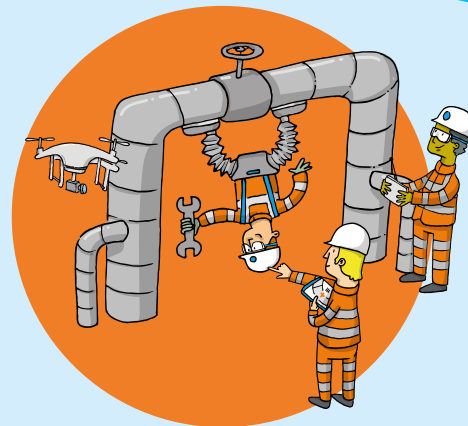
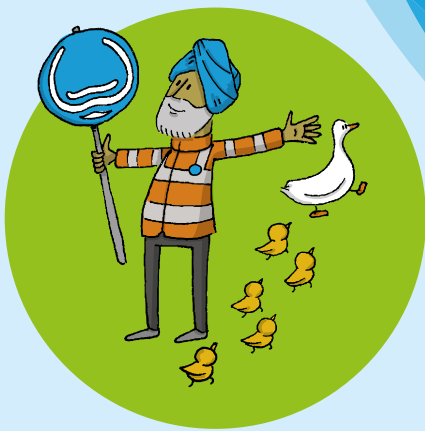




HERE FOR YOU



Our Business Plan 2020–2025
Summary version



Thames Water staff volunteers working on a river restoration project on the Kennet near Marlborough, Wiltshire.

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Foreword by Steve Robertson



I first became a customer of Thames Water in 1981. When I was lucky enough to be offered the opportunity to lead this amazing business I didn't hesitate. The vital relationship we have with our customers, the critical role that we play in our local communities and supporting our capital city made it an irresistible opportunity and challenge.

Since September 2016 I have got to know our customers and my teammates at Thames and if there is one thing I've learned it's that delivering clean healthy water and safely handling the waste we all produce every day is a lot more complicated than it sounds. When it works it's often an invisible but essential service at the heart of people's daily lives. However if something goes wrong the implications for individuals and families can be devastating. When we have made mistakes we have done our very best to learn from them. The changes that we have made as a result point towards a very different future for us, our customers and the communities we serve.

The relationship we have with our customers and the environment is intimate – the weather, what goes down our drains and toilets, how land is used, how rivers are cared for, how we look after our people, equipment and pipes is all connected. I believe that to look after our customers, their children and their children's children we need to understand and nurture those relationships. Everyone at Thames Water cares deeply about the service we deliver for our customers, and the impact we have on the environment. This plan reflects that.

It is built to meet the needs of our customers now and in the future. It is designed to make a significant improvement in our ability to insulate our customers from the impact of increasingly volatile weather while supporting the economic and population growth of our region. In the last year London surpassed its highest ever population and the Thames Valley is a focus for evermore ambitious housing development plans.

To support all of this we need to increase investment, improve efficiency and make a step change in service. We will also continue to strengthen our relationship with our stakeholders and our regulators who play a vital role in shaping the future of our industry.

At the heart of this plan is a balance between making our service affordable for all, improving the service we deliver by increasing investment, and strengthening our financial resilience. It is a balance that has been tested with and supported by our customers. It is fully supported by our Board and our owners. They have played a key role in ensuring that our plan is not only stretching and efficient but that it looks to the future as well as the needs of today. They have prioritised the long term health of Thames Water and the needs of our customers and region above short term financial returns. This plan has been built to strengthen the long term bond between the needs of our customers, the interests of our investors and the ambition of everyone who works at Thames Water – a bond that will have to be strong as we face the challenges of the future together. It is a personal commitment from everyone at Thames Water to everyone of our customers that we will be 'Here for You' in a Changing World.

Steve Robertson
Chief Executive

DELIVERING OUR VISION: 2020–2025

Average bills in real-terms

FLAT

Customers on our **priority services register**

400,000

Supporting families who find it **hard to pay**

200,000

Reduction in **leakage**

15%

Reduction in **pollutions**

18%

Extra spend on **improving resilience**

£2.1 billion

Increase in **financial resilience**
– equity buffer in 2025

£4.7 billion

Operational unit cost reduction

13.6%

**Homes powered with the
green energy** we generate

115,000

All costs are quoted at 17/18 prices unless stated otherwise.

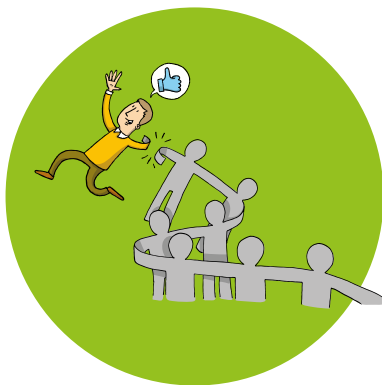
Our vision – here for you in a changing world

Our vision – **Here for you, in a changing world** – is our guiding principle – our “North Star”.

It means understanding our 15 million customers’ needs and devoting the resources and capability of our entire business, and that of our partners,

to deliver for them – individually and collectively – now and as their needs evolve in the future.

It is our job to ensure the service we provide – a service that is essential to society – is resilient to external pressures and always available to our customers, despite the challenges of an ever-changing world. It also needs to be provided at as low a cost to our customers as possible.



Understanding our customers as individuals, and what our service means to them, is a basic requirement to ensure we support them in the right way when things go wrong. We will engage with them in the way that suits them whenever we communicate, and build the long-term relationship that is essential to ensure their participation in the way we prioritise our business, look after the environment and meet their ongoing needs.



The relationship with our customers is intimate. Two thirds of their body is made up of our product. Ensuring that they have a pure and reliable supply of water and that wastewater is dealt with safely and effectively, is the cornerstone of our relationship. It is our job to make sure we are there for them 24 hours a day, 365 days a year and look after their needs and those of their children.



Our region is growing quickly. To support the growth in the economy and population, we need to make sure that we invest in new capacity, whilst looking after our existing assets. We will engage proactively with our partners in local government, other water companies and local communities in order to understand and anticipate their emerging needs, and what we need to do to satisfy them.



Looking after the environment and being its strong advocate is essential for the long term health of our business and a very important priority for our customers. Avoiding pollutions, generating green energy and engaging local communities and environmental groups all contribute to bringing this to life!



The climate is changing and we need to insulate our customers from its effects, both from short term volatility – storms, cold snaps and hot, dry spells – and long term trends that threaten the water supply or raise the spectre of drought.

The key attributes of our plan

To be true to our vision, and ensure our plan delivers for our customers, we have incorporated the following characteristics:



Open and transparent

We recognise the responsibility of being a monopoly provider of essential services and the need to build trust with those who rely on us – our customers and stakeholders. They need to understand what we're doing and why.



Efficient

We spend money on behalf of our customers. It is essential we spend it wisely to deliver value. This supports delivering the service our customers need, and reasonable returns to our investors.



Promote fairness

Access to water and waste water services is a basic human right. Our region contains ten of the most deprived boroughs and some of the most affluent areas in the country, and we know affordability is one of our customers' biggest concerns. We therefore need to agree with our customers the right balance between affordability, service delivery, investment, and investor returns.



Resilient

The increased volatility of our changing world demands that we improve the resilience of our business – this includes asset, operational, people and financial resilience. Our customers expect consistent delivery of our core services in an environmentally responsible way, whatever the external circumstances.



