significant increase in size and scope of environmental programmes, Innovative environmental pilot schemes to support PR24 options Developing land management programme to conserve and enhance biodiversity on our sites
Limited finances for the business	Financial stability to protect customers, ability to withstand economic shocks and stresses	Continuation of financial modelling, 5-year financial viability statements

Table 9.4: Key resilience risks in AMP7 and beyond

## 9.7 Resilience beyond 2025

- We continue our journey to building resilience and we have proactively developed our long-term resilience plans, summarised in Figure 9.5.

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Figure 9.6: resilience strategy to address future shocks and stresses

## 9.8 What good resilience looks like

1. Our Lee Catchment pilot is a multi-stakeholder project that aims to identify opportunities for use of innovative interventions, such as local water recycling from rainfall and sustainable urban drainage systems, investigate the impact of sustainability reductions, recharge, effluent reuse, decentralised sewerage treatment and catchment management, along with community engagement and demand management activities to reduce the demand for water.
2. We will explore the potential to use those innovative solutions as part of a holistic catchment management programme in collaboration with local partners in our communities. The project will connect with the Environment Agency concept of a catchment system operator - bringing together physical water saving tools and initiatives at a domestic, and where possible, commercial scale, twinned with community outreach programmes to create water saving communities.

### 9.8.1 Co-creation and co-delivery with our communities

1. We will be working in a new and unique way to deliver a multi-party, multi-channel project incorporating changes in a variety of water use behaviours. The project will create opportunities to work with new and existing housing stock, linking with local plans and planning process as well as housing associations. More detail on our community strategy can be found in Chapter 8.

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2. The project will explore:
  - Development of delivery model
  - Reduction in PCC
  - Reconnecting people with the local aquatic environment
  - Micro-component, consumption and network data
  - Environmental data and evidence gathering. (Water available for use, No deterioration, Water Framework Directive (WFD))
  - Community engagement
  - Education and bespoke research
  - Water balance and water cycle at a catchment level (catchment mass balance)
  - Public acknowledgement, engagement and awareness before and after the programme.
  
3. We will be utilising the principles of Natural Capital and Ecosystems services to evaluate the positive environmental benefits of taking a whole catchment approach to sustainable water management.
  
4. The project is expected to deliver the following benefits:
  - Reconnecting people with their local aquatic environment
  - Reducing demand, therefore assisting in supporting more water either available as WAFU or remaining in the environment supporting WFD objectives
  - Innovative approach to delivery, looking holistically at the water cycle and engaging the local community to reduce demand
  - Utilising existing stakeholders and partners within the community
  - Use of Citizen Science in support of project evaluation.
  
5. The aim is to produce a delivery model that can be replicated in the future.

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## Our Data Strategy – designed to meet our Outcomes

Data plays a central role in meeting our company objectives and delivering our outcomes. Our ambition is to establish a systematic focus on data and knowledge throughout the business, with a culture of innovation and collaboration that will allow us to achieve and sustain breakthrough service and performance at least cost. We recognise the need to make more use of data to meet customer's needs, whilst also leveraging the use of innovative technology to achieve this, as highlighted in our innovation strategy, see Chapter 6.



We seek to empower the customer, by providing a tailored information environment which links their billing, water usage and water network information in one place – data quality and security is also crucial to provide customers with the assurance that we value accuracy and precision of all data we hold. Our Data Strategy has been developed to provide an articulated view of all these elements, improving stakeholder confidence and trust in our data.

## Data as an asset – lifecycle planning

The strategy sets out our longer-term ambition and vision to obtain best value from the asset, operational, financial and customer data we hold, by applying our lifecycle approach. We use this approach to ensure we meet our outcomes by proactively planning the use of data: how it will benefit customers; how we measure success, drive improvement and how we will best meet these





requirements through the sustained use of advanced analytical and visualization techniques. advances, legislative changes and policy developments.

Our Data Strategy is not static and will evolve and develop over time, responding to market developments and technology.

What we're doing - Since 2015, we have successfully implemented several business initiatives thanks to sound data management and applying best practice lifecycle management of data; such examples include the work delivered during market reform, to provide quality assurance and monitoring tools to manage our non-household data and deliver improved data processes – this has helped us reach top of the league table for operational performance in 2018, as measured by MOSL. Some of our other achievements include:

- Strong collaboration and data driven planning to improve our operational customer response and customer satisfaction
- Enriching the customer billing experience with an online billing platform
- Providing near real time network management using accurate pressure and leakage logger data
- Delivering centralised works management data with our new MAXIMO platform
- Building a centralised, single source repository for asset documentation, improving incidents response times
- Supporting the security of our information by implementation of data loss prevention tool

### Our future plans

Technology and cloud applications will be the key enablers to deliver our service successfully to customers in AMP7. By leveraging the use of telemetry, works management and social media information, we also intend to provide a rich, real time environment to our operational staff when responding to bursts and operational incidents. We continue our journey enterprise information management, integrating and centralising of our data sources to simplify access and continuously improve the mastering of our data. We also continue our journey on data governance, architecture and quality assurance, enabling us to further improve visibility and confidence in our data:

- Working with Ofwat and other water companies on open data initiatives
- Making more use of smart technology to monitor network leakage, consumption and water abstraction
- Giving customers a localised, up to date view on their community investments and performance, supporting resilience and service delivery mapping
- Further enhancing and improving operational incident response with advanced analytics and visualization
- Continuous improvements in data ownership and governance through our Information Management Board.

The Data Strategy will be a key enabler to deliver the business plan and further details are included in Appendix C. As part of this, some of our “best practice” case studies are provided to exemplify how we use data by applying best practice lifecycle management.

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### Deliverability Statement

*"We have placed a strong emphasis on resilience in the round, ensuring that customers take priority in our resilience strategy that we have developed in conjunction with leading experts. Over the next five years we plan to build on our strong approach to risk management and governance, robust financial resilience and industry leadership on collaboration and water resources management planning. We have established action plans to address areas identified for improvement from our independent review and will continue to seek opportunities to share and adopt best practice within the industry and beyond. We are looking to develop additional supply resilience, enhance our role as a key trading hub and continue to work collaboratively with other water companies."*

*Our Plan is financially resilient meeting Ofwat's suggested stress test and the Company's stress tests. The company has also in recent years addressed its pension liability, investing and removing risk to achieve a scheme that is self-sufficient eight years ahead of target.*

**Director of Asset Strategy, Managing Director Wholesale Operations and Chief Financial Officer**

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## 9.9 How our plans for resilience address Ofwat's four Price Review themes

### Great customer service

We have placed customers at the heart of resilience, and will be improving service by striving to provide uninterrupted supply and good water pressure.

### Affordable bills

Our approach to resilience has ensured our proposed investment is best value for customers in the long term and necessary to meet our statutory requirements.

### Innovation

We are proposing some innovative schemes to improve resilience, such as the Lee Pilot project or the Fast Data scheme looking at supporting customers to reduce their consumption. We will be using real-time data to improve service and making the most of the digital revolution.

### Long term resilience

During AMP7, we will be restoring headroom and maintaining resilience levels, as well as planning for the future, by developing transfer options and supporting regional resource development required by 2037. From 2024, our supply demand situation will have improved, coping with 1:200 drought event, without the need for drought permits and orders

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## 10 Ensuring Affordability and Financeability

Our plan keeps customers' bills as low as possible and ensures our business is financeable and able to withstand financial shocks. We have assessed these using the Ofwat and Company stress tests, maintaining the ratios within our covenants at a level consistent with our family credit rating of BBB+/Baa1. We have also balanced bill levels and financeability with the need to deliver the commitments and service our customers and stakeholders expect. This plan is built on the strong financial structure the company has in place and on the access to the long-term financing needed for investment during the first half of AMP7, which is already funded. Our plan has been developed using the weighted average cost of capital (WACC) proposed by Ofwat.

Our water bills are consistently lower than the industry average and will have reduced by nearly 7% since 2015 and by 5% over a period of 10 years. The average bill will increase marginally from £170.90 in 2019/20 to £174.44 in 2024/25 before inflation. This small increase reflects:

- increased investment in long-term infrastructure development to deliver the environmental and resilience improvements set out in the plan
- offset by £200m of efficiencies on our base Totex and retail costs (wholesale opex £129m, wholesale capex £66m and retail £5m)
- further offset by spreading the cost of the enhancement investment in bills over the next 3 AMPs and sharing our financeability with customers. This reduces our Pay as You Go (PAYG) ratio to an average of 66.2% from 76.2% for AMP7.

We understand from our customer research and customer engagement that the small increase is affordable and supported by the majority of our customers. However, we are extending and developing the support we provide for customers in financially vulnerable circumstances (see Chapter 7).

Customers have told us that they want smooth bills and to avoid cost shocks. The plan to achieve this includes spreading the revenue adjustments from wholesale revenue forecasting incentive mechanism (WRFIM), despite this resulting in a penalty for company. This adjustment arises from the large increases in new connections we have experienced. Our plan advocates that developer services contributions be taken outside of the coverage of the WRFIM adjustment for AMP7.

We are currently outperforming our Totex allowances for 2015 to 2020 and have been driving efficiencies throughout our business. We have a cost-efficient Wholesale Plan for our Water Resources and Network Plus activities and are challenging this further in our plan for AMP7 by £195m. We are projecting enhancement spend will increase to improve regional resilience, whilst maintaining the resilience of our existing supplies in line with our WRMP.

Our retail price control revenue reduces in real terms over the period as a result of the stretching efficiencies of £5m, including our target for bad debt, that we expect will place us in the upper quartile for efficiency by the end of the AMP.

We have addressed the areas identified by Ofwat in its "Putting the Sector Back in Balance" conclusions. This includes our policies on dividend and executive pay, sharing financial outperformance, scenario stress testing, financial resilience, and simplifying our group structure (including the removal of the Cayman Island entity). It is our intention to reduce gearing over AMP7. We are committed to being fully transparent in our reporting. We are continuing with our application for the fair tax mark.



**BOARD ASSURED**

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## 10.1 Financial strategy

### 10.1.1 Introduction

1. We have considered the balance of keeping customers' bills low, the financeability of our proposals and the key financial ratios we need to maintain to retain our current investment grade ratings and are satisfied that the projections underpinning our Business Plan meet the necessary tests set by the rating agencies throughout 2020 to 2025. Our plan delivers significant efficiencies of £200m on our base Totex and retail costs and is built on a strong financial structure. It is financially resilient and enables the commitments and investments included in the plan to be delivered.

### 10.1.2 Strong Financial Structure

1. We are a business with a long-term outlook and expenditure commitments, which need to be matched with long-term sources of debt finance. We consider the most cost-effective way to raise long-term debt is through the debt capital markets. In June 2012 we took the decision to set up a bond programme, which enables us to issue further bonds without the need for significant additional documentation. The bond programme is governed by Whole Business Securitisation (WBS) documentation, which encompasses a series of covenants that the company must meet in addition to its regulatory requirements. Since the refinancing in 2013 we have issued further bonds, both new and tap issues, to raise a further £189.2m. The programme limit is £2.5bn with £1bn issued to date so there is capacity to fund our Plan utilising the existing programme, together with our revolving credit facilities. The following chart shows the maturity profile of all our bonds, which includes a further £250m bond issued in 2004. We have only £14.2m of debt maturing in AMP7 and a spread of maturity beyond this.

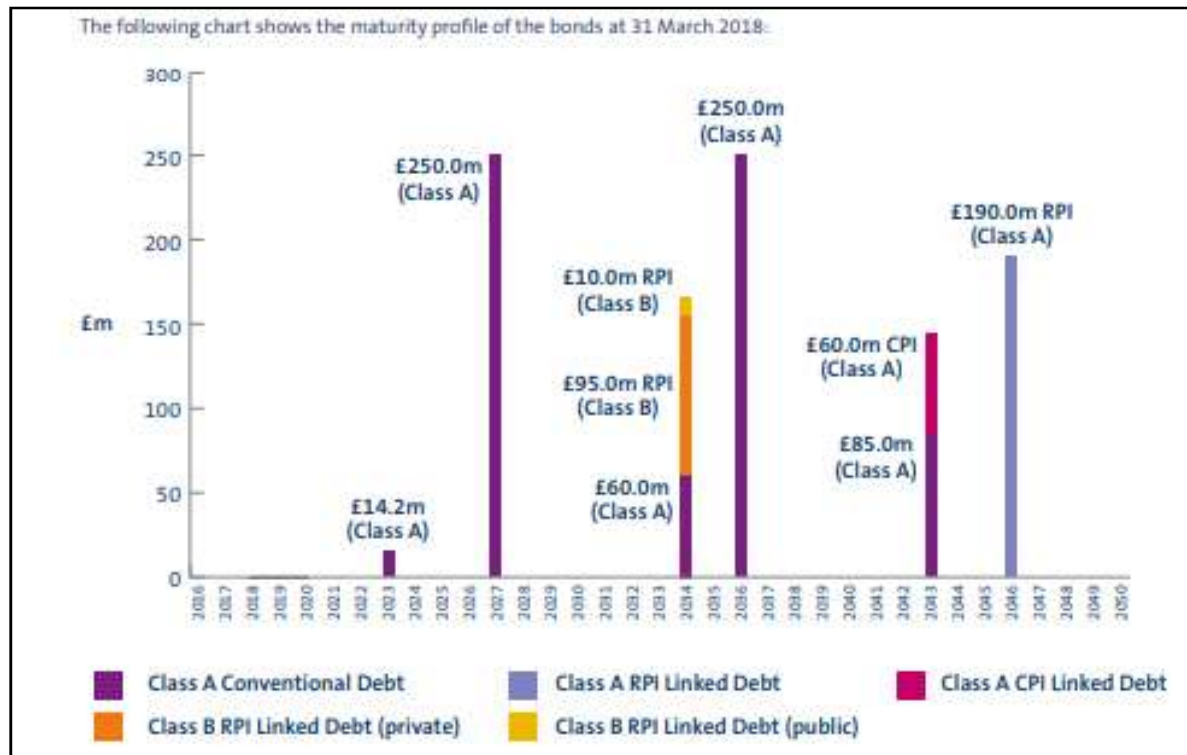


Figure 10.1: Bond maturity profile

### 10.1.3 Liquidity and access to markets

1. Our objective is to ensure we have adequate funding arrangements, cash and standby facilities, to enable us at all times to have the level of funds available which are necessary for the achievement of our business and service objectives. At 31 March 2018, we had cash balances of £114.8m.
2. Interest rate exposure is primarily managed by using a mixture of fixed rate, floating rate, CPI and RPI linked borrowings. Ofwat's final methodology for PR19 has confirmed that prices in the industry will in future be indexed to CPIH (Consumer Prices Index including owner occupiers' housing costs) instead of RPI. In order to manage this inflation risk, £60m of CPI linked debt was raised during the year. At 31 March 2018, 62.8% of our gross borrowings were at fixed rates, 31.6% at rates indexed to RPI, 5.6% at rates indexed to CPI and none were at floating rates.
3. This has provided us the pre-funding for AMP7 with no requirement for new debt until year 3 of AMP7.
4. We have a regular monitoring and certification process of the financial covenants within our WBS documentation. This covers information, financial and general covenants. Our treasury policy requires that financial covenants, which include gearing and interest cover ratios, are monitored and reported on a regular basis to the Board.
5. At 31 March 2018, net debt, as defined in the financial covenants in the company's securitisation documentation ('compliance net debt'), was £949m. Gearing of compliance net debt to RCV at 31 March 2018 of 78.6% remains below our internal gearing target level of 80.0%. This allows sufficient headroom within financial covenants, which are only triggered at a level of more than 90.0%.

### 10.1.4 Financial Resilience

1. We have reviewed the results of the financial stress tests applied to both our actual capital structure and to the notional capital structure assumed by Ofwat using the stress tests for the PR19 Business Plan period. We have restricted these stress tests to the appointed business and have not allowed the stresses applied to be satisfied for RCV through the use of non-appointed revenues. In addition, we have also reviewed the results of the Company stress tests for AMP7. These are equal to or more challenging than the Ofwat tests and are the same tests we report in our Annual Report. The results from the stress tests set out by Ofwat and our own stress tests confirm that our Business Plan is financeable. Refer to Appendix 10, section 10.11 for further information on our financial resilience which should also be read in conjunction with Chapter 9.

### 10.1.5 Scenarios and stress testing

1. We have conducted stress testing on both the notional and actual financial structure to ensure our Business Plan has the headroom to mitigate reasonable risks to the business. To test the financial resilience of the appointed business, we carried out stress testing over the price review period to examine the durability of the Business Plan.
2. The scenarios we have selected reflect risks posed to the business covering internal and macroeconomic factors, such as inflation, in assessing the suitability of our Plan.

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3. The scenarios are:
  - increase in Totex spend by 10% in each year
  - incurring a financial penalty to the value of 3% of revenues annually
  - incurring an ODI penalty to the value of 3% of RoRE for each year
  - increase in bad debt by 5%
  - higher inflation of 3% CPIH and 4% RPI
  - lower inflation of 1% CPIH and 2 % RPI
  - increase in cost of new debt by 2%
  - a combination scenario – 10% increase in Totex, financial penalty on 1% on revenue and ODI penalty of 1.5% on RoRE.
4. To test the suitability of our Business Plan under these scenarios, we examined key financial indicators based both on an actual and notional debt structure. The indicators provide coverage for:
  - Regulatory view;
  - Actual capital structure (i.e. actual debt covenants); and
  - Rating agencies and key metrics they use.
5. The company and the Business Plan continues to be viable and is able to meet its liabilities for all the scenarios. Appendix 10.17 provides the results of the stress testing scenarios and performance of the financial indicators.

#### 10.1.6 Financial ratios

1. We have considered key financial ratios for our Business Plan based on the actual debt structure and a notional debt structure, including gearing, interest cover, funds from operations (FFO) to net debt, dividend cover, and return on capital employed. The notional debt structure is based on the expected WACC as set out by Ofwat.
2. The results from this analysis have been included in detail in Appendix 10.18. As the ratios demonstrate, the indication is that the Business Plan is financeable on both its actual capital structure and on the notional capital structure. We do not foresee any issues with actual financeability and we are maintaining strong financial ratios enabling us to raise capital.

#### 10.1.7 Credit Rating

1. Our current credit rating is BBB+/Baa1 for 2017/18. During the year, we continued to maintain an investment grade corporate family credit rating in line with our peers in the water sector, being two notches above investment grade. Our Class A debt has a rating of A3 Moody's and A- S&P (Standard and Poors), which is three notches above investment grade. However, Moody's have recently changed our outlook from Stable to Negative due to an increase in their Interest Cover ratio (ICR) threshold for Baa1 credits from 1.2 to 1.3 on the back of the Ofwat consultation document in July 2017. Moody's are also moving to a gearing target of between 75%-80% instead of 80% but the actual threshold has not been confirmed. The primary S&P ratio (FFO/Debt) is at a sufficient level to maintain the current rating and they have not indicated any change in their methodology.
2. Our financing benefits from the protections afforded from our WBS structure, which was implemented in February 2013. We will seek to maintain a family credit rating of BBB+/Baa1

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	<b>Chapter 10: Ensuring Affordability &amp; Financeability</b>	Chapter 11: Board Assurance
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and it is our intention to reduce gearing over AMP7. This should allow us to maintain our current credit ratings on our Class A debt of A-/A3.

3. To the extent that additional funding is required, we have access to £100m of committed bank facilities, which were undrawn at 31 March 2018, to finance capital expenditure and working capital requirements. In addition, we have access to a further £58m of liquidity facilities, consisting of a 364-day revolving £38m facility to fund any debt service payments in the event of a liquidity shortfall that would otherwise prevent such payments being made and a 364-day revolving facility of £20m to fund operating and capital maintenance expenditure in the event of a liquidity shortfall.
4. The bond programme has significant capacity to raise additional funding from the capital markets. Affinity Water is amongst the strongest rated entities in the sector and as we are infrequent issuers relative to our peers there should be sufficient demand to raise additional funds if required.

### 10.1.8 Pension costs

1. The company operates a pension plan, the Affinity Water Pension Plan ('AWPP') comprising both defined benefit and defined contribution sections.
2. The defined benefit section of the AWPP, providing benefits based on final pensionable salary, is closed to new members (the two precursor plans closing in April 1996 and September 2004). At the same time that the defined benefit section closed to new entrants, the company established a defined contribution section to provide pension benefits to qualifying employees.
3. The cash contributions refer to the actual cash paid to both sections of the plan. Other operating expenditure in Figure 10-5, includes the accounting pension service charge for the defined benefit section of the plan and the cash contributions for the defined contribution section of the plan.
4. The defined benefit section is fully funded on a Technical Provisions basis and is showing a £100m surplus on an accounting basis. We are also fully funded on a Self Sufficiency basis. This surplus can also be attributed to the ongoing support of the Sponsoring Employer, through the shareholders, with the level of contributions paid in the AMP to date significantly exceeding the deficit repair allowance from Ofwat at PR14 of £3.9m.
5. The company has agreed with the Pension Trustee to bring forward the next triennial valuation by 12 months from 31 December 2018 to 31 December 2017. It is hoped this will be completed by the end of September 2018 concluding that we have reached our Self Sufficiency target ahead of our original 2026 objective and generating cash savings from reduced contributions.
6. Details of the proposed cash contributions during AMP7 are included at Appendix 10.5. Appendix 10.6 provides supplementary information on the preliminary results of the December 2017 actuarial valuation.

## 10.2 WACC and Inflation Assumptions

1. We are using WACC and margin assumptions in line with Ofwat's methodology issued in December 2017 as follows:

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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- WACC – 5.48% nominal, 3.54% CPIH and 2.8% RPI (CPIH inflation is assumed to be 1.87% and RPI inflation assumed to be 2.61%). The inflation figures are based on historical trends. These affect the RPI and CPIH WACC but there is no benefit in a change to these figures as the nominal WACC of 5.48% is as per Ofwat's methodology
  - RCV Runoff Rate – 4% (25 years in line with asset depreciation)
  - RPI – 2.61%
  - CPIH – 1.87%
  - Small company premium – We are assuming this to be zero for this AMP period
  - Retail net margin – 1%
2. We have completed actual values for the inflation indices using the Office for National Statistics publications. We have projected inflation by assuming that the Bank of England accomplishes its inflation target of 2% per year for CPI. By comparing the historical values of the CPI, CPIH and RPI inflation indices, we can determine the average spread between the different indices. Over the full period for which CPIH data is available we have found that each month, CPIH is on average 0.13% points lower than CPI. Accordingly, our forecast of CPIH is 1.87%. We have also found that each month, RPI is 0.74% higher than CPIH on average. Therefore, our forecast for RPI is 2.61%.

Component	Nominal
Gearing	60.00%
Total Market Return (TMR)	8.60%
Risk free rate (RFR)	2.10%
Equity risk premium (ERP)	6.50%
Asset beta on PR14 basis (no debt beta)	0.32
Debt beta	0.10
Asset beta on PR19 basis (including a debt beta)	0.37
Notional equity beta	0.78
Cost of equity (including a debt beta)	7.13%
Ratio of embedded to new debt	70:30
Cost of embedded debt	4.64%
Cost of new debt	3.40%
Issuance and liquidity costs	0.10%
Overall cost of debt	4.36%
Appointee WACC (vanilla)	5.48%
Retail net margin deduction	0.10%

Figure 10.2: WACC components

## 10.3 Wholesale price control

1. This section sets out the Wholesale revenue requirement and costs for Opex, Capex, Infrastructure Renewals Expenditure (IRE) and pensions. It also provides a summary of the planned efficiencies of £195m.

### 10.3.1 Breakdown of our revenue requirement

1. The table below shows the main components of the wholesale price control. Further details have been provided in Appendix 10, section 10.1.

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	<b>Chapter 10: Ensuring Affordability &amp; Financeability</b>	Chapter 11: Board Assurance
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Wholesale revenue requirement in £m	2020/21	2021/22	2022/23	2023/24	2024/25
PAYG %	63.20%	61.90%	64.00%	68.40%	73.40%
PAYG Totex	197.5	195.9	197.9	201.7	198.8
RCV Depreciation	52.9	58.8	64.4	69.3	73.3
Post Tax Return on RCV	39.5	42.7	45.7	48.1	49.7
Sharing Mechanism	(2.0)	(2.0)	(2.1)	(2.1)	(2.2)
PR14 Reconciliation Adjustments	(5.6)	0.0	0.0	0.0	0.0
Tax Charge	2.2	4.6	4.9	4.0	3.7
Third Party and Principal service revenues	(2.5)	(2.5)	(2.6)	(2.6)	(2.7)
<b>Total Revenue Requirement</b>	<b>282.0</b>	<b>297.4</b>	<b>308.2</b>	<b>318.3</b>	<b>320.6</b>

Figure 10.3: Revenue requirement in £m during AMP7  
Casting differences in the table have arisen due to rounding

- This control does not include contributions from new connections and infrastructure charges or other income which has been included in our Income Statement. The Income Statement itself, together with our Financial Statements, both on an actual and notional basis, along with other income which has been included are all included in Appendix 10, section 10.3.

### 10.3.2 Wholesale Totex

- We began developing our Business Plan in April 2015 using as reference the 10-year investment plan produced for the PR14 Business Plan submission. Over the last year the Plan has been developed in conjunction with our WRMP. The investments have been developed through either the WRMP, based on business cases, or through our asset planning tool Pioneer. The Totex figures for Wholesale are as below:

In £m	Opex	IRE	Capex	Contributions	Total
2020/21	142.5	19.6	149.8	(16.2)	295.7
2021/22	136.6	24.4	149.0	(16.2)	293.8
2022/23	133.0	25.7	139.3	(16.2)	281.8
2023/24	133.9	30.7	115.4	(16.2)	263.8
2024/25	131.8	31.0	91.3	(16.2)	237.9

Figure 10.4: Wholesale total costs in £m

- Infrastructure Renewals Expenditure (IRE) is allocated between Opex and Capex:
  - 60% of IRE is allocated to Opex as 'Renewals expensed in year (infrastructure)'
  - 40% of IRE is allocated to Capex as 'Maintaining Infrastructure'.

### 10.3.3 Cost adjustment claims

- Our cost adjustment claims are detailed in data table Wn6 and the supporting commentary. We have included £54.2m as cost adjustment claims that we believe should be specifically

allowed for in Ofwat's Totex baseline assessment covering high average occupancy, regional wages and treatment complexity. The claims are modelling adjustments to the wholesale cost models. They are factors which we believe materially affect our costs, but which we do not expect to be accounted for in the models.

2. We carefully reviewed the draft models published by Ofwat in March 2018, enabling us to assess the likelihood of our claims being included. Some models accounted for high occupancy, most accounted for treatment complexity, but in variable ways (some of which fully captured our costs, and some of which did not). Very few models accounted for differences in regional wages. On this basis, we have included all three modelling adjustment claims.

#### 10.3.4 Wholesale operating costs (Opex)

1. The table below sets out our Opex projections. Although, we face further cost pressures over the period, not least from household growth, we shall offset these with challenging efficiency improvements to ensure that annual Opex falls by the end of the period.
2. Further details of the line items have been provided in Appendix 10, section 10.4.

Operating expenditure in £m	2020/21	2021/22	2022/23	2023/24	2024/25	AMP7	Water Resources	Network Plus
Power	22.9	22.0	22.0	21.1	21.1	109.0	15.3	93.8
Abstraction charges	4.4	4.4	4.4	4.4	4.4	22.0	22.0	-
Bulk supply	9.2	8.0	7.7	12.6	12.6	50.2	8.5	41.7
Other operating expenditure	89.3	85.3	81.9	78.8	76.6	411.8	24.9	387.0
Local authority and cumulo rates	14.6	14.7	14.8	14.9	15.0	74.0	9.3	64.7
Third party services	2.1	2.1	2.1	2.1	2.1	10.6	-	10.6
<b>Total operating expenditure excluding renewals expensed</b>	<b>142.5</b>	<b>136.6</b>	<b>133.0</b>	<b>133.9</b>	<b>131.8</b>	<b>677.7</b>	<b>80.0</b>	<b>597.8</b>
Renewals expensed in year (Infrastructure)	11.7	14.6	15.4	18.4	18.6	78.8	-	78.8
<b>Total operating expenditure</b>	<b>154.2</b>	<b>151.2</b>	<b>148.4</b>	<b>152.3</b>	<b>150.4</b>	<b>756.5</b>	<b>80.0</b>	<b>676.6</b>

Figure 10.5: Wholesale operating costs in £m  
Casting differences in the table have arisen due to rounding

### 10.3.5 Capital expenditure

1. The table below sets out our Capex projections:

Capital Expenditure in £m	2020/21	2021/22	2022/23	2023/24	2024/25	AMP7	Water Resources	Network Plus
Maintaining infrastructure	7.8	9.8	10.3	12.3	12.4	52.5	-	52.5
Maintaining non-infrastructure	69.4	55.5	55.7	38.2	37.2	255.9	27.3	228.6
Enhancement infrastructure	29.7	31.1	33.9	32.7	21.6	149.0	64.0	85.0
Enhancement non-infrastructure	50.7	62.4	49.8	44.4	32.5	239.8	91.7	148.1
<b>Total gross capital expenditure</b>	<b>157.6</b>	<b>158.8</b>	<b>149.6</b>	<b>127.7</b>	<b>103.7</b>	<b>697.3</b>	<b>183.0</b>	<b>514.3</b>
<b>Grants and Contributions</b>	(16.2)	(16.2)	(16.2)	(16.2)	(16.2)	(80.9)	-	(80.9)

Figure 10-6: Capital expenditure for Wholesale in £m  
Casting differences in the table have arisen due to rounding

2. Please refer to Chapter 6 for details of our Capex projections.

### 10.3.6 Profiling of Wholesale costs

1. In this Plan, our average PAYG ratio is 66.2%. In establishing the average PAYG ratio, the annual percentage varies from a low of 61.9% to a high of 73.4% over the course of the five years. We have used this mechanism to minimise bill volatility arising from Totex being significantly higher (due to the enhancement programme) in the early years. We have taken this approach because we know that stability of future bills is a key concern of customers. The slower PAYG profile is representative of the shift towards a larger share of Totex being made up of enhancement Capex. Enhancement Capex, due to its nature, benefits future generations and therefore we feel justifies the slower profile, keeping bills lower now and recovering the costs in future periods.
2. We have chosen to run-off existing RCV at 4% per annum on a reducing balance basis. We have chosen an average asset life for new RCV of 25 years. We believe that these decisions ensure that current customers pay a fair share of the costs incurred in delivering improvements in AMP7, but that some of those costs will fall on future generations of customers who will also benefit from those improvements.
3. We have considered the inter-generational issues around this pricing period. A fast growth in RCV will generally lead to higher bills for future generations, whilst a falling RCV would suggest that current customers are paying now for investment that future generations will benefit from. Overall, the Plan generates an increase in RCV of 28% during 2020 to 2025 including inflation. This is due to the significant level of investments in infrastructure, metering and leaving more water in the environment, that we would not expect to be repeated in future periods.
4. The transition to CPIH was not a direct factor in our decisions around bill profile. Although, we have adopted PAYG rates to adjust for the increase arising from a higher CPIH WACC.