Innovative

To be more resilient and efficient in the face of increasing volatility it is essential we innovate with purpose, focusing on the most important challenges facing our business that will make a meaningful difference to our customers' lives. We will continue to collaborate with other water companies, suppliers, universities and other utilities to ensure that we innovate based on global best practice.

Putting customers at the heart of our plan

Our ambition is to put our customers at the heart of our decision-making. We developed our plan based on the insights of nearly one million customers, who took part in a wide-ranging and detailed programme of research and engagement. More than 150 separate pieces of insight supplemented the feedback customers give us every day.

The programme took in domestic and business customers as well as house builders. We engaged across all age groups and with those in vulnerable circumstances. We have also worked with charities, advocacy groups and local communities, to make sure our plans reflect our customers' varied needs and circumstances.

Customers have helped shape the 53 Performance Commitments in our Plan so they mirror the issues that matter to them. The majority of the Outcome Delivery Incentives used to incentivise successful delivery of our Plan are financial, linking our performance with the bills our customers pay.

We have already introduced a link between our performance and executive pay. Our Chief Executive Steve Robertson has agreed not to take any bonus payments until 2020, as a personal pledge to improving the performance of the business, and payments will only be made if we meet challenging commitments on the issues that matter most to customers.

In implementing our Plan we will continue to collaborate with customers. We will deliver a step change in how we engage and involve them in the delivery of the service, for example with programmes to conserve water and prevent sewer blockages.

Our Plan has also been reviewed in detail by our independent and active Customer Challenge Group, which scrutinises the quality of our customer engagement. Members have met on 70 occasions from 2015 – 2018, covering a wide range of issues and challenging us to make sure that our Plan meets our customers' needs, provides value for money and balances appropriate trade-offs.

To meet customers' needs, we plan to spend £11.7bn in the period 2020-25 on operating and investing in our business*. This is the largest ever programme of expenditure in Thames Water's infrastructure, and a significant increase compared to 2015-20. Low financing costs, and an efficient and innovative approach to delivery, will help make sure we can deliver this programme with no real terms increase in the average customer bill.

* Regulated expenditure (totex).

We've created
our plan with
the insights of
nearly one million
customers.



What our customers want

The first phase of engagement enabled us to establish five customer outcomes. These were:



Outcome: A clear plan for the future

Our customers said they want us to:

Ensure long-term resilience

Ensure there is enough water available in the future

Ensure the wastewater system can cope in the future

Protect the service against future hazards



Outcome: Personal, proactive service

Our customers said they want us to:

Treat customers as individuals

Resolve issues quickly and efficiently

Communicate clearly

Pre-empt customers' needs



Outcome: A safe and dependable waste water service

Our customers said they want us to:

Maintain the system to ensure reliability

Reduce the incidence of sewer flooding

Support customers who suffer sewer flooding

Help with blockages in customers' pipes



Outcome: A safe and dependable water service

Our customers said they want us to:

Provide high quality water that is safe to drink

Provide a constant water supply

Help with leaks on customers' pipes

Fix leaks (they are wasteful and suggest poor maintenance)



Outcome: Responsible Company

Our customers said they want us to:

Support low income customers

Meet the needs of customers in vulnerable circumstances

Improve and protect the quality of rivers

An ethical and transparent company

Building a strategy to deliver our vision

At the heart of our plan a balance has been struck between affordability, service levels, investment and financial resilience.

Our customers have endorsed our plan to:



Hold bills flat on average in real terms for the duration of AMP7.



Provide significantly more support for customers in vulnerable circumstances – as well increasing our priority services register to 400,000, we will also increase the number of households receiving financial support to at least 200,000.



Invest significantly in improving outcomes and delivering a more resilient service – we propose to invest £2.1 billion between 2020–25 to improve the resilience of our infrastructure.



Make a meaningful improvement in financial resilience and reduction in gearing – we propose to reduce gearing to 76.2% and increase our equity buffer to £4.7 billion.

Our priorities are:



Deliver brilliant customer engagement to create lifelong advocacy

As active participants in the water cycle, it is essential our customers feel we are engaging with them in the right way, on their terms, and that we're making a positive connection in every interaction. If we do this brilliantly we create lifelong advocates.



Invest in resilient systems and assets

Customers have told us they expect us to be more resilient in the future. Increasing and sustaining resilience requires us to take a long-term perspective on investment and operational performance across all cycles of the business.



Use data from customers, operations and the environment to make better decisions

To make smarter business decisions and deliver better customer outcomes, we will strengthen the principle of turning data into information and insight, to drive our actions, across all areas of our business. The core of this approach is to understand the relationships between our customers, the environment and our business, how they affect each other and therefore what we need to do to successfully deliver the wishes of our customers.



Protect and enhance the environment

We rely heavily on the environment for the provision of our services. We are passionate about being both responsible custodians of the water cycle and the environment.



Build a collaborative and capable team, dedicated to serving our customers

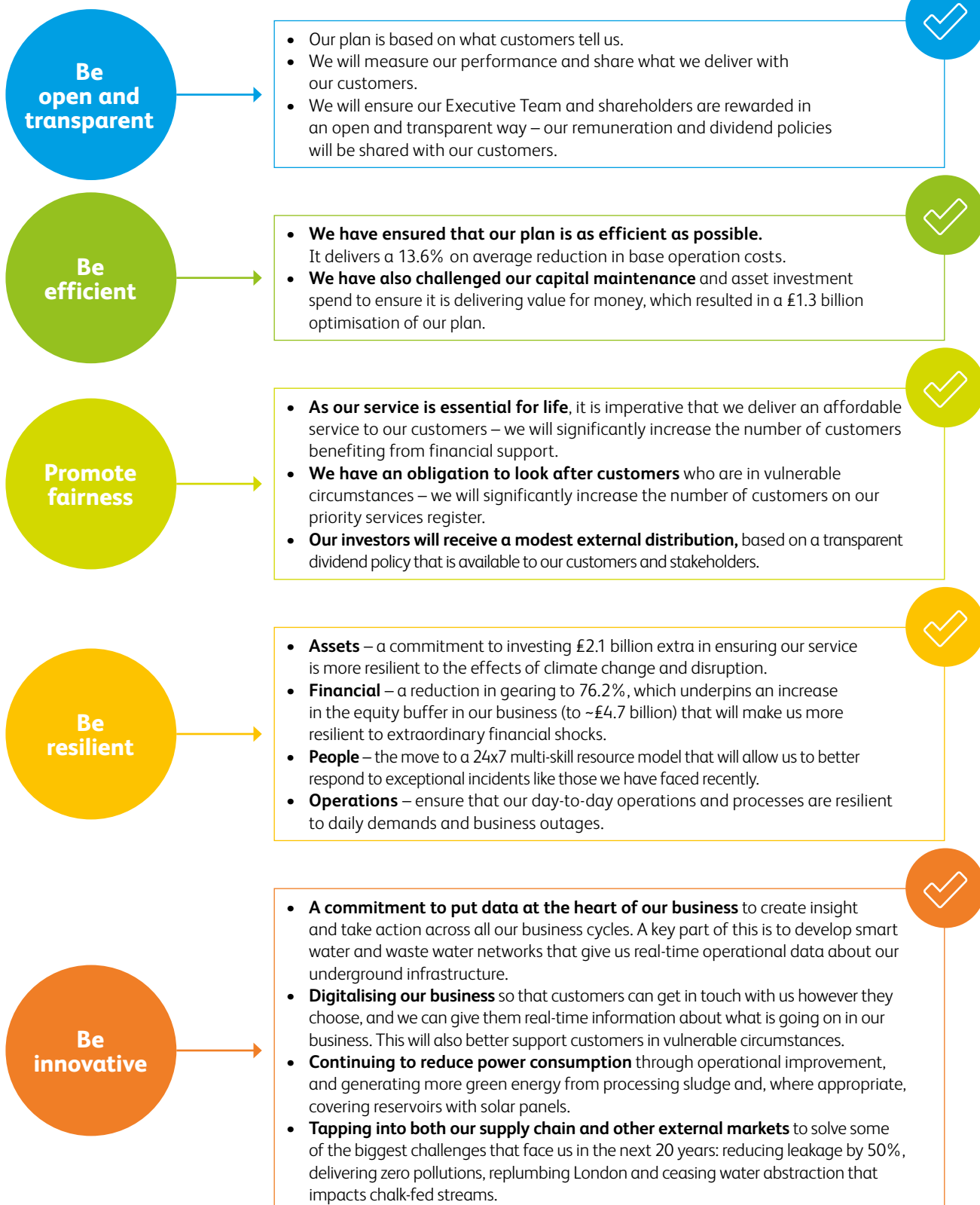
To deliver our vision for our customers, there are critical skillsets and characteristics we need to nurture and strengthen within our teams. We also need to work collaboratively with our supply partners and ensure alignment with our customer outcomes.