### 10.3.7 Wholesale Cost Efficiencies

1. We are forecasting to outperform our Totex allowances for the current AMP and we have also been driving efficiencies throughout our business and supply chain. We have negotiated new contracts with our key suppliers, and brought services in-house where we will continue to benefit from both reduced costs and increased knowledge. We are also delivering a complex Trunk Main and Mains Renewal programme in a cost-effective manner.
2. As we head towards 2020, we will be continuing to drive cost efficiency through to our unit rates for key capital investment programmes, such as mains renewals and meter installations. To deliver this we will push for increased productivity from delivery partners involved, as well as upskilling our own resource.
3. The following graph illustrates our Totex evolution through to 2025.

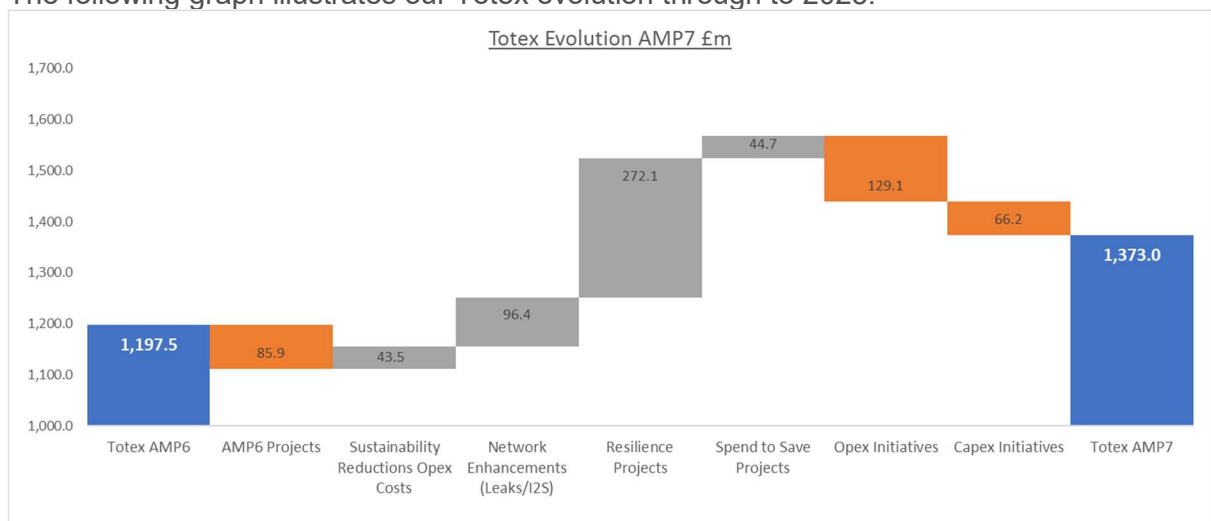


Figure 10.7: AMP7 Totex evolution

4. The efficiencies we are committing to in the Plan are significant and stretching and relate to the base Totex. The network enhancements and resilience projects have been built on a unit cost basis net of efficiencies. We understand the areas where we have scope to deliver these efficiencies, developing them with teams across the business. Over the next year we will develop and put in place the detailed plans to enable these to be delivered. To deliver these we will need to re-organise our business and continue to drive innovation in the business.
5. We have benchmarked, with the support of Oxera, our Wholesale Totex against the industry to help the company understand the level at which the Totex allowance for Wholesale could be set for 2020 to 2025. The benchmarking suggests we are slightly better than average (3% to 5%) on our recent historic costs, not taking into account the efficiencies we have outlined above.
6. Our assurance partners, PwC and Atkins, have reviewed the efficiencies being committed to in our Plan. They have assessed deliverability of our Plan to be particularly challenging due to the stretching level efficiencies needed to deliver the performance commitments within the Totex envelope proposed.

### 10.3.8 Opex efficiency initiatives

1. We have five efficiency initiatives that are currently being delivered and these will deliver benefits at an annual run-rate of £17.5m for the start of 2020.

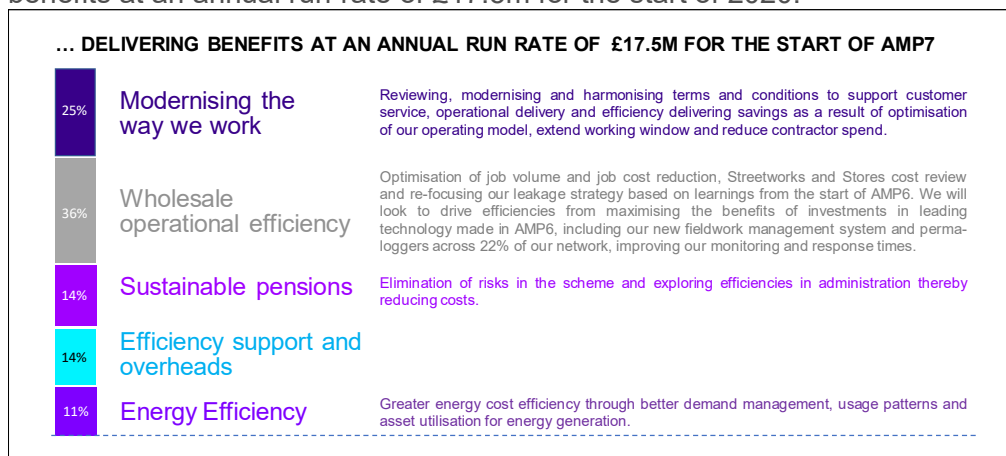


Figure 10.8: AMP6 efficiency initiatives

2. Following on from the completion of our scoping of the investment portfolio we have identified additional demands of £35m per annum for Opex funding covering energy, bulk supplies and leakage.
3. Subsequently, we have developed a targeted efficiency initiative programme that will deliver £129m of savings after a capital investment of £45m. The following initiatives constitute the efficiency programme:





	 <b>Target Operating Model</b>	 <b>Subcontractor Contracts, Network Processes (Innovation)</b>	 <b>Procurement</b>	 <b>Energy: Price and Volume</b>
<b>Opex Efficiency Initiatives</b>	Optimisation of the organisational structure and ways of working to increase efficiency, productivity and service levels for our customers	Right mix of direct employees and sub-contractors to best deliver the jobs our network requires whilst leveraging the continuous technological and process improvements	Procure lower than inflation prices	Reduce energy demand through targeted capital investment on our above ground assets and invest in renewables generation projects
<b>Capital Investment required</b>	£20m to enhance IT systems and network operating performance	£5m on research		£20m on renewable generation projects across two phases
<b>Estimated benefits over AMP7</b>	£75m	£30m	£10m	£3m and then £6m per annum

Figure 10.9: AMP7 Opex efficiency initiatives

### 10.3.9 Capex efficiency initiatives

1. Following on from completion of the scoping of our investment portfolio, the capital programme of £718m is made up of the following investments:
  - 13% of Capex is the investment required to meet our environmental commitments.

- 60% of Capex will be spent on our non-infrastructure assets; this will either be projects to meet our supply demand balance, a direct output of the revised WRMP, or evidenced through business cases. These peer-reviewed documents make the case for specific (often unique) maintenance and enhancement investments.
  - 23% of Capex spend is for our infrastructure network, to ensure our pipes continue to supply customers with potable water.
  - 4% of Capex is for business improvement, to continue to allow the business to support its wider Totex programme.
2. In order to maximise efficiency within this programme we have identified the following Capex initiatives targeting £66m of cost savings:

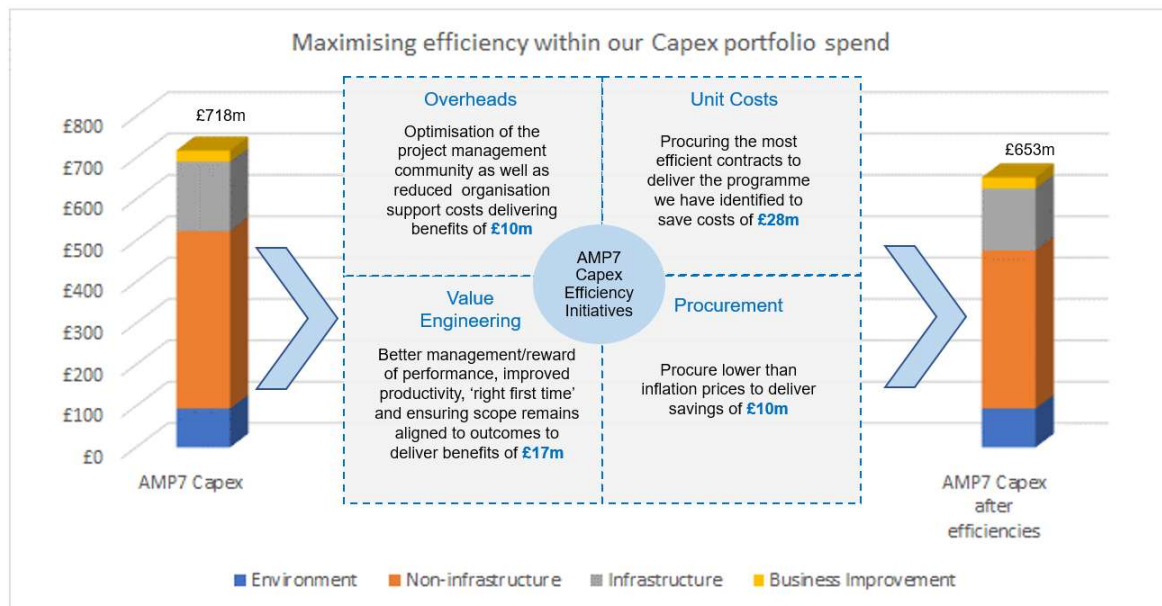


Figure 10.10: Capex efficiency initiatives for 2020 to 2025

3. Delivering the planned targets will result in the overall Capex envelope reducing from £718m to £653m (before adding £45m spend to save with our Opex programme).

## 10.4 Retail household price control

1. This section sets out the Retail revenue requirement and costs. It also provides a summary of planned efficiencies.

### 10.4.1 Breakdown of our revenue requirement

1. The table below shows the main components of the retail revenue requirement:

Retail residential revenue requirement in £m	2020/21	2021/22	2022/23	2023/24	2024/25
Residential Retail Margin %	1.00%	1.00%	1.00%	1.00%	1.00%
Residential Retail Margin	2.6	2.7	2.8	2.9	2.9
Cost to Serve	30.2	30.6	31.2	31.8	32.0
PR14 Reconciliation Adjustments	(1.8)	(1.9)	(1.9)	(1.9)	(2.0)

Retail residential revenue requirement in £m	2020/21	2021/22	2022/23	2023/24	2024/25
Total revenue requirement	31.0	31.4	32.2	32.8	33.0

Figure 10.11: Retail residential revenue requirement (£m)  
Casting differences in the table have arisen due to rounding

- During 2020 to 2025, we expect our retail costs to increase in line with forecast growth in the number of households we serve in our area of supply and from an increase in the number of measured customers we serve. We also expect our gross retail costs to increase annually due to input price pressures over the price control period and have reflected this in the above costs to serve.<sup>83</sup>
- We have calculated our expected SIM incentive as a 6% penalty on allowed retail revenue (household) included as PR14 Reconciliation Adjustments in the above table. This figure is calculated using the RPI inflation indices. In projecting the penalty, within the allowed range - 6% to -12%, we considered that customer satisfaction is good in absolute terms despite the fact that relative SIM results place us at the lower end of the industry range. We also considered that our SIM results have been on an improving trajectory over the first three years and we expect this to continue over 2018/19 and 2019/20.

#### 10.4.2 Retail cost assessment and efficiency

- During 2017/18 our residential retail costs per customer were £23.26, slightly lower than the industry mean of £24.03<sup>84</sup>, but slightly higher than the median in the industry of £22.52. We have an aspiration to be in the upper quartile in terms of delivering efficient retail services to customers. The current upper quartile cost to serve is £19.07 per customer<sup>84</sup>. We currently have a gap of £4.19 per customer to the upper quartile target which equates to £5.47m for 2017/18.
- We are committed to delivering a more cost-effective service to our customers without compromising customer experience, and recognise that this new target represents a significant step change in our levels of efficient retail expenditure. To help us reach our targeted level of efficiency in AMP7, we have AMP6 efficiencies that will deliver annual cost savings of £1.26 per customer by AMP7. We have planned to drive further efficiencies averaging at £2.70 per customer through initiatives earmarked for AMP7 as detailed in Figure 10-12 below. This will deliver £5m of savings.
- The chart below shows that the efficiencies mentioned above drive actual reductions, in outturn prices, for both our measured and unmeasured customers. Furthermore, our combined average cost to serve reaches our upper quartile performance levels by the end of AMP7. The upper quartile performance is based on the 2017/18 data share upper quartile average cost to serve with an added £1 per customer relating to our cost adjustment claims and also increases each year with inflation. Our combined average does not increase as the efficiencies partially mitigate input price pressures. While we recognise that we do not hit the upper quartile performance levels by the start of the AMP, it is equally important that we continue, and improve on, the great customer service we deliver to our customers every day.

<sup>83</sup> We commissioned Economic Insight to produce a report of likely Input Price Pressures that our retail business would be subject to over the price control period. This has been calculated using a range of indices applied to a detailed segmentation of our retail cost types. Refer to Appendix 10.7. Their report on Transience has also been included at Appendix 10.8.

<sup>84</sup> Based on the 2017/18 industry datashare, after accounting for dual service costs at a multiplier of 1.3 as stipulated in the PR14 technical appendix document August 2014, refer to Appendix 10.9.

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We must therefore ensure that our cost reductions are set at a sustainable pace and we have balanced the ambition to be upper quartile against setting a plan that is deliverable and does not put an unacceptable risk on customer service delivery.

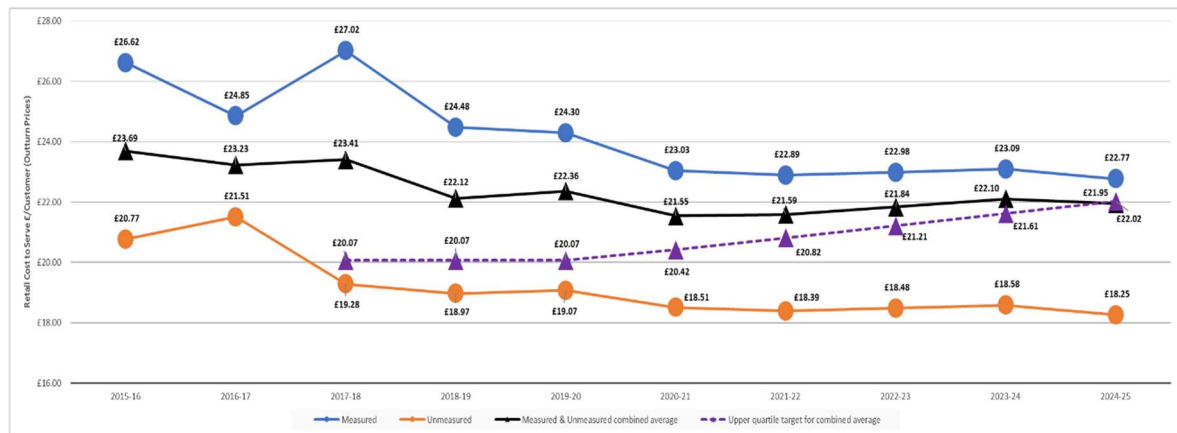


Figure 10.12: AMP 6 and 7 household retail costs per customer

### 10.4.3 Cost adjustment claims

1. Our cost adjustment claims are detailed in data table R2 and the supporting commentary. We have included £7.8m as cost adjustment claims that we believe should be specifically allowed for in Ofwat's retail cost assessment covering retail transience. This is a factor which we believe materially affect our costs, but which we do not expect to be accounted for in the model.
2. We carefully reviewed the draft models published by Ofwat March 2018, enabling us to assess the likelihood of our claims being included. None of the models accounted for transience, on this basis, we will continue to submit this modelling adjustment claim.