How our plan delivers our vision

The **way in which we deliver** our strategic priorities is an essential part of making our vision a reality.

Our vision compels us to:

How our plan responds:



Deliver brilliant customer engagement to create lifelong advocacy

Create a better customer and service experience

As well as providing a far greater level of support for those with particular needs, our Plan will improve the service all our customers receive. This includes:

- Making it easier for customers to get in touch in a way that suits them. This includes building a new customer contact system that will instantly recognise individual customers, and provide the member of staff helping them with historical information, and real-time data on any incidents affecting them
 - Proactively providing customers with more up-to-date information. This includes, for example, when an engineer will arrive; and letting customers know about roadworks and water supply interruptions that might affect them
 - Making sure our water quality remains among the highest in the world, with a target of zero water quality sample failures. This includes accelerating lead water pipe replacement from 36,000 pipes during the period 2015–2020 to 54,000 in 2020–2025. Our Plan commits to removing all customer-side lead ‘communication’ pipes from primary schools and nurseries
- We will also:
 - Install new treatment processes and telemetry equipment at water treatment works;
 - Complete a programme to flush strategic water mains to make sure we meet standards for levels of iron; and
 - Extend catchment management activities to protect drinking water sources from the agricultural pesticide metaldehyde, and install metaldehyde sensors in high-risk areas
 - Implementing new technology that will allow us to minimise bursts and disruption on our water network; and prevent blockages, floods and pollution incidents on our waste networks. When something does go wrong, we will use technology to ensure that we can fix a problem first time, whilst providing real time updates to customers
 - Continuing to roll out our smart metering programme which will help to reduce demand for water and give customers control over their bills, alongside our Smarter Home Visits, which include plumber audits, tailored advice and water efficient devices, fitted for free

To deliver our vision – ‘Here for You’ – we will put customers at the heart of our business. A big part of this is to connect what our customers tell us into the decision-making fabric of our company. We will roll out a Net Promoter system where we will listen, learn from, and act on all customer feedback across our entire organisation. As part of this every employee will be measured on their ability to create lifelong customer advocacy.



Walthamstow
Wetlands, Europe's
biggest urban wetland,
is an oasis of calm,
green space 15 minutes
from central London.

Engaging with our customers as participants

Engaging with local communities

Engaging customers requires us to think and act locally. In addition to engagement with a wider range of stakeholders, we maintain contact on local issues with the 145 MPs and 105 Local Authorities in our area, and more than 600 local groups and organisations.

This helps us to promote a better local understanding of our business and the water cycle that underpins it, bringing important benefits, including:

- Identifying opportunities for partnership working
- Using customers' valuable knowledge about their neighbourhood to support our work in their area
- The opportunity to explain how customers' choices affect our ability to deliver their service

Educating the next generation of our customers

Our ambition is to reach every child in our area during the period of our Plan, through:

- Visits by local schools to the seven education centres on our sites
- Outreach visits by staff to schools, using our sites and projects to boost understanding
- A new mobile classroom that will bring our operational business to life
- An expanded digital outreach programme, linked to the national curriculum
- Innovative programmes delivered by partners, like the award-winning Sustainable Drainage for Schools

Promoting increased access to our sites

Many of our operational sites provide a valuable natural resource of green space, close to centres of population, with opportunities to boost local health and well-being. We want to provide safe, managed access wherever possible. This will include:

- Continuing to develop our flagship site at Walthamstow Wetlands, east London, where we are expecting in excess of 3 million visits
- Developing a visitors centre at Farmoor reservoir, Oxford, in partnership with Bucks, Berks and Oxon Wildlife Trust
- Actively promoting our heritage sites, including increased access to Abbey Mills pumping station in east London, and other historic sites
- Providing increased opportunities for communities to visit local operational sites, using an 'Open House' format, together with angling tuition, sporting events and special interest visits

Enhancing biodiversity

Many of our operational sites provide a haven for nature. Our biodiversity performance commitment sets a stretching target of a 5% net biodiversity gain at our 253 operational sites assessed as being of biodiversity interest. This will improve an area of land of around 3,000 hectares (more than two and a half times the size of Heathrow Airport).

In addition:

- We will continue to manage, improve and promote our 28 nature reserves, in partnership with our leaseholders and local interest groups
- We have surveyed the existing trees on almost 3,000 of our operational sites and have allocated £500,000 for additional planting of native species

Community investment projects

From 2015-2020 we will deliver more than 60 local environmental enhancement projects in partnership with local groups, including wildlife and community organisations as part of a £6.5m programme funded by shareholders, in lieu of a fine for inadvertent misreporting of data to Ofwat. More than 70,000 people have taken part, including through community volunteering.

This programme has also provided a valuable opportunity to innovate with local partners, including on community sustainable drainage schemes and 'Outfall Safaris' using citizen science to help track wrongly connected drains polluting urban rivers.

The overall programme has proved so successful that our shareholders have decided to continue to fund it, on a voluntary basis, with a further £5m.

Deliver brilliant customer engagement to create lifelong advocacy

More help for customers who need it

Our customers pay an average of just over £1 a day – the second lowest combined bill in England and Wales. They have told us that they want their bills to remain affordable, and offer value for money – but they also want to see us invest to meet their needs.

Our Plan will make sure vital investment can go ahead, while at the same time avoiding any increase in our bills in real terms, and providing more support where it is needed. When we consulted our customers, nearly seven out of ten found our proposed bills for 2020–2025 acceptable.

Financial support

We serve some of the most affluent areas of the country and some areas of high deprivation. While we won't be asking our customers to pay any more in real terms, we recognise that some need help to pay their bills.

**“It doesn't matter whether you're
old or young, we all need a
little help now and again.”**

Jo, Thames Water customer in Oxfordshire

We already support 57,000 customers through our social tariff, discounting bills by 50% and saving a customer receiving water and wastewater services an average of around £230 a year – but this discount does not reach enough of those who could benefit. Our Plan sets out a step change in this area, and our ambition is to provide help to every customer who is struggling to pay their water bill. We have committed to supporting at least 200,000 customers with social tariffs by 2025, which represents 3.8% of our customer base. We also recognise that not enough people apply for our social tariffs, so we are transforming our processes to be much more proactive to find and support those that need it.

A majority of customers – 79% of those surveyed – said they are willing to pay £11 to support up to 300,000 customers who cannot afford to pay. This support was consistent across income bands, and whether or not those asked were themselves struggling to pay their bill.

Customers also told us that they want our social tariffs to be more accessible, so we have redesigned them so that they align with other water companies in the south east, working with partner organisations to make them easier to understand and simpler to apply for. Discounts will be either 25%, 50% or 75%, depending on household income*, and adjusted to reflect the cost of living in London.

Priority Services Register

Some customers have particular needs that can make it more difficult to access our services, so we maintain a register of people who may need additional support, such as the delivery of bottled water to their home if supplies are interrupted. We know this register is not yet comprehensive, and we weren't able to provide help to all our customers who needed it when some lost water supplies during a rapid freeze and thaw in March 2018.

We have already committed to increasing the number of customers on the register more rapidly than previously planned, from 57,000 in 2018 to 115,000 by 2020. Our Plan sets out a very significant further increase to reach 400,000 by 2025.

We will provide
more help for
customers who
need additional
support.



We and other organisations need to respect the privacy of our customers' data, and this is a key consideration when working together to identify customers who may benefit from our support. We are working with councils, energy companies and third sector organisations to identify more vulnerable customers and raise awareness of our register.

Other assistance

As part of our Plan we will refer customers struggling with debt and arrears on their account to one of our partner agencies for free and independent advice. This will include checking they are claiming all the benefits they are entitled to.

We will also help customers through additional investment in our Customer Assistance Fund, which provides grants to help pay current charges by writing off outstanding arrears. This will benefit 15,000 customers. The Thames Water Trust Fund, which is funded by our shareholders and can make additional grants for essential household items, will continue to help those in financial hardship.

Alongside these commitments we also plan to:

- Increase the number of households on an active payment plan from 2.1 million in 2018 to 2.6 million by 2025, giving them greater flexibility over how they pay
- Provide customers temporarily unable to pay with the option of a payment holiday
- Use the opportunity provided by the roll-out of smart meters to offer customers 390,000 Smarter Home Visits, providing free water-efficient devices and tailored practical advice to help them take control of their bills
- From summer 2018, transfer 300,000 tenants currently billed by local authorities and housing associations so they are billed directly by us. By ensuring we have a direct relationship we will be better able to provide them with the support they need

* Excluding any benefits received.

Partnership with Royal Berkshire Fire and Rescue Service

In 2018, we formed a partnership with energy company SSEN and the Royal Berkshire Fire and Rescue Service to trial a scheme in Reading to promote our priority services register.

As part of Royal Berkshire Fire and Rescue's Home Fire Safety Check service, they are helping to identify vulnerable customers who would benefit from being on our priority services register, helping the householders they visit to fill in and send off their information to us.

We hope to roll the scheme out more widely to help make sure we know about all of our customers who need extra help.

We are doing more to get water to customers if their supply is interrupted.

Investing in resilient systems and assets

Our customers judge resilience by the impact disruptions to our service have on their quality of life, and the impact we have on the natural environment. We treat resilience as our ability to handle all forms of disruption, including those more commonly associated with resilience – such as severe weather – but also wider operational, corporate and financial issues.

Seven challenges are placing increasing pressure on our systems:

- 1 Higher customer expectations, including a desire for a more personalised, proactive approach, round the clock
- 2 Changing seasonal climate trends and increasing climate volatility, causing an increase in demand for water and risk of drought and floods
- 3 Population growth – we forecast 2.1 million more people in our area by 2045
- 4 Ageing infrastructure and urban scale. Many of our assets are Victorian and more than one third of our water pipes over 100 years old
- 5 The availability and cost of skills. 24% of our workforce are over 50 and will likely retire in the next 10 to 15 years. There is intense competition for skills, and higher living costs, in our region

6 Macro-economic factors. Higher prices due to inflation, interest rates, import duties and rising prices make day to day operations increasingly expensive

7 Higher environmental standards to protect rivers from the potential for over-abstraction and improve the quality of effluent discharged from sewage works

Our customers and stakeholders have told us that they want us to be more resilient, and in response our Plan will:

- Enhance our level of resilience to ‘extreme’ challenges, such as a 1-in-200-year drought and critical financial shocks;
- Improve our day-to-day operations to maintain a high quality of service given challenges such as population growth and climate change; and
- Strengthen resilience where our customers’ tolerance of risk has changed, and we need to do more to meet their needs

This plan is the first stage of a long-term programme to deliver the step change in resilience our customers have told us they expect, and to make sure we are able to maintain and enhance the service we provide and the environment we rely on, for the period of this Plan and beyond.

More than one third of our water pipes are over 100 years old.

Wastewater resilience

To reduce the risk of sewers overflowing we will take a twin-track approach, managing surface water at source with sustainable drainage (SuDS), and increasing capacity. We will also increase the capacity of our sewage works to ensure we can accommodate population growth and meet existing treatment standards, as well as enhancing treatment standards where necessary.

Future drainage capacity

Our sector-leading work to evaluate sewer capacity, combined with information from extensive installation of monitors measuring the frequency and duration of storm discharges, is being used to prioritise areas of our sewer network under the most pressure.

We will build on this by developing Drainage and Wastewater Management Plans, which will set out how we will maintain a robust and resilient drainage and wastewater system that supports economic growth and resilient communities, and protects the environment over at least the next 25 years.

By 2020 we will have installed monitors on all our permitted storm overflows, measuring when spills occur and for how long, providing better information to plan with.

Managing surface water

Without action, population growth, urban creep and climate change would increase the likelihood of sewer flooding and pollution. Historically our response has focussed on engineering solutions, typically using storage tanks. Our Plan shifts the emphasis on to reducing the volume of surface water entering the sewers, releasing capacity to manage future challenges in a more cost effective way. We will work in partnership with others, particularly local authorities with overall responsibility for surface water, to do this.

Coupled with the introduction of real-time control of our sewer network, this will help introduce smarter ways to operate our existing network and make better use of capacity, in turn reducing incidents of sewer flooding. Our Plan sets out a 15% reduction in internal sewer flooding incidents by 2025.

Protecting key sites

We are continuing work to make sure our key operational sites can withstand and quickly recover from the impact of flooding caused by storms. We have developed river and rainfall flood risk maps to predict how storms could affect our sites, and to identify the increased risk presented by climate change. Our Plan includes investment at 37 waste water sites.

* One hectare is roughly the size of an international rugby pitch, or the area inside a 400 metre athletics track.

Sustainable drainage

In 2015 we launched a SuDS programme to disconnect 20 hectares* of impermeable land from London's combined sewers. Our Plan will increase the scale and pace of this work, targeting areas with the least available capacity in the sewers.

We have developed a programme to disconnect more than 65 hectares by:

- 1 Providing up to £150,000 to each of the 96 Lead Local Flood Authorities (LLFA) with overall responsibility for surface water to contribute to SuDS schemes
- 2 Forming partnerships with three LLFAs with some of the greatest pressure on drainage capacity to jointly deliver a range of projects
- 3 Funding third-sector bodies (including schools and environment groups) to deliver SuDS schemes
- 4 Installing a range of schemes ourselves in areas with the least available capacity in sewers, using large-scale SuDS and sewer interception / storage schemes

We intend as part of our Drainage and Wastewater Management Plans to increase the programme to 100 hectares in 2025-2030; 150 hectares in 2030-2035 and 200 hectares in 2035-2040.