### 10.4.4 AMP 7 retail efficiency initiatives

1. The following activities and initiatives account for the movement in our projected costs.

Cost initiative	2020/21	2021/22	2022/23	2023/24	2024/25	Average
Digital customer journey	£0.82	£1.18	£1.31	£1.44	£1.58	£1.27
Doubtful debt reduction	£0.67	£0.88	£1.08	£1.28	£1.49	£1.08
Meter reading efficiency	£0.36	£0.36	£0.36	£0.36	£0.36	£0.36
<b>Total</b>	<b>£1.84</b>	<b>£2.41</b>	<b>£2.75</b>	<b>£3.09</b>	<b>£3.42</b>	<b>£2.70</b>

Figure 10.13: AMP7 Retail household initiatives per customer  
Casting differences in the table have arisen due to rounding

2. The following includes details of our AMP7 initiatives:
  - Digital customer journey  
We aim to deliver cost reductions over AMP7 driven by an increase in customers contacting us through digital channels, reducing the demand on our call centres. We are also improving our end to end customer journeys and removing duplications and hand offs in our processes and automating several back-office tasks.

- **Doubtful debt reduction**

We recognise that our bad debt charge, when shown as a percentage of our revenue is in the bottom quartile in the industry. There are, therefore, significant improvements to be made to ensure we are delivering efficient retail costs to customers. There are several areas that will drive our bad debt reduction plan over the AMP:

- data segmentation to ensure more targeted debt collection, focusing on collecting at risk debt before it becomes overdue.
- a drive to increase the number of customers on secure payments from 60% to 68% by the end of AMP7. This will ensure payments are for manageable amounts and customers do not slip into debt, by paying each month.
- improving the service we offer to vulnerable customers. Following support from customers, we aim to expand our social tariff offering in AMP7 to help an additional 30,000 customers. We also plan to increase the number of home visits we pay to customers in financial hardship and offer a range of assistance measures to help them to set up sustainable payment plans and get them back on track (refer to Chapter 7 for more detail). In order to demonstrate our commitment to supporting financially vulnerable customers, we plan to introduce a number of our customer assistance measures prior to AMP7, including enhanced flexible payments in 2018 and a Customer Assistance fund in 2019/20.
- Our Plan aims to deliver the following change to our bad debt. The chart below shows our bad debt as a percentage of revenue against the 2017/18 industry average<sup>85</sup>. We aim to move to the upper quartile by 2023/24.

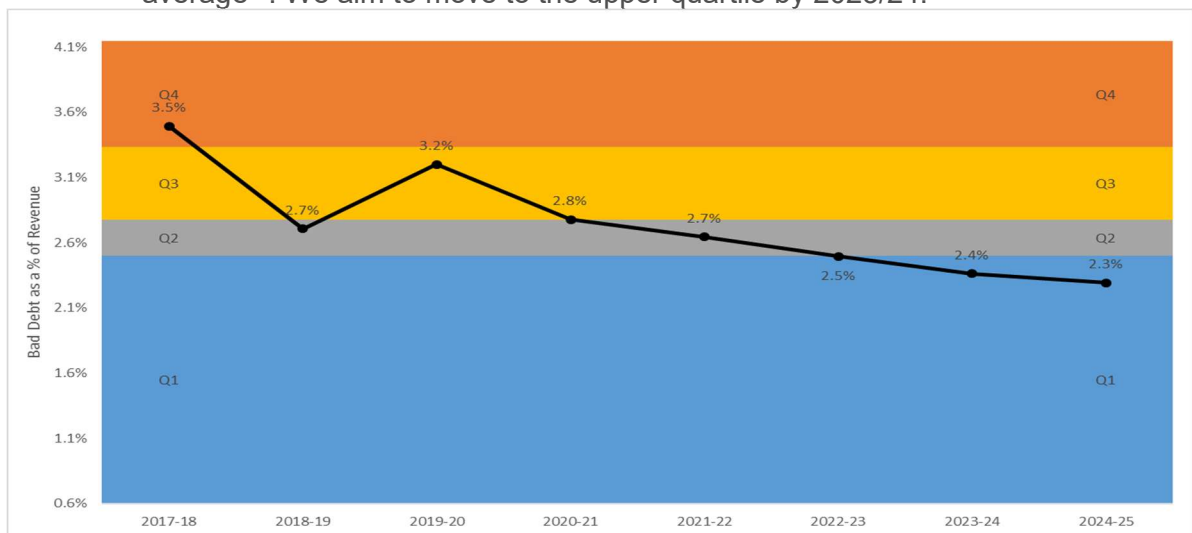


Figure 10.14: Benchmarking of bad debt as a percentage of revenue

- **Meter reading efficiency**

We aim to deliver cost efficiencies through a sustainable reduction in the frequency of our meter reads and reductions in unplanned ad-hoc reads. This will be delivered through increased estimation where there is a demonstrably consistent pattern of consumption on which to base our estimates. Through this delivery we will ensure that our estimations minimise variances in customers' bill values.

## 10.5 Proposed Bills 2020 to 2025

1. We have worked hard to keep our bills low whilst maintaining a high quality and trusted service. Our water bills are consistently lower than the industry average, and will have reduced

<sup>85</sup> Based on the 2017/18 industry datashare.

in real terms between 2015 and 2020 by almost 7% and by 5% over a period of 10 years. The average bill will increase marginally from £170.90 in 2019/20 to £174.40 in 2024/25 before inflation. This small increase reflects our investment in long-term infrastructure development to prevent large bill increases for future generations. We have mostly offset this increase with our commitment to deliver £200m of efficiencies in AMP7 (£27 reduction on the average bill) and the financeability of the plan that enables the increase in the average bill to be further offset £6.6 and results in Pay as You Go (PAYG) ratio to reduce from an average of 76.2% in AMP6 to 66.2% for AMP 7.

### 10.5.1 Customer bills remain affordable and offer value for money

1. We have researched how our average bills compare with estimates for customers' real household income after allowing for housing costs. The small increase in our bills that we have planned for 2020 to 2025 will still represent a declining share of customers' projected disposable income. Therefore, the affordability of our bills will improve further.

Affinity Water average water bills and operating area average weekly household income after housing costs 2011 - 2025 (in 2016/17 prices)

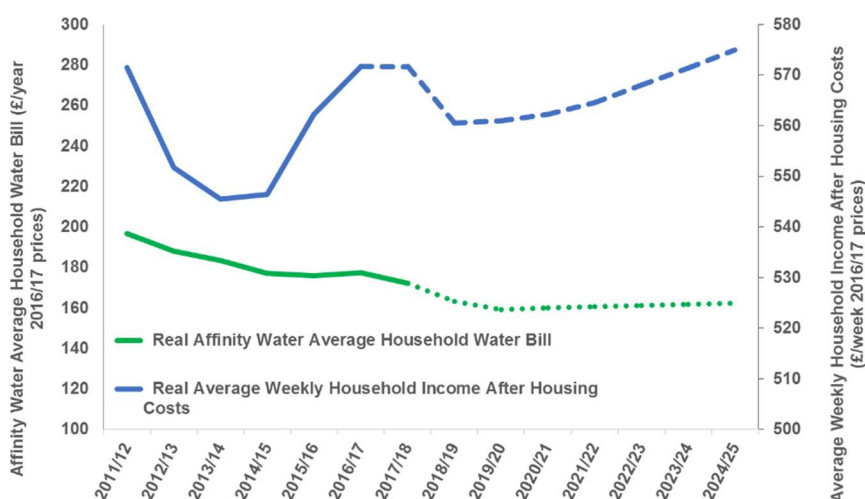


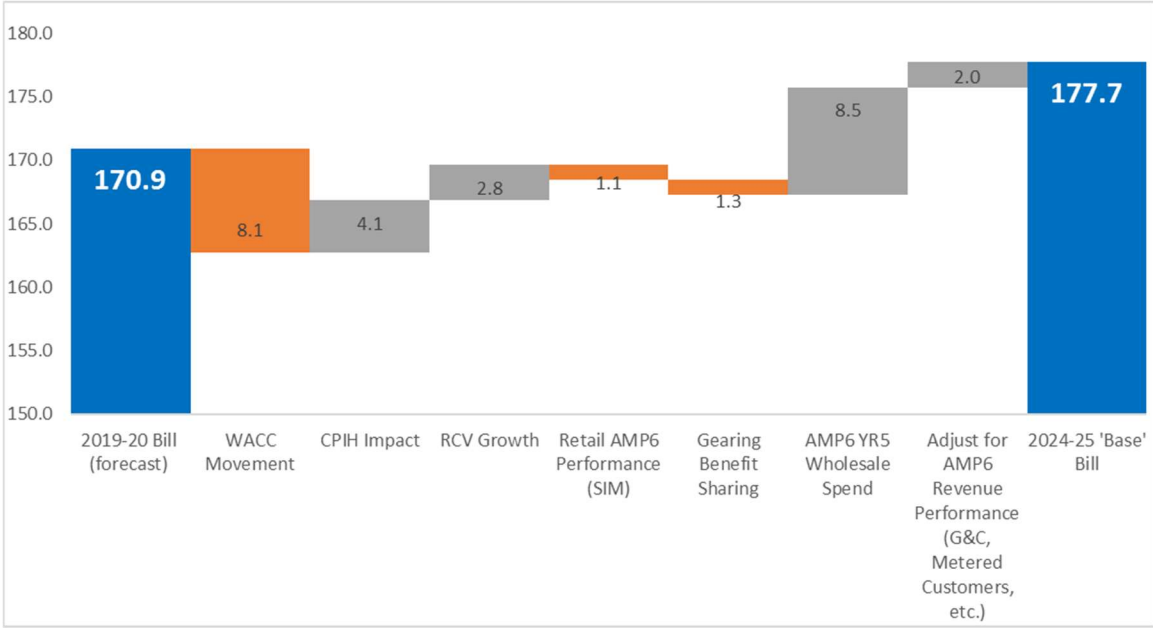
Figure 10.15: Comparison of average household water bills and real GDHI

2. We have engaged with customers and they have told us our water bills are affordable and better value or similar value in comparison to other utilities<sup>86</sup>. The customer engagement and consultation with our customers included the acceptability of an increase in the bill. The results from phase 3 of the engagement concludes that three-quarters of customers find it acceptable to increase bills by an extra £3 to £5 a year and 84% acceptable to an increase of £1 to £2 a year to make sure there is enough water in the future. The bill increases and bill profile being proposed in the Plan is within these levels. For additional details on customers' views of affordability and the value of services received, refer to Chapter 3.
3. We are committed to ensuring that our bills remain affordable and offer value for money for all customers. Moreover, to ensure that our bills remain value for money, we have conducted various customer engagement activities to explain and gain feedback on the impact that key proposed investments would have on customers' bills during 2020 to 2025.

<sup>86</sup> phase 0 ethnographic interviews, phase 0 - signpost focus groups; value for money survey, phase 1 customer community – omnibus survey; phase 2 BP acceptability survey

### 10.5.2 Customer bills drivers

1. In arriving at the average household bill level, we considered the expenditure required to deliver our core services, build on our existing core resilience and lay the foundations for future regional resilience. We have also factored in reductions in bills driven by an increase in new connections revenues, the effects of the metering programme, the sharing of a SIM penalty with customers and our financeability.
2. The charts below illustrate the progression of the average customer water bill bridge from 2019/20 to 2024/25. The first bill bridge explains the movement in average bills from factors either outside company control, such as changes in the assumed WACC or from RCV growth or historic spend and performance. This results in a 2024/25 base bill. The second bill bridge explains the movement in average bills from the proposals contained within in our Plan for 2020 to 2025.





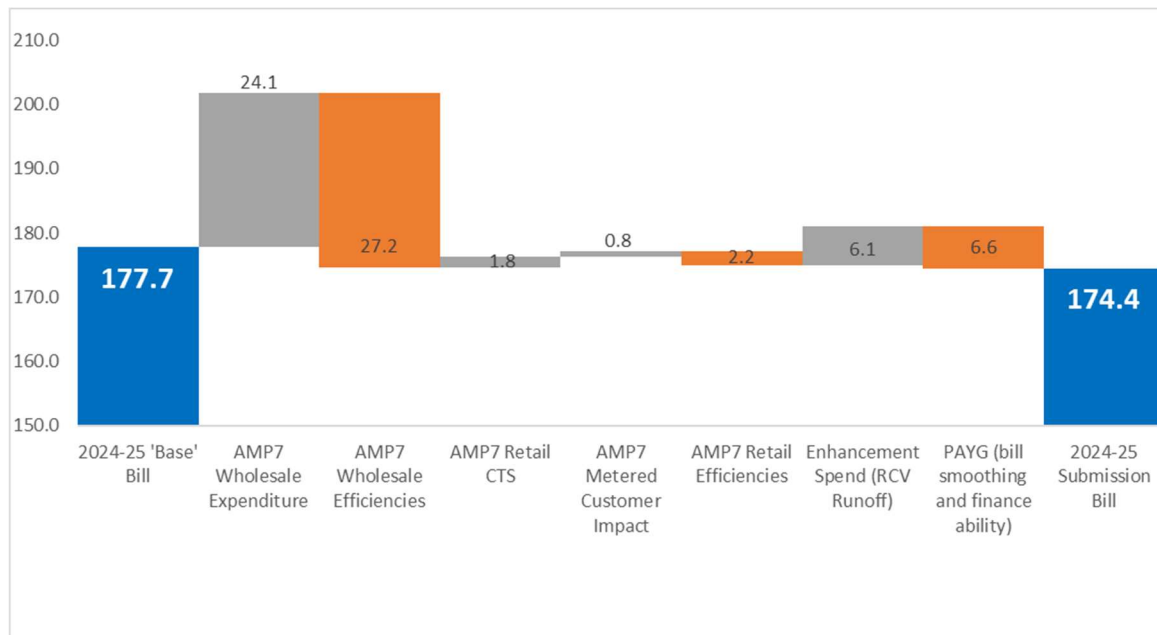


Figure 10.16: Average customer water bill bridge from 2019/20 to 2024/25

3. We continue to maintain a strong position in the delivery of our core services whilst maintaining performance levels, with our bills remaining in line with our expectations due to our efficiency programmes.
4. Building on our core resilience and drawing less from the environment, the Wholesale Plan is closely aligned to our water resources position as developed in our WRMP, allowing us to maintain resilience of supplies in response to sustainability reductions notified to us under WINEP3. Details of the investments and expenditure to support delivery of these commitments is set out in earlier Chapters.
5. Developer Services/new connections revenue – the initial increase in our bills reflects higher grants and contributions of £6.8m collected since 2015 than allowed in our previous Business Plan due to increased Developer Services work. This leads to lower customer bills between 2015 and 2020 under the wholesale revenue correction mechanism.
6. Service Incentive Mechanism (SIM) penalty payback – to compensate for our SIM performance between 2015 to 2020, our bills to customers will fall from 2020 onwards, equating to an average of £1.19 per customer per year.