Investing in resilient systems and assets

Water supply resilience

Water resources

Our changing climate, growing population and the need to leave more water in the environment to protect wildlife, are projected to create a shortfall of 652m litres a day (Ml/d) by 2100. Our revised draft WRMP sets out how we will bridge the gap.

To manage the risk of shortages we plan to strengthen our resilience to drought to withstand a 1 in 200-year event by 2030. Our Plan for 2020–2025 sets out the short-term steps to get there, including a more ambitious programme to manage demand by:

- Reducing leakage by 15%, as part of a commitment to halve leakage by 2050. This will include continuing to increase our work to find and fix leaks; replacing 650 km of smaller water mains and 55 km of larger 'trunk mains'. We will also increase trunk mains monitoring coverage to 25%
- Installing 700,000 smart water meters
- Offering more than 400,000 Smarter Home and Business Visits, providing free water efficient devices and tailored advice for customers
- Taken together, these measures will help reduce consumption in our region from 142 litres per person per day in 2020 to 136 litres per day in 2025

As part of our Plan we will develop a new source of groundwater, and an innovative scheme to replenish an aquifer under south London. We will also make water available through an abstraction licence trading agreement with a third party.

Beyond 2025 we will also need to develop new sources of water, including a new water transfer scheme that will bring additional supplies from the Midlands through the Oxford Canal, and an innovative water recycling plant at Deephams sewage works in Edmonton, north London.

In addition, we have worked with companies across the region through the Water Resources in the South East group to identify opportunities for shared solutions. Our revised draft WRMP identifies a new reservoir filled from the River Thames near Abingdon in Oxfordshire, shared with Affinity Water, as the best value option to meet our and their customers' long term needs. As part of our Plan we will start work with them on the initial planning; engagement and design, with the reservoir ultimately in use by 2037.

We will also continue work to explore the potential of and barriers to an intra-regional raw water transfer, and our Plan includes funding for a joint study with United Utilities, Severn Trent Water and regulators.

Water network resilience

We are developing a long term strategy to improve our water supply and treatment systems to ensure a more reliable service. This 25-year programme of around £1bn will start with north east London and Guildford.

Our work in the north east London water supply zone will address a combination of challenges:

- The north east London water supply zone contains the City of London and Canary Wharf, which underpin the UK's economic engine
- Growth over the 25 years to 2041 at a rate double the national average
- Greater flexibility in the water supply network is needed in the event of a breakdown
- There is a greater risk in north east London of 'blooms' of algae reducing the quality of water stored for treatment

Our Plan sets out the first phase of an investment programme, totalling £180m, up to 2030. This includes an innovative full-scale pilot plant to screen algae at Coppermills water treatment works; a new water treatment works linked to a new service reservoir; network interconnections and a major new pumping station.

“The priority for London business is greater resilience not lowest possible cost. Water shortages would be extremely damaging for a wide range of London businesses – from offices to restaurants, theatres, hotels and the leisure sector.”

London First



Wider resilience

Natural resilience

Abstraction of water from rivers for public supply and discharges from sewage works can harm river systems and the fish, invertebrates and plants that live there, if they exceed the environment's natural ability to cope with them. The Smarter Water Catchments programme in our Plan (see page 20) will build better functioning river catchments that, in turn, are better equipped to support water company and ecosystem services.

In particular, our partnership with South East Rivers Trust will explore how to help rivers cope with society's needs by modifying flow and features so rivers are closer to a more natural state, and better able to cleanse themselves. We hope to be able to apply what we learn more widely, both across our region and elsewhere.

Financial resilience

Our customers have told us they are concerned about our level of 'gearing' – the ratio of net debt to the value* of our business, and the potential impact on our financial resilience. We carry out stress tests regularly, and are confident that our current gearing is sustainable. This is reflected in our investment-grade credit ratings.

We have listened to our customers and, to rebuild trust our Board has agreed, with the support of our investors, to reduce gearing. This will be made possible by reducing dividends to below the 5% level deemed by Ofwat to be a reasonable yield. We plan on paying significantly less than this, with modest dividends to external shareholders of around £100 million across five years.

Our shareholders, 47% of which are pension funds, take a long-term approach and are supportive of our reduction in dividends. To demonstrate their commitment to enhanced financial resilience, they have decided to inject around £460m back into the business over 2020–2025.

These changes will reduce gearing by 5%, from 81.3% in March 2018 to 76.2% in March 2025. This is underpinned by a planned cash injection of around £900 million over the period. Together with the growth in value of our business, we expect our equity 'buffer' to increase by around £2 billion by March 2025, which provides further protection against shocks.

Operational and people resilience

Our business provides service 24x7 and we need to make sure that in the event of an issue we respond appropriately at any time of the day or week. Therefore we are investing in new process and systems to ensure we can get the right team on site to fix problems right first time. We are also creating a more flexible resource model – across our supply chain – to ensure we can respond round the clock.

We have made several changes to our governance, as a result of a review carried out by our chairman Ian Marchant. This has included having a different chairman for Thames Water Utilities Limited and Kemble (our holding company), separating decision-making between Thames Water and its shareholders. The review has also resulted in a review of the skills and diversity of the independent directors on the Board.

* Regulated Capital Value.

The River Wandle at Hackbridge, south west London, before and after river restoration work led by the Wandle Trust, part of the South East Rivers Trust.



Protecting and enhancing the environment

Everything we do has an impact on the natural environment we rely on to deliver our services – from the water we take from rivers and streams; to safely processing wastewater from homes and businesses. We take seriously our responsibility to act as good stewards of the environment, and this is reflected in the passion and diligence of our staff.

Our Plan delivers measured improvements that fully reflect customer support for environmental enhancement, and aims as far as possible to meet the expectations of our stakeholders. Overall, it will improve the quality of 745 km of rivers in our region.

While some projects and programmes can be delivered through work on our own assets in isolation, others require a more innovative approach, and we are adopting wherever possible a wider catchment approach, working with stakeholders. This helps ensure we can deliver the right outcomes for the environment effectively and efficiently, maximising natural capital.

Sewage works

Our customers want us to operate our assets responsibly, and expect us to protect and enhance the environment over the short, medium and long-term.

This will include continuing work to reduce phosphorus and ammonia in discharges from our sewage works, meeting more stringent and challenging standards for phosphorus at over 40 sites, including upgrading works to meet new 'sensitive area' designations. We are adopting a catchment permitting approach to protect a sensitive chalk stream, the River Lambourn, and this sees us going beyond our obligations to meet stretch targets.

Elsewhere, we are planning to upgrade treatment capacity at 30 sites, and storm tank capacity at 34 sites – reducing the frequency and/or duration of storm discharges. Our plans also include the installation of 459 new monitors to better measure flows going through wastewater treatment works and storm tanks.

By 2020 all of our storm sewage overflows will be monitored, helping us prioritise our investment to where it is most needed.

By 2025 our Plan will deliver all measures in the Water Industry National Environment Programme, including those confirmed to be necessary in the final River Basin Management Plans.

We will build on previous work carried out through the national Chemical Investigation Programmes to improve our understanding of emerging risks, such as anti-microbial resistance and the impact of micro-plastics on biodiversity, and to assess what actions can be taken. This includes upgrading two sewage treatment works to reduce concentrations of chemicals found at elevated levels, and in further monitoring and investigations.

Pollution incidents

We have reduced pollution incidents by 69% since 2013, which saw a number of incidents for which we were later heavily fined. In 2017 we recorded 33 pollution incidents/10,000km – down from 90 incidents/10,000km – with a further target of 28 incidents/10,000km in 2020.

This improvement has been made through a combination of measures, including investment in our treatment works and targeted sewer cleaning. We have also successfully introduced the use of advanced weather radar, sewer depth monitors and data from other sources to support a proactive approach, preventing problems before they occur.

Most of the opportunity to further reduce pollution incidents lies in our sewer network.



Our long-term aspiration is to have zero pollution incidents. We are therefore setting ourselves a challenging but achievable target of 23 incidents/10,000km by 2025, with a continuing trend to reach 20 by 2027 – 22% of 2012/13 levels.

Most of the opportunity for further improvements lies in the network. Trend analysis reveals increasing numbers of pollution incidents from foul sewers and surface water outfalls, caused by wrongly connected household drains and blockages linked to the disposal of wet wipes, sanitary products and cooking fat.

We plan to step up our ‘misconnection’ tracing activities to increase the number of polluted surface water outfalls we clean up from 200 to 500 over five years, and build on the public interest in ‘fatbergs’ to engage customers on reducing sewer abuse as part of our plans to reduce blockages from 75,000 to 65,000 a year.

Renewable energy

Treating and pumping water and sewage is energy-intensive, and power is forecast to make up 12% of our operating costs. Our energy needs are set to increase as the population we serve rises, and with higher wastewater treatment standards.

Sludge digestion and incineration, together with wind and solar power, generated more than one fifth of our energy needs in 2017/18, reducing greenhouse gas emissions, and benefitting customers by saving the equivalent of £30 million in energy costs.

Sewage sludge is a valuable resource, and we continue to be an industry leader in the production of energy from it. During 2017/18 we produced more renewable electricity from sludge than ever before, and this is set to increase further as we continue to optimise our existing assets and commission the UK’s first full-scale Advanced Energy Recovery (AER) trial plant.

We produce more than 382,500 dry tonnes of sludge every year, and treat 97.9% of this energy-rich resource using anaerobic digestion or incineration. By 2025 we want to put more than 99% of our sludge through a treatment process to recover energy before we recycle it, reducing our reliance on the grid and the volume of untreated sludge we need to recycle.

Our Plan for 2020–2025 is to maximise energy recovery and continue to invest in renewable energy solutions that lower our greenhouse gas emissions. This will involve continuing to develop innovative technologies such as AER and the next generation of thermal hydrolysis, and increasing the use of biogas and developing fuel cells, building on existing research activities. We will also build three new thermal hydrolysis plants and replace five aging Combined Heat and Power engines.



**Europe’s largest
floating solar panel
array on our QE2
reservoir.**

Protecting and enhancing the environment

Abstraction

We take water from rivers and underground sources to provide the 2.7bn litres we supply to our customers every day.

During 2017/18 we achieved 99.97% compliance with our daily abstraction licences. We aim to reach 100% through our Plan, and maintain this in the long-term.

Customers want us to use the resources we already have more responsibly and efficiently and reducing our abstractions, particularly at potentially environmentally sensitive sites, supports this. We plan to complete 13 projects to alleviate or mitigate low river flows, with a further 23 assessments of the impact of abstractions on river flows.

We will also continue to use the Abstraction Incentive Mechanism (AIM), an incentive to reduce the volumes of water taken from potentially environmentally-sensitive rivers when flows are low. Flows in all five rivers currently part of the AIM in our region fell below trigger levels in 2017/18, and in each case we were able to reduce abstractions to protect the river environment.

We recognise our role in protecting the unique ecosystems which environmentally sensitive chalk streams support, and our Smarter Water Catchments project on the River Kennet will help protect this iconic river. Our work on environmental resilience will also help protect other vulnerable chalk streams in the south east. The measures we are taking in this period form the first steps in our long term commitment to cease all abstraction that adversely affects environmentally sensitive chalk streams and watercourses.

“Chalk streams are an important part of society and the lives of Thames Water’s customers and Thames Water has a duty of care to protect and enhance these unique habitats for future generations.”

South East Rivers Trust



Natural capital

Understanding and measuring the value of the natural environment in providing goods and services can help us make more informed decisions. We will as part of our Plan measure the quantity of natural capital on all our sites, helping us better understand the value of the environment we directly manage. This will support more informed decisions about how we operate our assets and invest in the future.

We also plan to assess our interactions with wider natural capital and measure our dependency on the environment to provide water resources and drainage; purify pollutants and receive treated sewage sludge.

As well as enabling better investment decisions, this will also provide insights into our environmental resilience, and highlight opportunities to apply natural approaches to deliver our services, such as changing the way land is managed so soil can absorb more water.

Smarter Water Catchments

Harnessing natural processes and tackling problems at source can offer better value or greater benefits than conventional ‘end-of-pipe’ capital investment solutions. In 2018 we are working on projects in 20 catchments and with more than 300 farmers, as well as many partners and stakeholders in urban areas.

Catchment management projects in our plan:

Catchment	Focus	Partner
River Evenlode, Oxfordshire	Range of water quality issues in a rural catchment	Evenlode Catchment Partnership, Natural England, Atkins
River Crane, west London	Water quality and flooding in an urban catchment	Crane Valley Partnership
River Chess, Buckinghamshire	Low flows and water quality	River Chess Association, Chilterns Chalk Streams Project
Catchment(s) in TW and South East Rivers Trust region	Environmental resilience to support abstraction	South East Rivers Trust
River Kennet, Wiltshire & Berkshire	Impact of community engagement on water use	Action for the River Kennet
Region-wide	Dual-purpose flood and water storage assets	Environment Agency

Urban catchment management: River Crane, west London

Most catchment schemes have focused on upstream, rural areas but here we are tackling a more difficult problem facing a highly-populated urban area.

Rapid population growth is quickly eroding headroom available at Mogden sewage treatment works, with population set to increase by more than 15% in the next 20 years.

A more conventional approach to upgrading the sewage works would come with high capital and operating costs, and is particularly challenging given that there is very little space to accommodate changes within the boundary of the site.

At the same time, the River Crane catchment suffers badly from wrongly connected drains, and historic decisions to collect surface water, which between them cause pollution of the river and contribute to high flows arriving at the works. The clean surface water diverted into the foul sewer takes up valuable capacity, and its removal should help reduce the need for further upgrades.

Finding misconnected household drains is time-consuming and difficult as the discharges are often intermittent, but we're making major progress by working with organisations such as FORCE and ZSL, through 'Outfall Safaris' where knowledgeable local volunteers comprehensively survey the river to help us trace and tackle the problems.

We are working through the Crane Valley Partnership to identify and deliver a programme of activities, many in collaboration with customers and NGOs, to tackle the underlying problems at source and reduce or defer the need for 'end-of-pipe' solutions. Our plans include:

- Improvements to the public sewer network including diversion of surface water out of the foul network
- Property-level improvements, such as tackling misconnected drains – which cause pollution in streams and rivers, and channel rainwater into sewers – and installing water butts and planters
- Increased use of sustainable drainage

We will also target the 60 schools in the catchment, and extend 'Citizen Crane', the successful citizen science programme that is already involving local people to help improve water quality.