### 10.5.3 Bill Profile

1. We have made our bill profile as smooth as possible to minimise cost shocks for customers while ensuring that the Plan remains financeable to address its upfront needs. The bill profile between 2015 and 2025 is shown in the graph below. The grey line shows the PR14 Plan and the difference to this line is mainly the reduction in the bill driven by an increase in connections revenue and the effect of the slower than planned metering programme.

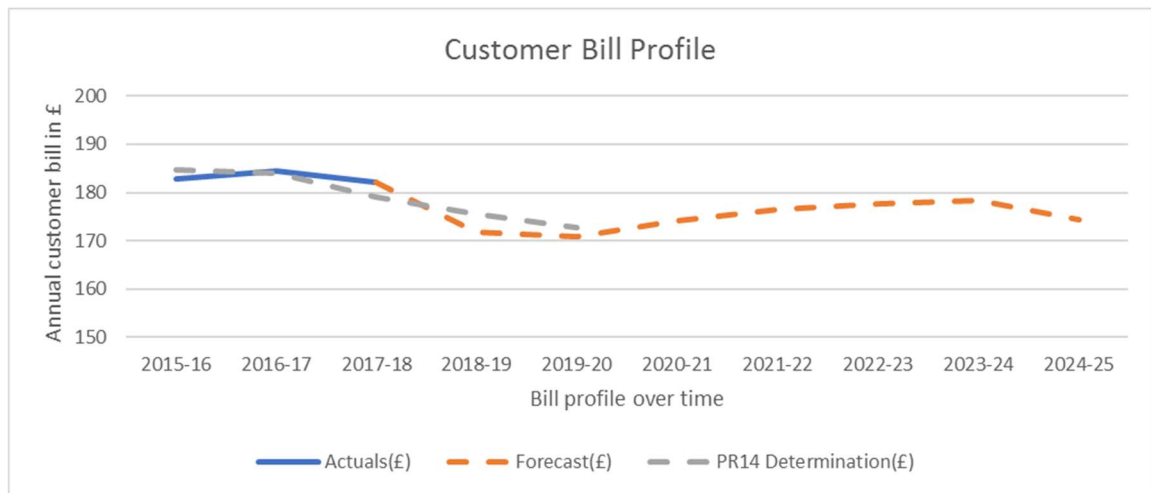


Figure 10.17: Customer Bill Profile

- For the years 2018/19 and 2019/20 bill forecasts have been constructed using assumptions for RPI and wholesale revenue forecasting incentive mechanism (WRFIM) mechanics (which are explained below) applying the 2017/18 actual revenue position and forecasts on grants and contributions.

In £	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Real	171.7	170.9	174.2	176.6	177.7	178.3	174.4
Nominal	175.4	179.0	185.9	192.0	196.9	201.1	200.5

Figure 10.18: Customers' average water bill, £ per year

- The assumptions we have considered to calculate the bill profile for Forecast Totex levels, PAYG and RCV run off rates, Ofwat's cost of capital and anticipated retail margins are outlined in subsequent sections below.

#### 10.5.4 Impact of income from Developer Services and Single Till

- In our 2017/18 Annual Report and Financial Statements, we recorded a WRFIM balance of £6.8m. This is predominantly the result of higher receipts from developer contributions than anticipated at the last price review and at the time of tariff setting, due to increased activity since 2015, to date of 19%, just under 5,000 connections.
- Having considered the alternatives of how best to implement the necessary WRFIM corrections in 2019/20 tariff setting and beyond, and their consequences, we have concluded that setting tariffs in 2019/20 to clear the full WRFIM balance would reduce water bills in 2019/20, only for bills to have to rise again the following year. If instead we spread the adjustment we need to make over the two years 2019/20 and 2020/21 we can avoid this bill instability. To give effect to this, we have revised our WRFIM calculations from those submitted in July 2018, to spread the adjustment in a way that we calculate will achieve the most stable bill profile between the two years 2019/20 and 2020/21.
- We believe that by spreading the corrections, customers will be no worse off because the WRFIM mechanism recognises the time value of money. In addition, we understand that we risk a higher incentive penalty than otherwise as a result of maintaining a positive WRFIM balance for a longer period. We have judged that these consequences are preferable to those of bill instability.

- As the current price control period has evolved, we have become increasingly concerned about the effects of volatility in developer contributions on water bills. One of the objectives of the WRFIM mechanism and licence amendment was to prevent large tariff effects from accumulated revenue forecasting errors. However, as contributions have accelerated in recent years, their inclusion within the 'single till' is having the opposite effect, increasing bill instability. This price review provides an opportunity to review the operation of WRFIM, and based on our experience of the mechanism and to further the aim of bill stability, we suggest that in next five year period, developer contributions be taken outside of the coverage of the WRFIM mechanism, especially as these contributions are charges on a cost neutral basis.

### 10.5.5 Wholesale and retail revenue requirements for calculating customers' bills

- The table below shows total water revenue requirements for our wholesale and retail price controls, including the split between Water Resources and Network Plus for the wholesale business. Across the elements, we project our annual revenue requirement to increase from £313.0m in 2020/21 to £353.6m in 2024/25, including the effects of inflation. Wholesale activities account for 91% of our total revenue requirement over the period, with retail household accounting for about 9%. Our total annual wholesale water revenue requirement will increase from £282.0m to £320.6m over the period. Our wholesale total water revenue requirement over the five-year period is £1,526.5m.
- As the connection and infrastructure charges and other income (bulk supplies, chargeable services, aerial rentals, hydrants and rental income) are not part of the price control, we have not included these in our wholesale water revenue requirement. We have included the breakdown of these charges in the supporting Appendix 10, section 10.2.
- Our total revenue requirement for our household retail price control over the period is £160.4m. This requirement marginally increases overall over the five-year period. The net effect of our proposed efficiencies partially offsets the increases caused by new household growth and the increase in the number of measured customers.

Revenue requirement in £m	2020/21	2021/22	2022/23	2023/24	2024/25
Water Resources	49.8	53.9	54.8	59.3	45.0
Network Plus	232.2	243.5	253.4	259.0	275.6
<b>Wholesale revenue requirement</b>	<b>282.0</b>	<b>297.4</b>	<b>308.2</b>	<b>318.3</b>	<b>320.6</b>
Retail residential revenue requirement	31.0	31.4	32.2	32.8	33.0
<b>Total revenue requirement</b>	<b>313.0</b>	<b>328.9</b>	<b>340.3</b>	<b>351.1</b>	<b>353.6</b>

Figure 10.19: Revenue requirement in £m during AMP7  
Casting differences in the table have arisen due to rounding

## 10.6 Proposed Bills 2025 to 2040

- The chart below shows the forecast average bill per customer over the next three AMP periods to 2040. This shows a projected average bill increase of 8.3% from the end of AMP7 to the end of AMP10, with the most significant increase during AMP9 due to the delivery of a new reservoir. The increase in bills from 2016/17 to the end of AMP10 equates to around £3.00 per customer before inflation, but will ensure long term resilience to supply for the current and future generations.

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2. In preparing the projections, the following assumptions were made:
  - Leakage will be reduced by 50% in line with the National Infrastructure Commission Report
  - Drive to achieve 1% year on year efficiencies
  - Current opex run rates will be achieved
  - New regional transfers are built in to the modelling
  - Production of a new regional reservoir will be completed
3. In advance of the next price review period, we will engage with customers on price increases, reviewing the increase in bills against the need to achieve the leakage targets and complete the production of the reservoir stated above to support long term supply resilience.
4. As part of preparing for the next price review in 2024, the company will also consider and develop proposals for sharing the cost of production of the reservoir. We will need to determine whether the cost should be shared solely with Thames Water Utilities Limited or whether customers benefiting from the reservoir in the wider supply region should also share some of these costs.

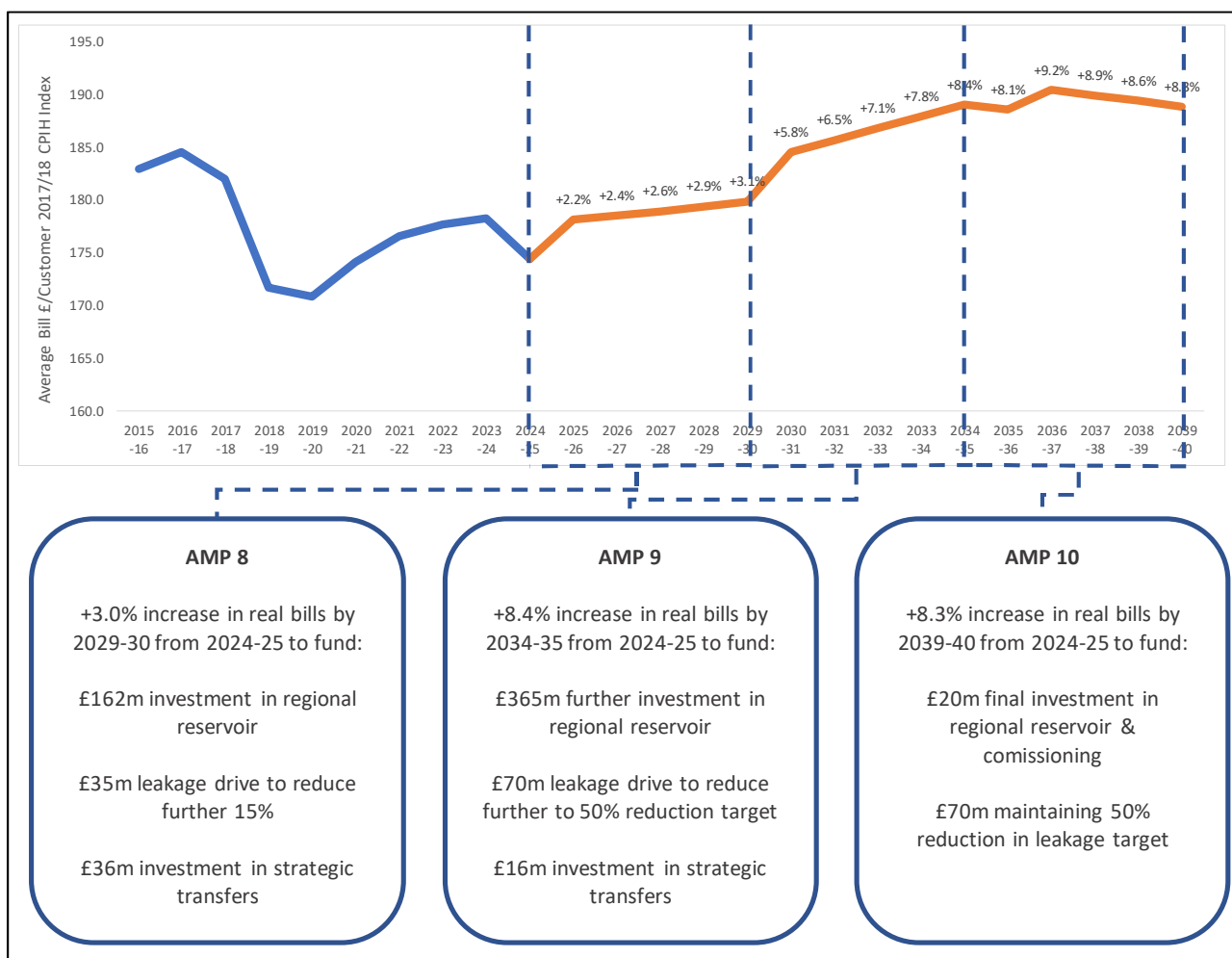


Figure 10.20: Bill projection over the next three AMP periods



## 10.7 Appointed company financial statements

- Our Appointed company financial statements are included in the supporting Appendix 10, section 10. This includes our treatment of RCV and legacy adjustments which are in line with the regulatory rulebook.

### 10.7.1 Debt and Interest

- The table below shows the debt requirement over the AMP and the associated interest cost. A further £115m of debt is required to be raised to fund the investment programme.

Net Debt in £m (nominal)	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Class A Debt	947	954	961	954	962	970	
Class B Debt	123	126	130	133	136	140	
New Debt	-	-	-	61	99	114	
Accrued Interest	14	14	14	14	14	14	
Cash Balance	134	78	16	14	17	19	
Net Debt	950	1,016	1,088	1,148	1,193	1,218	
Senior Gearing	80%*	80%	80%	80%	80%	80%	
* Includes Midnight Adjustments to RCV							
New Debt in Period	-	-	-	61	37	15	114
Movement in Cash		(56)	(61)	(3)	4	2	(115)
Interest Charge	38	38	38	40	42	44	
Indexation on Debt	10	10	11	11	11	11	

Figure 10.21: Debt requirement over the AMP  
Casting differences in the table have arisen due to rounding

## 10.8 Financial Transparency

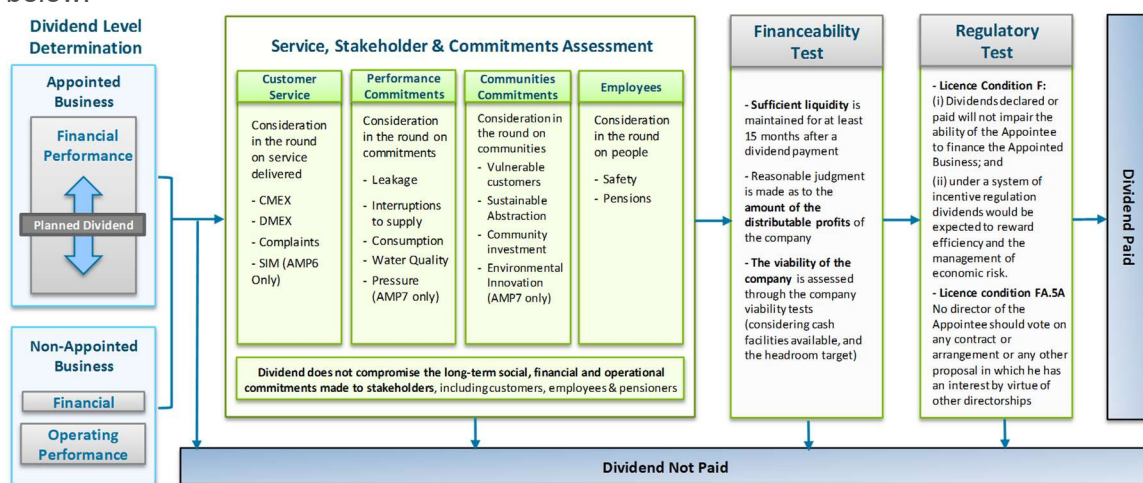
- This section of the sets out the transparency of the Plan.

### 10.8.1 Transparency and simple financial structure

- The transparency of our current structure has been acknowledged and held up as an example of best practice by the Private Equity Reporting Group. Nevertheless, we are looking to improve further and are already taking a number of steps:
  - we will simplify further our legal structure and remove Holding Company entities in the vertical structure, see Appendix 10, section 10.14.
  - we are at an advanced stage of substituting our Cayman Island entity with a UK entity
  - we have applied for the Fair Tax Mark, including additional disclosures in our Annual Report and Financial Statements for the year ended 31 March 2018 in order to increase transparency and assist understanding of our tax position
  - we have published our group tax strategy on our website
  - we published in our Annual Report and Financial Statements for the year ended 31 March 2018 a comparison of our returns on actual regulated equity compared to under notional financing.

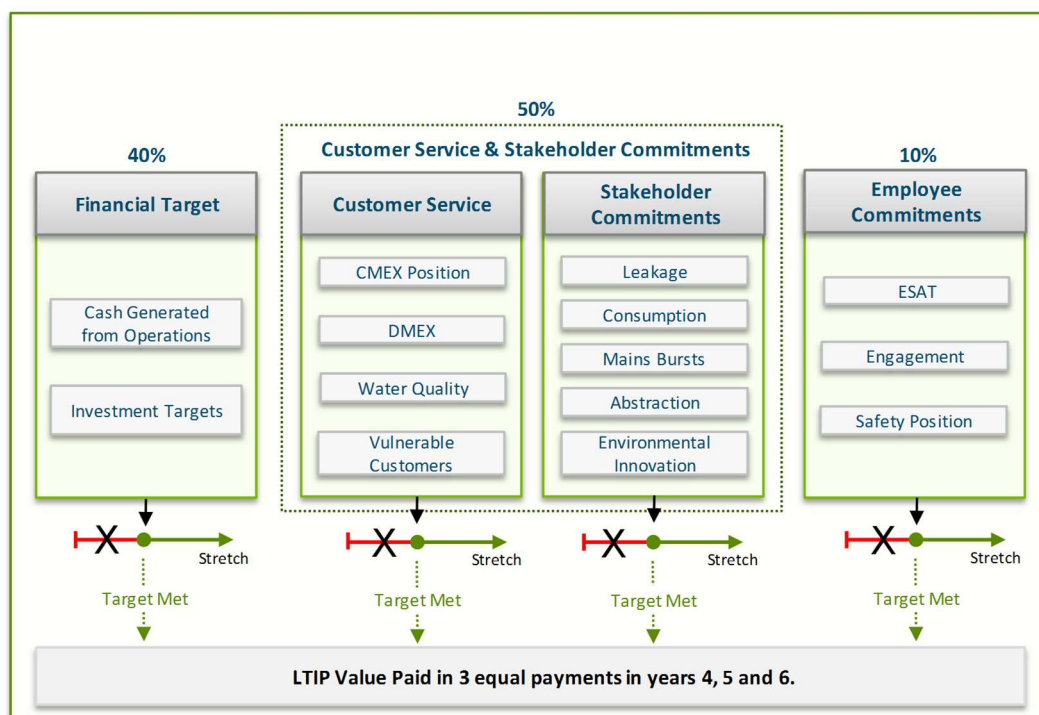
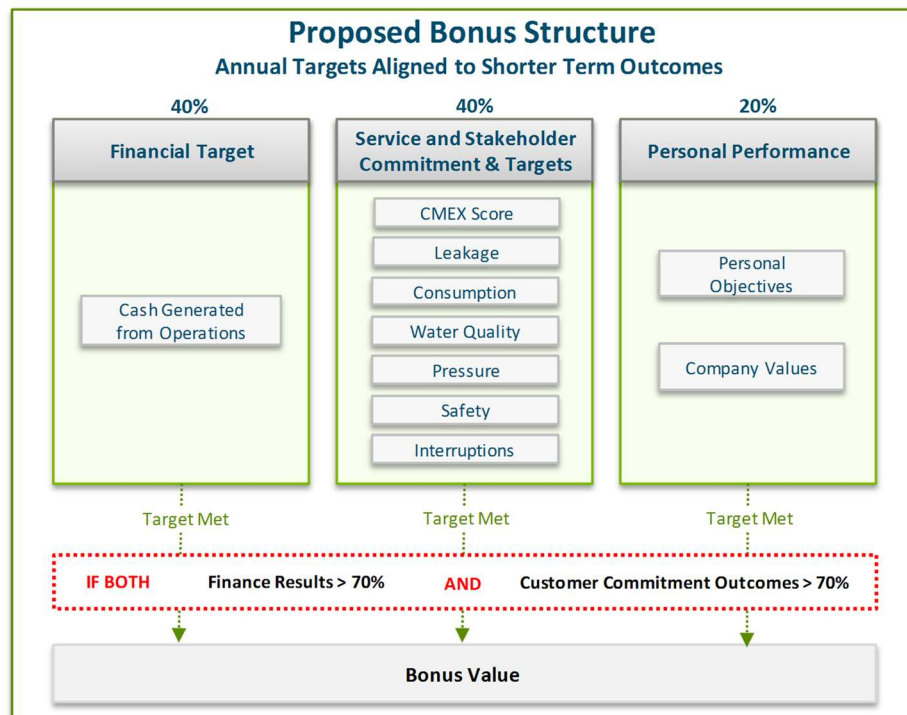
### 10.8.2 Linking dividend policy with delivery for customers

1. Our Board has approved a Dividend Policy that provides for dividends commensurate with long-term returns and performance of the business, whilst not impairing its longer term financeability. The performance of the appointed and non-appointed businesses are considered separately. The performance of the appointed business comprises its financial performance against the company's internal business plan and an assessment of performance in the following areas: customer service; operational commitments; community commitment; and people. Under the policy the Board must also test any proposed dividend payments against legal and regulatory requirements and restrictions, including the management of economic risk and compliance with financial covenants.
2. This view of customer bills beyond AMP7 confirms that the PAYG rates used in AMP7 are sustainable for future periods.
3. Our dividend policy is set out in Appendix 10, section 10.12 and summarised in the diagram below.



### 10.8.3 Linking performance related executive pay with delivery for customers

1. Customers, regulators, investors and stakeholders rightly expect that the performance related remuneration of executive directors to be linked to providing high quality services to customers. Over the course of the last year, in line with our new shareholders' long-term perspective, our Remuneration Committee, led by Susan Hooper, has comprehensively overhauled our Executive Remuneration Policy to ensure that it meets those expectations.
2. We consider that our Executive Remuneration Policy (Appendix 10, section 10.13) provides assurance to customers and stakeholders that our executive directors are appropriately incentivised to focus on providing stretching delivery for customers in the short and long-term, through an annual bonus plan and long-term incentive plan.



#### 10.8.4 Sharing mechanism and gearing

1. We strongly agree that companies in our sector should be financially resilient and able to withstand shocks. We use our whole business securitisation to support comprehensive fiscal discipline around going concern, cashflow, stress-tested viability, and reserves. With this approach, we have to date maintained our gearing between 75%-80% during AMP6, and our credit rating is Baa1 stable, which is two notches above investment grade, better or equal to

most of our peers. In March 2018, we indicated to Ofwat we would be considering our long-term gearing as part of our PR19 Business Plan submission.

2. As part of this work, we have been considering the implications of the revisions to Ofwat's final methodology for the PR19 price review, confirmed in "Putting the sector in balance: position statement on PR19 business plans". In particular, we have noted the mechanism within the PR19 methodology requiring companies to "share financing outperformance" where actual reported gearing is more than 70%. We have formed a preliminary view that, if such a mechanism is included in our AMP7 price controls, maintaining current levels of gearing may no longer be in the long-term interests of the company.
3. We have discussed this with our shareholders who, at this stage, have indicated they are minded to modify the capital structure of the Daiwater Investment Limited group. If this modification were to proceed, we would expect it to result in the company's actual reported gearing reducing to below 75% in AMP7, with an ambition to achieve an actual reported gearing level of 70% in this period. We are working with our shareholders on a detailed plan to enable this intent and ambition to be realised and would expect this plan to be confirmed once the AMP7 price controls are finally determined.
4. We should emphasise there can be no certainty of implementation or the timing thereof and therefore believe it appropriate to include an 80% gearing level for each year of AMP7. We remain satisfied that this level of gearing would be appropriate and that this Business Plan will facilitate the company maintaining an investment grade credit rating and remaining financially resilient throughout AMP7.
5. We have included in this Business Plan the default "benefit sharing mechanism" shown in Figure 5 of Section 6.3.4 of "Putting the sector in balance; position statement on PR19 business plans", in light of the changes to Ofwat's final methodology:
  - introducing a default "benefit sharing mechanism" in respect of financing outperformance for each year of AMP7 where reported gearing exceeds 70%; and BULLETS
  - amending the Initial Assessment of Plans tests for companies' business plans to take into account the sharing of outperformance with customers. BULLETS
6. We have included this mechanism notwithstanding our misgivings as to the necessity for and appropriateness of such a "benefit sharing mechanism".

## 10.9 RoRE and scenarios

### 10.9.1 Return on regulated equity (RoRE)

1. We have examined the impact to the RoRE of several scenarios within a P90/P10 range of probability of occurring. The aim of this analysis is to examine the impact on returns driven by key risks and opportunities to the business, and how this is allowed within the risk and reward framework. These scenarios look at both an upside and downside impact for the following:
  - Wholesale price control revenue and costs;
  - Retail price control revenue and costs;
  - ODIs;
  - C-MeX and D-MeX;
  - Financing;
  - Water trading.

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2. As illustrated in the following chart below, the base Appointee RoRE of 5.13% has an upper boundary within the P90/P10 range of 8.26% and a lower boundary of 2.27%.
3. Further information on RoRE has been included in Appendix 10.16.

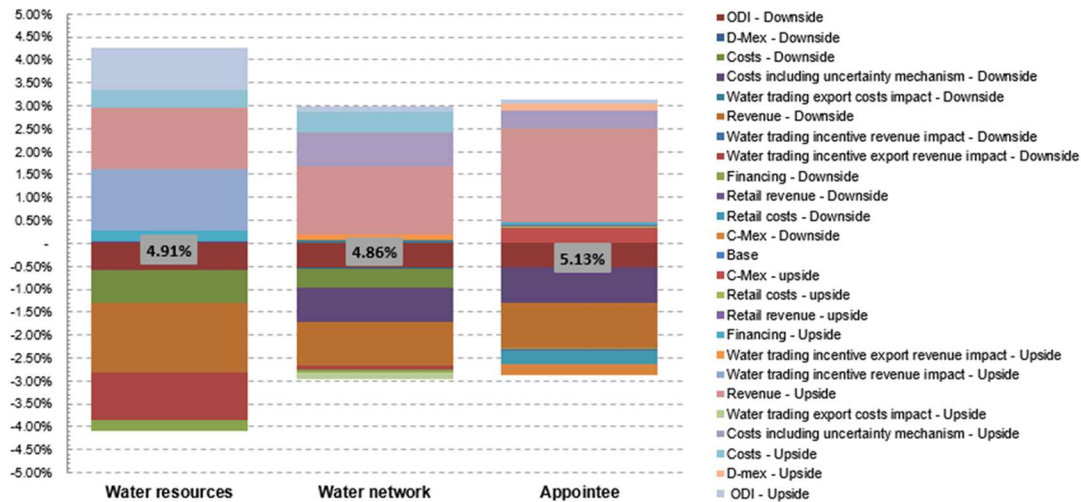


Figure 10.22: Range of RoRE

## 10.10 Uncertainty Mechanisms

### 10.10.1 Managing risk and uncertainty

1. We have an established framework for identifying, evaluating and managing the key risks we face. A key aim is to foster a culture in which teams throughout the business manage risks as part of their management of day-to-day operations.
2. We consider the Economic Balance Supply Demand (EBSD) model to select cost efficient options to balance the supply and demand sides within our WRMP and our asset optimisation tool, Pioneer considers a risk based approach to evaluate the asset lifespan and replacement decisions.
3. Risks are recorded and assessed, including existing management and control processes, and action plans are prepared, if necessary, to implement further mitigation. Activities against these plans are monitored on an on-going basis. Operational risks are also ranked by our teams during the year. Based on these rankings the most significant risks are discussed by our senior management and included in the strategic risk register, which is reviewed by the Board and the Audit Committee. The latter reviews senior managements' work on risk management and reports to the Board on the effectiveness of risk management processes.
4. We reported our key risks and uncertainties in our annual report in July and consider these to remain our key risk and uncertainties as the time of writing this report.
5. In developing our plan we have completed a full assessment of risk at programme, sub-portfolio and portfolio levels. The assessment was completed through a series of workshops with people across the business and was supported by PwC. The review considered the degree of impact of each programme on Performance Commitments and strategic risks legal

and regulatory obligation and the deliverability risks associated with each programme. Mitigations were set for the risks identified.

6. Where additional costs were incorporated to mitigate risks, we have followed a rigorous challenge process to ensure efficient costs. For example, we have increased the scope of our Trunk Mains Renewals programme from £15m to £30m to mitigate the associated risks at the onset but challenged the costs down to £25m to drive efficient unit costs without affecting the scope.
7. With this risk management approach, we have reviewed the mix of our programmes and pricing of risk not only with an eye to improve customer value through commitment to enhanced performance but also to deploy capital more effectively for increasing and sustaining investor returns.
8. Please refer to Appendix 10, section 10.15 for further detail on the risk review process and the risks, their scoring and the mitigations.

### 10.10.2 Environmental Uncertainty Mechanism

1. We have included the following unit cost adjustments to account for any discrepancy between the scale of assumed and confirmed programmes. These are linked to an outcome and a unit cost and are shown in the following table. Details of the calculation of the unit cost are provided in Appendix 10, section 10.19.

Environmental Uncertainty Mechanism	Linked Outcome	Unit	Unit Cost Adjustment (£m)
WINEP 3 “amber” sustainability reductions not required	Making sure you have enough water, while leaving more water in the environment	MI/d of deployable output reduced	-3.710
WINEP 3 “amber” river morphology projects not required	Making sure you have enough water, while leaving more water in the environment	Project unit	-0.331

Figure 10.23: Unit cost adjustments

### 10.10.3 Bespoke Uncertainty Mechanism

1. We are including a bespoke uncertainty mechanism to address two specific uncertainties that we have identified.
2. The first relates to an additional sustainability reduction in our Brett community. The EA has included as “amber” in WINEP3 a 2.6 MI/day sustainability change that is included within the environmental uncertainty mechanism. The EA has stated in correspondence that a sustainability change of up to 20 MI/day may be required and that although this is not included within WINEP3 we should nevertheless be prepared to implement such a sustainability change by 2024 unless it is technically infeasible. Further information is provided in Appendix 10, section 10.20.

3. The second relates to metaldehyde. Defra sent a letter dated 26 January 2018 to water companies regarding Defra's proposal to consult on a targeted ban on metaldehyde. However, because the consultation has not yet been published the realisation and effectiveness of the targeted ban is uncertain at this point in time. This uncertainty has specific implications for:
4. Our plan to import more water from Grafham, treat the water at Sundon and supply it into areas not previously supplied. This is an investment of £13.34m but the scheme does not include metaldehyde treatment.
5. Our proposed strategic transfer schemes (an investment of £36.67m) to move water further north from our treatment works on the River Thames and supply it into areas not currently covered by a water quality undertaking – "Water 2040".
6. DWI's policy is that it will not accept undertakings in relation to supply of water containing metaldehyde to areas that have not received such water on the basis that there should be no deterioration in the quality of water supplied. Should a ban not be implemented or prove ineffective then metaldehyde treatment may need to be provided at Sundon and our River Thames water treatment works.
7. We have included the following indicative unit cost adjustments to account for a potential need to make additional investment to deliver an additional sustainability reduction in Brett and to provide for metaldehyde treatment.

Uncertainty	Linked Outcome	Unit	Indicative Unit Cost Adjustment (£m)	Indicative Total Cost (£m)
Sustainability reduction not on WINEP3 in Brett Region (from 2.6MI/day to 3.7MI/day)	Making sure you have enough water, while leaving more water in the environment	MI/d of deployable output reduced	3.35	3.69
Sustainability reduction not on WINEP3 in Brett Region (from 3.7 MI/day to 20.0 MI/day)	Making sure you have enough water, while leaving more water in the environment	MI/d of deployable output reduced	6.67	108.72
Metaldehyde treatment (for up to 463 MI/day)	Supplying high quality water you can trust	MI/d of deployable output treated	0.296	136.95

Figure 10.23: Indicative unit costs adjustments

8. It is proposed that any adjustments under these bespoke uncertainty mechanisms are trued up in the RCV at the start of the following AMP. If these uncertainties do occur, due to their financial value confirmation by Ofwat will be required of the agreement of the value to be added RCV following their assessment of the costs. This will enable the company to fund the cost. This will be required ahead of any significant cost being incurred and may need to be agreed in stages.