Catchment management must now play a greater role to help successfully manage population growth and climate change; reduce our impact on the environment and give customers better value for money. Our 'Smarter Water Catchments' initiative will see a step change in our investment in this area – and we believe it is the most innovative and ambitious catchment management programme ever undertaken in the UK.

We are moving away from the conventional approach of addressing just one problem, such as pesticides or flooding, with catchment projects. Instead we are developing projects with partner organisations to tackle multiple challenges together, helping unlock wider benefits. As well as improving the quality of river water and reducing flood risk, catchment management can benefit wildlife, create green spaces that improve local amenities and provide mental health and well-being benefits for our customers.

Volunteers led by Rob Gray from FORCE search for evidence of pollution in the River Crane. This Outfall Safari project puts citizen science and community engagement at the heart of catchment management.



Delivering our plan

Our workforce

Without our people we couldn't deliver our Plan for our customers and the environment around us, and we will continue to invest in our workforce to do this. We will also change working arrangements to ensure that we can better respond to customer issues round the clock.

In an increasingly competitive market, we will develop an innovative approach to recruitment, targeting specific skill sets e.g. by partnering with engineering academies and sponsoring graduates. We will also go further in promoting inclusive working practices to attract a diverse and talented workforce.

Innovation

Innovation – which we define as developing new ways of getting better outcomes – is a critical enabler for our Plan, and the responsibility of everyone involved in preparing and delivering it. We have a strong history of innovation, and we are adopting new approaches throughout.

We structure innovation around the difficult problems we need to solve as a company over the long term. These represent some of our most challenging performance commitments. We have identified seven challenging problem areas that are the focus of our innovation activities:

- Reducing leakage by 50% (15% by 2025)
- Eliminating pollution

- Keeping all customers in continuous supply – and getting real-time customer and network insight
- Interacting with customers in a smart, intelligent and personalised way, including providing our vulnerable customers with world class service tuned to their needs
- Replumbing London – replacing a 150 year old Victorian mains network with a modern, fit-for-purpose infrastructure
- Ensuring our people and supply chain partners are passionate and engaged in our business, and are here for you
- Ensuring we continue to strive for frontier efficiency levels, redefining what is possible in the industry

Trunk mains

We have set out in our Plan our commitment to improve our trunk mains, and to do so in a more cost-effective way. We have conducted the UK's first ever in-situ trunk main survey, but assessing the condition of our trunk mains to target our investment to best effect remains a particular challenge.

We have committed to investing in a dedicated trunk main and leakage test facilities at Kempton water treatment works, and plan to open it up as an innovation campus, to share the data and learnings with the wider industry. We hope that this new approach will remove some of the traditional barriers to collaboration, and accelerate development in tools that assess trunk main condition, including pilots for novel data approaches, satellite detection and acoustic correlators.

We will invest in a dedicated trunk main test facility and open it up as an innovation campus.

Efficiency

Working efficiently will be key to successfully delivering our Plan. We have a responsibility to spend our customers' money carefully and wisely to give them greater value, and our Plan commits us to deliver frontier levels of cost efficiency – reducing our operational unit costs by 13.6% in real terms.

Efficiency is also an outcome of good customer service, removing the costs we incur when things go wrong. We have started a programme of work now that will extend beyond 2020 to overhaul how we manage and co-ordinate our field teams and help make improvements.

Operating with a number of legacy IT systems limits our ability to plan the work of our field teams and, most importantly, means we have not been able to provide customers with the best possible service. We have started the process of transferring to a single, modern, mobile work management system that is integrated with our asset management and customer systems.

We are replacing old hand-held devices with smart phones, reducing time spent on data entry by more than half; and making it possible to give customers live updates on what is happening. When we need to make changes to the application our engineers use, they can be built, tested and deployed to engineers in minutes, rather than the months this would have taken in the past.

We will roll this out progressively so that by the end of 2021 all field engineers will be using this platform, helping complete more work first time; making it easier for customers to see our progress and reducing our costs.

Next steps

All water companies in England and Wales submitted business plans for 2020–2025 to Ofwat on 3 September. Ofwat will publish an 'Initial Assessment of Plans' on 31 January 2019 and, depending on the outcome of this exercise, some companies may be asked to submit revised Plans in April of that year.

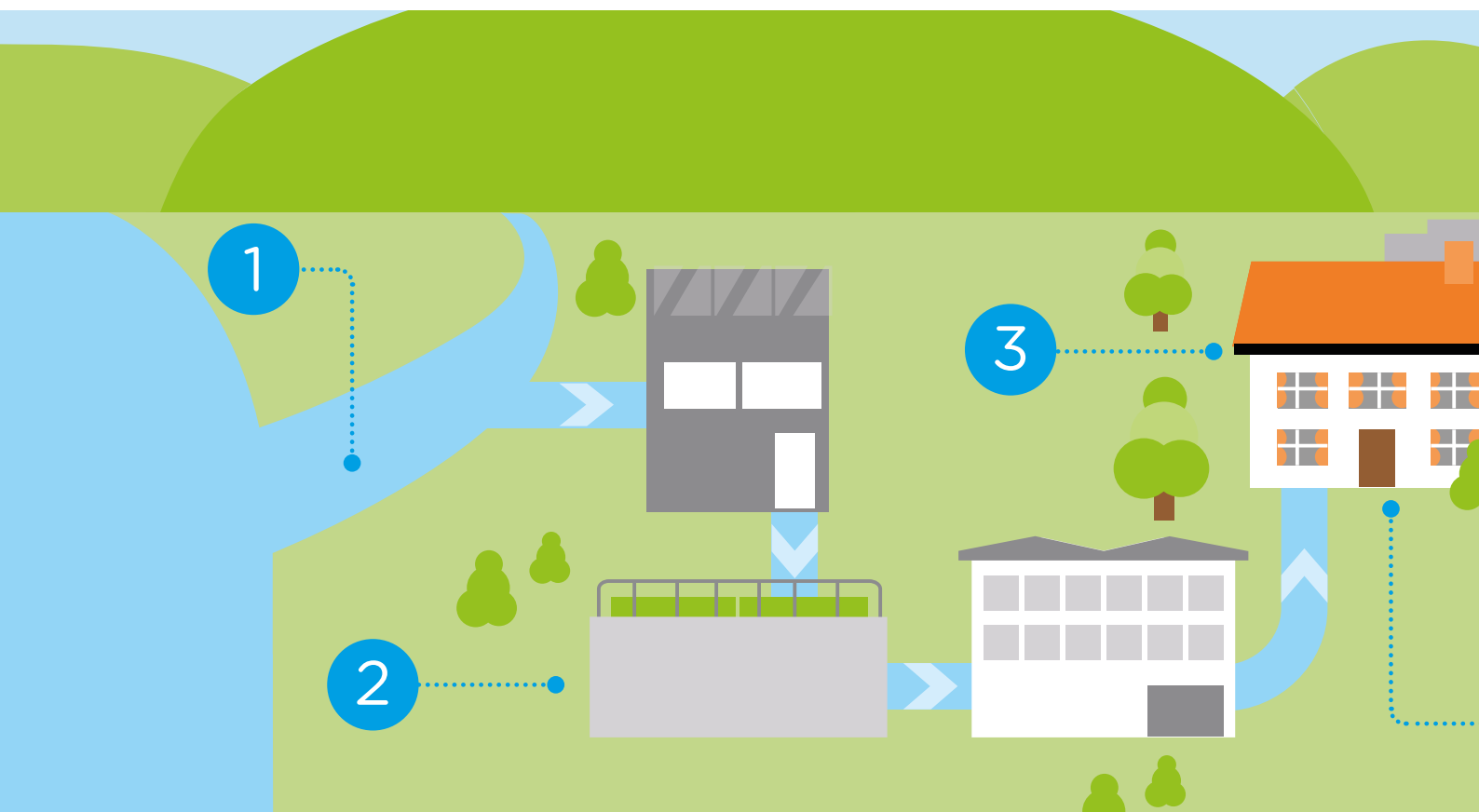
Ofwat will publish its Draft Determination, an initial decision on price limits and the outcomes companies will be expected to deliver, in July 2019. Companies have an opportunity to submit representations in August 2019 and Ofwat will publish its Final Determination in January 2020. This will come into effect from April 2020.