#### 10.10.4 Notified Items

1. We propose that the following uncertainties are included as Notified Items in the PR19 Final Determination to the extent that the bespoke uncertainty mechanism proposed by us is not included in the Final Determination or does not recompense us fully for the efficient costs we incur during AMP7 in respect of these uncertainties.

Notified Items
Sustainability reduction not on WINEP3 in Brett Region (above 2.6 Ml/day)
Metaldehyde treatment – Iwer, Egham, Chertsey, Walton, Sundon

Figure 10.24: Notified Items



#### Deliverability Statement

*We have balanced the affordability of our plan with the financeability of the company, the significant investment to provide resilient supplies for the future whilst meeting the environmental and customer commitments. We have ensured that customers today and in the future are paying equally for the investment we are proposing in this Plan. We have challenged ourselves on our efficiency, committing to a 28% reduction in our operating costs from where we are today. Our customers' bills are planned to increase by 2.07% over the AMP (excluding inflation). We expect customer bills to remain at some of the lowest levels in the industry and will have reduced over a 10-year period by 5%.*

*Following extensive consultation with our customers, we understand that the 2% increase is acceptable. However, we are conscious that for some of our customers, any increase in their bill will put further pressure on their household finances. As a result, we are increasing support for customers in vulnerable circumstances. We have planned for the small increase in customers' bills to be progressive to avoid bill shocks. We have achieved this by using the pay as you go mechanism and also smoothing the WIRFM adjustment even though this will result in a small penalty for the company.*

*We have revised our policies for dividends and executive pay and have fully incorporated the sharing mechanism required by Ofwat in light of operating with a gearing level that is higher than the notional level between 2020 and 2025. We have announced the removal of the Cayman entity as part of simplifying our group structure, set out our intent to reduce gearing and are continuing to progress our application for the fair tax mark.*

**Stuart Ledger; Chief Financial Officer**



## 11 Board Assurance

A message from our Chairman, Tony Cocker



It is a privilege to lead the Board of Affinity Water as we put forward our plans to continue to supply high quality and resilient services to our customers and communities for the period 2020 to 2025 and beyond. As we have developed this Plan through our discussions at the Board and with Executives, I have also personally listened to customers, met with stakeholders, and talked with our front line staff, so that I have a first-hand feel for some of their views, expectations and challenges.

At the heart of what we do, all day, every day, is supplying high quality drinking water to 3.6 million people and businesses in the south-east of England. We play a critical role in supporting economic and housing growth in one of the most economically active areas of the UK. We are also custodians of a precious resource and understand that our ability to continue to supply high quality drinking water to customers is dependent on having a healthy and resilient environment to abstract that water from.

As the provider of an essential public service, I am acutely aware of the trust placed in Affinity Water by all those we serve. We must therefore be accountable not only for what we do but also how we do it. As Chairman, I will continue to lead the Board in ensuring that Affinity Water is effectively governed, and that our values and culture live up to the expectations of our customers, communities and stakeholders. We have made a number of improvements this year and will continue to do so. We have included information about our governance in this Chapter to provide assurance in this respect.

I will also lead the Board in monitoring and overseeing the delivery of this Business Plan, with the leadership team, to ensure that we do all that we can to secure the long-term resilience of water supplies for our communities and the wider region and continue to deliver great service to our customers and communities at a fair price for all.

As a Board, we have worked hard to make this Business Plan the best that it can be and we have set out in this Chapter how we have assured ourselves that this is the case.



Tony Cocker

**Chairman**



**BOARD ASSURED**

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## 11.1 Introduction

1. In this Board Assurance Statement, as a Board, we set out how we are governed, how we have effectively overseen and led the preparation of this Business Plan, and how we have assured ourselves that our Plan is of high quality and delivers for customers, communities and the environment, in AMP7 and the long-term. We also set out how we will oversee and monitor the delivery of this Plan.
2. Over the course of AMP5, the need was recognised to improve the customer, operational and financial performance of the business to meet the expectation of customers, regulators and other stakeholders. A vision was conceived, and our community strategy developed, to support short-term and long-term performance improvement and to establish an organisation that was fit to meet its regulatory outputs for AMP5 and capable of adapting to the new challenges of AMP6 and beyond. At PR14 our ambitious plan was classified as enhanced by Ofwat and acknowledged to be challenging. We have met that challenge in most areas in AMP6 to date.
3. Since then, we have experienced significant changes in the ownership and leadership of Affinity Water, including:
  - the 2012 sale of our business by Veolia Environnement to a consortium led by Morgan Stanley and Infracapital Partners;
  - their sale of the business in 2017 to a consortium of long term investors comprising DIF, Allianz Capital Partners and HICL (advised by InfraRed Capital Partners). The consortium has a long-term investment horizon, aligned with the company's community vision, and customer and stakeholder priorities;
  - the appointment in early 2013 of an independent chairman, Dr Philip Nolan, who led the Board through PR14 and the first half of AMP6, before handing over to Tony Cocker in January 2018; and
  - changes in the executive leadership of the business, with Simon Cocks serving as Chief Executive Officer between 2015 and 2018, before handing over to Pauline Walsh in May 2018.
4. Notwithstanding these changes in ownership and leadership, the vision and strategy for a community focused business have remained constant. Our owners, Chairman, CEO and this Board strongly support the vision and strategy and are looking forward to delivering further stretching performance for customers in AMP7 and to demonstrating leadership on the long-term strategic priorities for the sector.

## 11.2 Board Leadership, Governance and Transparency

### 11.2.1 Our Board of Directors

1. Our Board comprises: a non-executive chairman, who is independent; four independent non-executive directors; two executive directors; three non-executive directors who are affiliated to shareholders, therefore not independent; and one non-executive director who was formerly an executive director and is therefore not independent.

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Director	Role	Appointment Date	Independent (Y/N)
Tony Cocker	Chairman (non-executive)	15 January 2018	Y
Pauline Walsh	Chief Executive Officer	1 May 2018	N
Stuart Ledger	Chief Financial Officer	9 October 2017	N
Patrick O'D Bourke	Non-executive	24 July 2013	Y
Chris Bolt	Non-executive	26 February 2015	Y
Trevor Didcock	Non-executive	30 November 2015	Y
Susan Hooper	Non-executive	30 November 2015	Y
Jaroslava Korpanec	Non-executive	19 May 2017	N
Angela Roshier	Non-executive	19 May 2017	N
Tony Roper	Non-executive	25 July 2018	N
Simon Cocks	Non-executive	1 June 2015 (Chief Executive Officer) and 22 May 2018 (non-executive)	N

2. We believe that the Board has the appropriate balance of skills, experience, independence and knowledge to enable us to discharge effectively both our legal duties as directors and the Company's statutory and regulatory obligations. Our biographies are published on our website and in our Annual Report.
3. Our combined, extensive professional experiences in senior roles across regulated utilities and other infrastructure business, as well as in finance, customer-facing and operational roles, provide a wide range of skills and experiences to ensure a diversity of perspective that helps promote the Company's long-term success.

## 11.3 Governance and Transparency

1. We recognise the importance of demonstrating to customers, communities, regulators and other stakeholders that we operate to the highest standards of governance and transparency.
2. As required by our licence, we operate our business as if it were a separate listed company:
  - having regard to the principles of good governance of the UK Corporate Governance Code; and
  - meeting the principles and provisions of Ofwat's publication: Board leadership, transparency and governance – principles (January 2014). We support the updated principles for regulated companies and holding companies published for consultation in July 2018.

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3. Our independent directors (including the Chairman) are the largest single grouping on the Board. This is consistent with Ofwat's current and future proposed governance principles. No single director or group of directors can dominate the Board's decision-making because:
  - no investor has a majority of voting rights and none of the shareholder directors is individually able to veto board decisions; and
  - there is no arrangement between shareholders as to how to vote on certain matters; directors appointed by shareholders act independently of those appointed by the other shareholders.

### 11.3.1 Board Leadership

1. Our Board is led by our Chairman, Tony Cocker, who was appointed Chairman on 30 January 2018. He is independent and does not hold any other directorships in the Affinity Water group. The roles of Chairman and Chief Executive Officer are separate, set out in writing and agreed by the Board.
2. Pauline Walsh, as Chief Executive Officer, is responsible to the Board for managing the business from day to day in an efficient, economical and effective manner. She was appointed on 1 May 2018 and is responsible for implementing the Board's decisions and for those matters we have delegated to her.
3. Our role as a Board is to lead and control the Company and to set strategy, objectives and major plans to make the business successful. As directors, we are also responsible for ensuring that the Company has competent, prudent and effective executive management and that all necessary management systems, processes and controls are in place and are working effectively.
4. We normally meet monthly as a Board and we have reserved to ourselves certain key matters such as strategy and the approval of key regulatory submissions such as the Business Plan, Water Resources Management Plan and our annual reporting.
5. Our Board is made up of directors with key relevant skills and experiences, who can challenge and support the executive management team and focus on customer, operational, regulatory and sector priorities. We wish to make some further improvements, including appointing a Senior Independent Non-Executive Director and ensuring that at least half our Board (excluding the Chairman) are independent. We plan to undertake periodic externally-facilitated board effectiveness reviews to help us meet customer, regulatory and sector priorities.

### 11.3.2 Independence

1. We consider Tony Cocker, Patrick O'D Bourke, Chris Bolt, Trevor Didcock and Susan Hooper to be independent, having taken account of the criteria for determining independence in the UK Corporate Governance Code.
2. Each director understands his or her duty to exercise independent judgment and, in discharging his or her duties, to have regard to customers, the long-term consequences of decisions and the Company maintaining a reputation for high standards of conduct.

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### 11.3.3 Conflicts of Interest

1. We have adopted a policy for the declaration and management of conflicts of interest. Where potential conflict exists between the interests of the Company as a water undertaker and those of other companies in the group, each director is obliged to have regard exclusively to the interests of the Company as a water undertaker.
2. As Directors, we do not vote on (nor are counted in a quorum for) any resolution relating to a proposed or existing contract or arrangement or any other proposal (including dividends) in which we have an interest by virtue of other directorships.

### 11.3.4 Board Committees

1. We have established an Audit Committee, Remuneration Committee, Nomination Committee and Community Committee to help us discharge our responsibilities as a Board. Membership is shown in the table below.

Audit Committee	Remuneration Committee	Nomination Committee	Community Committee
Patrick O'D Bourke (Chair)	Susan Hooper (Chair)	Tony Cocker (Chair)	Tony Cocker (Chair)
Chris Bolt	Chris Bolt	Patrick O'D Bourke	Trevor Didcock
Trevor Didcock	Tony Cocker	Susan Hooper	Susan Hooper
Angela Roshier	Angela Roshier	Jaroslava Korpanec	Pauline Walsh
Tony Roper	Jaroslava Korpanec	Tony Roper	Simon Cocks
			Angela Roshier

2. Membership of the Audit Committee, Remuneration Committee and Nomination Committee meets Ofwat's principle for directors that the Board considers to be independent to be the majority.

## 11.4 Our Owners

### 11.4.1 Ownership

1. We recognise it is essential for trust and confidence that we are transparent with our customers, communities and stakeholders about the ownership of our business. In May 2017, the Affinity Water group was acquired by a consortium of long-term investors in infrastructure and regulated utilities comprising DIF, Allianz Capital Partners and HICL Infrastructure Company Limited (advised by InfraRed Capital Partners Limited).
2. The consortium makes its investment through Daiwater Investment Limited, Affinity Water's holding company. The effective equity interests in the Affinity Water group are shown in the table below.

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Allianz Capital Partners on behalf of the Allianz Group	36.6%
DIF	26.8%
HICL Infrastructure Company Limited (advised by InfraRed Capital Partners Limited)	33.2%
Group of co-investors comprising UK local authority pension funds (advised by InfraRed Capital Partners Limited)	3.4%

- Our owners' groups are global fund managers and insurance companies with strong track records of investing in and managing public sector and regulated projects. Each of our owners' groups invest globally in the equity of essential, long-lived and capital-intensive infrastructure assets that meet the world's utility, transport and energy needs.
- ACP is Allianz's in-house asset manager for alternative investments of the Allianz Group, focusing on investments across infrastructure, renewables and private equity. It is a long-term, buy-and-hold investor seeking to generate returns through cash yields rather than exits. Its investment strategy focuses on investments that provide essential services to the public. ACP manages EUR 6.9bn of infrastructure assets across the gas, electricity, transportation and environmental sectors, including the Thames Tideway Tunnel, Cadent and Porterbrook in the UK."
- DIF has invested in and manages more than 150 infrastructure and renewable energy projects. In the UK, DIF has invested in and manages 32 infrastructure projects, regulated assets and renewable energy projects. The projects include investments in the following sectors: waste water, transport, defence, street lighting, accommodation, healthcare, education, leisure, solar and wind. DIF has invested in a number of major infrastructure projects, which include investments in Thames Tideway Tunnel and Thyssengas, a regulated gas pipeline in Germany.
- HICL was the first UK-listed infrastructure investment company. Its original portfolio of 15 predominantly-UK projects has increased to 115 investments across seven international markets. HICL and its project supply chain contractors work to deliver successful projects for public sector clients across six sectors. HICL is advised by InfraRed Capital Partners which operates worldwide, managing investment across the spectrum from financing and building new 'greenfield' infrastructure to buying and managing 'brownfield' operational infrastructure assets.

#### 11.4.2 Decision-making and Shareholder Reserved Matters

- We have regular interaction with our shareholders to appraise them of the performance of the business and any key decisions we need to make. Our shareholders respect the primacy of the Board and the requirements of Conditions F, K and P of our Instrument of Appointment regarding the ring-fencing of our business.
- Our shareholders have asked that we seek their approval as shareholders for a limited number of strategic matters, consistent with those matters reserved for shareholder approval in a company whose equity shares are listed on the London Stock Exchange. These matters relate to our capital structure and financing arrangements, acquisitions and disposals, business lines, directors' remuneration, material commitments, litigation and regulatory submissions, appointment of auditors, accounting and tax matters and insolvency. Further detail is set out in our publication: *Engaging with our Shareholders*,

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published on our website. We discuss these matters with our shareholders when they arise, and would seek their approval where this is required by company law.

### 11.4.3 Group Structure

1. The structure of the Affinity Water group of companies together with an explanation of the purpose of each company are set out in our Annual Report and published on our website. We recognise that, following our change of ownership, the structure is more complex than is now necessary and we are taking steps to simplify it. We will report our progress on simplification in our next Annual Report.
2. All companies in the Affinity Water group are incorporated and registered in England and Wales, except for Affinity Water Programme Finance Limited, which is incorporated in the Cayman Islands. It should be noted that:
  - Affinity Water Programme Finance Limited raises money to finance our investments and operations through the issue of bonds listed on the London Stock Exchange and is resident in the UK for tax purposes. Its incorporation outside the UK brings no tax benefit and UK tax is not avoided
  - We consider it in the interests of customers and wider stakeholders to remove this entity from our financing structure. On 23 August 2018, we announced our intention to replace Affinity Water Programme Finance Limited with a UK issuer and are actively seeking to do so by the end of 2018.

## 11.5 Taking Accountability for AMP6 Performance

1. At PR14, we set ourselves very challenging performance commitments for AMP6 to meet the expectations of our customers, regulators and other stakeholders with respect to the service we provide. We have closely monitored performance against these commitments and have performed well overall to date in meeting their expectations. Our AMP6 plan included some of the biggest reductions in leakage, demand and water abstraction of any company in the industry and we have met these performance commitments through the first three years of AMP6.
2. We recognise that our performance on supply interruptions greater than 12 hours has fallen short of the commitment we made and we continue to challenge and monitor the robustness of management's plans to meet this performance commitment for the remainder of AMP6.
3. We further recognise that we have continued to rank in the lower quartile for performance against the Service Incentive Mechanism. We have taken a close interest in the customer experience improvement plans developed by management and we continue to challenge them to make further improvements.
4. We continue to monitor the progress of the business in meeting all our performance commitments and our legal and regulatory obligations, and we oversee and challenge management's plans to achieve them.
5. This active oversight of performance, supported by third party assurance, gives us confidence that the business is meeting and will meet the targets set. Accordingly, we confirm the accuracy and completeness of our AMP6 performance to date as set out in this Business Plan.

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## 11.6 Leading the Development of this Business Plan

### 11.6.1 Leadership and Business Planning

1. We are, and have been, fully engaged in the design, development and preparation of this Business Plan. We own the strategy and our regular formal meetings as a Board have allowed us to lead and provide strategic direction to management, to scrutinise and inform their proposals and to hear the voice of our customers and stakeholders through our engagement programme. We have supplemented our regular meetings with a number of PR19-specific Board meetings and also established a regulatory working group, comprising executives, non-executive and independent non-executive directors to support our oversight, scrutiny and challenge of this Business Plan.
2. Our Audit Committee, Community Committee and Remuneration Committee, have also taken leading roles in the development of this Plan. In particular our Audit Committee has:
  - scrutinised and informed the scope of the PR19 assurance programme and approved the appointment of PricewaterhouseCoopers LLP and Atkins Limited to provide strategic and technical assurance as well as assurance of our data tables and commentaries submissions;
  - reviewed, challenged and approved the methodology for assuring the accuracy and quality of our data tables and commentaries submissions;
  - reviewed and challenged the process for assuring the accuracy and quality of the PR14 reconciliation data tables and commentaries and approved the submission;
  - reviewed third party assurance reports on the 3 September data tables and commentaries provided by PricewaterhouseCoopers LLP, Atkins Limited and ChandlerKBS and a report from Frontier Economics Limited providing assurance on the Outcome Delivery Incentives; and
  - reviewed and approved the Water Industry Strategic Environmental Requirements (WISER) submission to the Environment Agency.
3. Our **Community Committee** has reviewed the progress we have made in AMP6 against the community commitments in our PR14 Business Plan and has reviewed and influenced the community strategy we have set for AMP7 within this Business Plan.
4. Our **Remuneration Committee** has comprehensively overhauled our executive remuneration policy to equally incentivise delivery of stretching performance for customers and stretching financial performance, and to provide safeguards where stretching customer measures are not met. As a Board, we have considered the policy and are satisfied it appropriately links performance related executive pay with stretching delivery for customers.
5. The table below shows the meetings from July 2017 onwards where the strategy for and development of this Business Plan were significant or, in most cases, the sole agenda item.

Board	Audit Committee	Remuneration Committee	Community Committee	Regulatory Working Group
8	3	1	2	15

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### 11.6.2 Assurance

1. We have overseen the assurance programme for this Business Plan developed by management and supported by external specialist providers. We describe more fully the specific governance and assurance framework established for the preparation of this Business Plan in Appendix 11. Our approach to assurance of this Business Plan has been consistent with our latest published Assurance Plan.
2. We have derived assurance of the quality and accuracy of the data in this Business Plan from the “three lines of defence” model. Subject to any limitations identified in the data table commentaries and third-party assurance reports, we are satisfied as to the accuracy, completeness and quality of the data, estimates and forecasts provided in our Business Plan.
3. Pricewaterhouse Coopers LLP was retained to provide strategic assurance of our Business Plan and have reported to us their findings under their strategic assessment framework. We have also obtained technical assurance from Atkins Limited with respect to our investment programme, performance commitments and outcome delivery incentives. Frontier Economics Limited has provided assurance with respect to our outcome delivery incentives. We have carefully considered their respective findings and, subject to any limitations in their reports, we are satisfied that: this Plan is of high quality, stretching and deliverable; our investment programme has been prepared appropriately and is aligned to our outcomes and performance commitments; and that our outcome delivery incentives have been appropriately set.

### 11.6.3 Compliance with statutory and licence obligations

1. We have considered the Company’s key statutory and licence obligations to assure ourselves that the Business Plan will enable those obligations to be met in the short and long term, Appendix 11 shows how our key statutory obligations link to our outcomes and performance commitments and the *Atkins Limited PR19 Assurance Report* sets out how the investment programme links to our performance commitments. We are satisfied there is a clear line of sight from our statutory obligations, through our outcomes, to our performance commitments and investment programme.
2. Our Audit Committee reviewed the report to the Environment Agency and Natural England on the actions and investments within our Business Plan to meet the Water Industry Strategic Environmental Requirements (WISER), providing assurance that our Business Plan includes the investments for the delivery of “green” and “amber” schemes in the Water Industry National Environment Programme (WINEP3).

### 11.6.4 Alignment with our water resources management plan

1. As a Board, we recognise the need to provide certainty that this Business Plan includes the investments in our revised draft water resources management plan that we need to make in AMP7. Our Business Plan investment programme comprises:
  - the investments included in our draft water resources management plan “Alternative Plan”, consulted upon in March 2018, and for which there was clear support from consultees; and
  - two further investments relating to strategic supply transfer schemes and investment in preparing for delivery of the Upper Thames Reservoir (brought forward from 2039 to 2037) where representations have identified clear customer and stakeholder support for this further investment.

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2. We are proposing to undertake re-consultation to present to stakeholders a consolidated revised water resources management plan reflecting the Alternative Plan consulted upon and these two further investments included in response to representations received (our revised draft water resources management plan or “rdWRMP”).
3. We can therefore provide assurance that our Business Plan is aligned with our rdWRMP as all of the AMP7 investment in our rdWRMP was already included in the Alternative Plan, or has been added to the rdWRMP in response to representations received during the statutory consultation. Accordingly, we do not envisage there will be any change to the investment programme included in the Business Plan for AMP7.

### 11.6.5 Customer engagement

1. We reviewed and challenged the strategy for customer engagement at the outset of the engagement programme and have been regularly appraised by management of customer feedback, and how this has informed our Plan. We have met as a Board with the Chair of our Customer Challenge Group, Teresa Perchard, on a number of occasions and discussed the CCG’s assessment of our programme through its challenge framework. A number of us have attended CCG meetings and observed customer engagement events which have helped us to understand better what matters to customers. On the basis of these activities, we can be satisfied that the Plan has been informed by customer engagement.

### 11.6.6 Affordability and customers in vulnerable circumstances

1. We know that bills need to be affordable for our customers in AMP7 and the longer term. As a Board, we have scrutinised management’s investment and expenditure proposals for AMP7 and set our business a challenging efficiency target to minimise the increase in bills during AMP7. Our financial resilience has allowed us to reduce the pay as you go ratio in AMP7 to reduce the impact of our ambitious Plan in AMP7, while maintaining a fair balance with affordability in the longer term.
2. We are satisfied from research that the small increase in average bills over AMP7 will represent a declining share of our customers’ projected disposable income (allowing for housing costs) over that period. We are assured that there is a high level of customer acceptability for the increase. We also note that, before inflation, average bills in 2024/25 will be lower than average bills in 2014/15.
3. For those of our customers least able to pay, we are satisfied that the planned 25% increase in the number of customers benefiting from our social tariff by the end of AMP7, together with the customer assistance fund we are establishing, represent appropriate assistance for those struggling, or at risk of struggling, to pay their bills.
4. We also know that we need to provide a fully inclusive service which enables customers in vulnerable circumstances to experience a smooth and simple service from us, and enables us to help customers with vulnerabilities if there are issues with water supply (e.g. in cases of interruption to service). We are satisfied that our proposed performance commitments and plans for vulnerable customer support (including our Priority Services Register) will achieve this.

### 11.6.7 Outcomes, Performance Commitments and ODIs

1. Throughout the development of this Business Plan, we have kept ourselves appraised of customers’ views and priorities to ensure that our Plan is informed by those views and

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priorities and will deliver what customers most want. We are clear that our package of outcomes and performance commitments and outcome delivery incentives reflects customer preferences and is stretching. We have reviewed third party assurance of our outcome delivery incentives and are satisfied that the package falls within the RORE range set by Ofwat.

2. As a Board, we will monitor delivery of our performance commitments through our regular meetings and challenge management to ensure that our delivery plans are the best they can be. We will take ownership for reporting how well we are doing, building on the approach we have taken in AMP6 to report performance regularly at a community level.
3. We recognise it is essential that the information we report on our performance commitments is reliable and robust and, in the case of the common performance commitments, prepared on a consistent basis with other companies. Our Audit Committee will continue to take a leading role in assuring that this is the case.

### 11.6.8 Resilience

1. We have reviewed an independent, robust and systematic assessment of the company's systems and services from the perspective of operational, corporate and financial resilience. We have noted the strengths identified by the assessment in relation to: governance and assurance processes; risk management; business continuity planning; our collaborative and long-term approach to water resources management planning; and the robust stress and scenario tests we undertake to assess financial viability.
2. We have discussed opportunities for enhancement identified by the assessment with respect to: development of long-term strategic direction in the face of resilience challenges; further enhancing our community-focused approach to deliver further resilience for the company, customers and the environment; embedding our data strategy to inform short-term emergency decisions and strategic financial and investment planning for the longer term.
3. In addition to the independent assessment, we have as a Board, reviewed the financial resilience of the business and appraised ourselves of the actions planned for the remainder of AMP6 and AMP7 to enhance resilience in the areas of long term financial planning, ongoing financial reporting, maintaining our credit rating, operating a robust and efficient financing strategy, long term financial viability and our defined benefit pension scheme.
4. Through these steps we have been able to satisfy ourselves that the activities and interventions in our Business Plan with respect to operational, corporate and financial resilience will deliver long term resilience in customers' long-term interests.

### 11.6.9 Cost Assessment

1. As a Board overall, and through our Audit Committee, we have reviewed the expenditure forecasts included in the Business Plan to satisfy ourselves that they are robust, reliable and efficient, taking account of benchmarked cost data. In this regard, we have taken into account the Atkins Limited PR19 Assurance Report and benchmarking information provided by Oxera. We have challenged management about their plans to achieve the operating and capital cost efficiencies within the Business Plan so that we are assured they are both stretching and deliverable.

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2. We have reviewed how the wholesale investment programme has been developed and the process by which options have been assessed. We have reviewed the scope and deliverability of the investment programme and, where uncertainties in scope or cost have been identified by our assurance providers, we have satisfied ourselves that those risks and uncertainties are appropriate and that the relevant investment remains the best one for customers.

#### 11.6.10 Innovation and markets

1. We are committed to the Company's use of markets where they produce better outcomes for customers and the environment. Our Bid Assessment Framework makes clear our ambition to be at the frontier in promoting innovative methods and models to drive efficiency in the provision of services relating to water resources, demand management and leakage services in the increasingly water scarce south-east of England. It includes an illustrative example of how we could use the non-household retail market to drive lower consumption, which could in turn optimise water trading arrangements and, because of the nationwide reach of retailers, could lead to the "cascading" of water from those areas that have a surplus of water to those in deficit.

#### 11.6.11 Risk

1. We have considered carefully whether our Business Plan represents an appropriate balance of risk between our investors and customers. We acknowledge that the regulatory framework provides a number of significant protections for companies with respect to revenue and costs. As a Board, we have taken steps to appraise ourselves of the risks associated with delivering our Plan and reviewed and challenged the work undertaken by management to mitigate those risks. We are satisfied that management's risk and mitigation plans are appropriate.
2. We are clear that delivery of the Business Plan will be stretching, with significant cost efficiencies needing to be achieved to facilitate a fair return to our investors. We have identified two specific risks (potential investment in treatment for metaldehyde and a potential sustainability reduction in our Brett Region) where we consider uncertainty is such that additional protection is needed to maintain an appropriate balance between customers and investors. Our Business Plan includes bespoke uncertainty mechanisms for these two risks, such that there would be an adjustment made at PR24 in respect of costs incurred by the Company during AMP7. We are satisfied that management has taken all appropriate action to mitigate these risks and has considered a range of approaches in respect of the potential impacts of these uncertainties.

#### 11.6.12 Financeability

1. As a Board, we have taken steps to satisfy ourselves that the Plan is financeable on both a notional and actual capital structure basis and that the plan protects customers in the short and long term. Through our Audit Committee, and as a Board, we monitor the financeability of the Company on an ongoing basis.
2. For this Business Plan, we have reviewed the resilience of the appointed business to the eight stress tests set within the PR19 methodology and are satisfied that, even if no remedial actions were taken, the appointed business remains viable for each of the stress scenarios.
3. We have also reviewed the resilience of the Company over AMP7 to the stress tests used for financial reporting and are satisfied that Company remains viable for each of these

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stress scenarios. Our Audit Committee determines appropriate stress scenarios for testing.

### 11.6.13 Dividend Policy

1. We have approved a Dividend Policy that provides for dividends commensurate with long-term returns and the performance of the business. It allows shareholders to earn an appropriate return from their investment, whilst not impairing the Company's longer term financeability, and takes into account commitments to our stakeholders and customers. Under the policy, we will also test any proposed dividend payments against legal and regulatory requirements and restrictions, including the management of economic risk and compliance with financial covenants.

## 11.7 Summary

1. We have reviewed successive drafts of this Business Plan to ensure that it effectively conveys the challenges our business faces, how we are placing customers at the heart of our future plans through our outcomes, performance commitments and outcome delivery incentives and how it provides resilience in the round and affordable bills for customers today, balanced with an appropriate level of investment for the future. We have challenged management's proposals and, where appropriate, mandated changes to those proposals.
2. We believe that this combination of personal and collective Board leadership and the comprehensive external assurance programme we have instigated demonstrates our commitment to producing a well evidenced Business Plan of the highest quality. We are satisfied that:
  - all the elements of this Business Plan add up to a business plan that is of high quality, stretching and deliverable;
  - the overall strategy for data assurance and governance processes has delivered data which is high quality;
  - this Business Plan will allow the Company to meet its statutory and licence obligations, now and in the future, taking account of the UK Government's strategic policy statement;
  - this Business Plan will deliver operational, financial and corporate resilience over AMP7 and the long term through our governance and assurance processes, taking account of our track record of performance; and
  - this Business Plan will enable customers' trust and confidence through high levels of transparency and engagement on issues such as governance, transparency and the resilience of our corporate and financial structure.

Chapter 1: About Us	Chapter 2: Our Track Record	Chapter 3: Listening to Customers & Stakeholders	Chapter 4: Our Outcomes & Performance Commitments	Chapter 5: Managing Water Resources in the Long Term	Chapter 6: Delivering our Investment Plan	Chapter 7: Delivering Great Customer Service	Chapter 8: Developing Our Community Approach	Chapter 9: Ensuring Long Term Resilience	Chapter 10: Ensuring Affordability & Financeability	Chapter 11: Board Assurance
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**Tony Cocker**  
Chairman



**Pauline Walsh**  
Chief Executive Officer



**Stuart Ledger**  
Chief Financial Officer



**Chris Bolt**  
Independent non-executive director



**Patrick O'D Bourke**  
Independent non-executive director



**Trevor Didcock**  
Independent non-executive director



**Susan Hooper**  
Independent non-executive director



**Simon Cocks**  
Non-executive director



**Jaroslava Korpanec**  
Non-executive director



**Tony Roper**  
Non-executive director



**Angela Roshier**  
Non-executive director

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