If you would like to find out more about our Plan, please contact: strategicbusinessplanning@thameswater.co.uk

**Replacing the
technology used by
our field staff will
reduce costs and
improve our service.**



Our plan at a glance



1

Make enough water available for customers

- New groundwater project, and an innovative scheme to replenish an underground aquifer in south London
- Abstraction licence trading agreement on the River Thames
- Plan for a water transfer scheme using the Oxford Canal
- Plan for an innovative effluent reuse plant in north London
- Plan with Affinity Water for a shared new reservoir in Oxfordshire
- Further investigations with other companies into raw water transfers

2

A safe and dependable water service

- Reduce leakage by 15%
- Replace 705 km of water mains – enough to go round the M25 almost four times
- Increase monitoring of large 'trunk' mains to 25%
- Increase lead pipe replacement by 47%, and ensure no primary schools or nurseries have lead pipes to their buildings
- Target of zero water quality sample failures

3

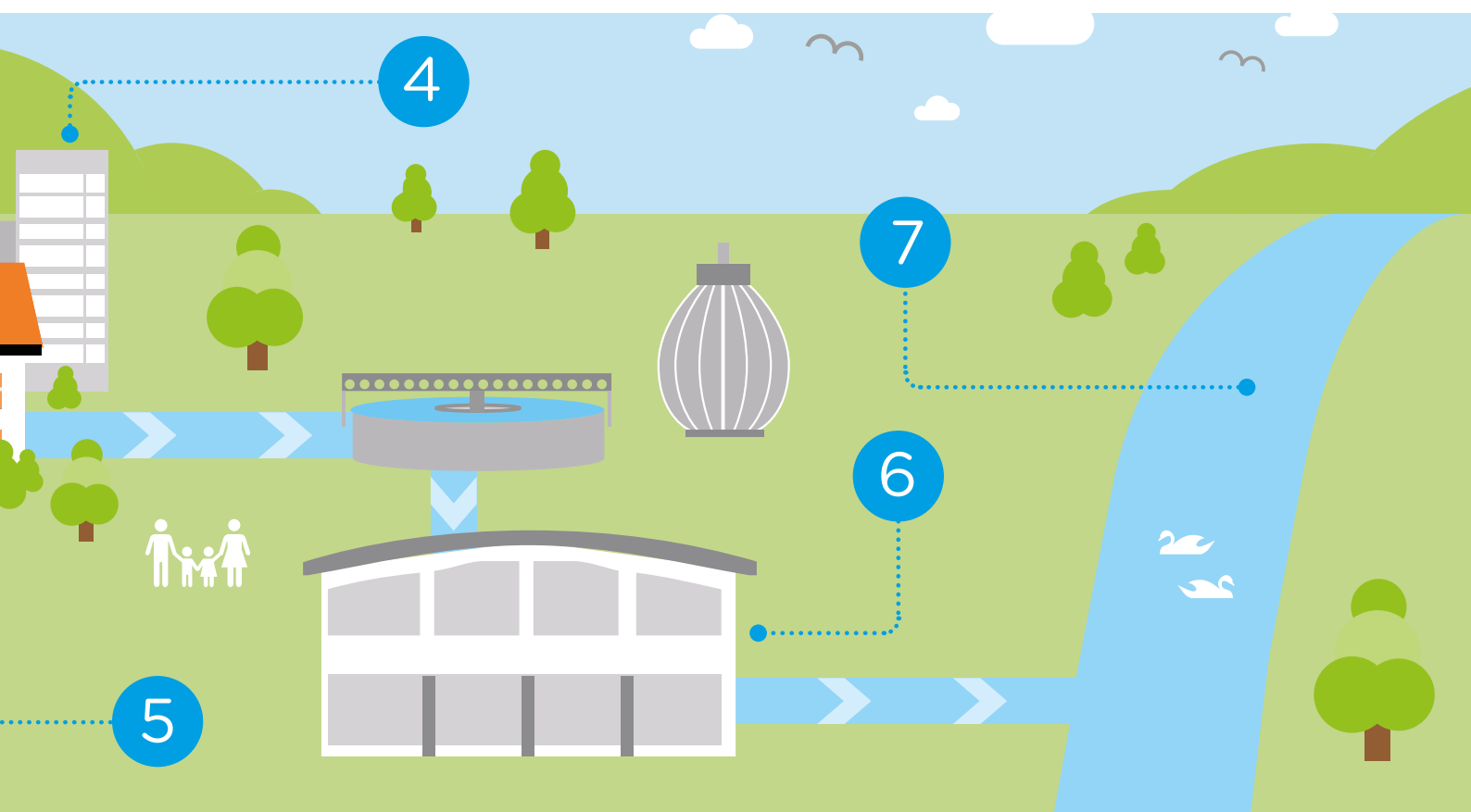
Help customers use water and sewers wisely

- Reduce consumption by 4%, from 142 litres per person per day to 136 litres
- Install 700,000 smart water meters
- Offer Smarter Home and Business Visits, providing advice and practical support to save water to more than 400,000 customers
- Incentivise developers to install non-potable water systems for toilet flushing
- Work with customers to keep fat and wetwipes out of the sewers, helping reduce blockages from 75,000 to 65,000 a year

4

Improve our service – and give more support to customers who need it

- No increase in the average bill in real terms
- 400,000 customers on our priority services register – a seven-fold increase from today
- Give at least 200,000 customers a discount on their bill – a four-fold increase from today
- New customer contact system to personalise the service customers receive
- Give customers more up-to-date, proactive and personalised information



5

Play our part in the community

- Ambition to reach every school age child in our catchment
- Host school visits to our seven education centres, and take a new mobile classroom to schools
- Increase public access to our sites, including a new visitors centre at Farmoor Reservoir, Oxford
- Deliver a pioneering commitment to increase biodiversity by 5% at 253 sites
- Deliver a £5m community investment programme, funded by shareholders

6

A safe and dependable wastewater service

- Reduce instances of internal sewer flooding by 15%
- Cut sewer blockages by 13%
- Connect 65 hectares of land draining to our sewers to sustainable drainage
- Install up to 200,000 depth monitors on our sewer network, helping prevent flooding and pollution
- Make 11 waste water sites more resilient to power interruptions, and 37 sites more resilient to flooding

7

Protect and enhance the environment

- Improve 745 km of rivers across our region
- Reduce serious pollution incidents by 18%
- Meet or exceed all environmental obligations
- Install monitors on all permitted storm overflows, helping prioritise investment
- Reduce the impact of abstractions on vulnerable rivers affected by low flows in 13 locations
- Protect chalk streams including the Lambourn, Kennet and Chess
- Generate green energy equivalent to the power used by 115,000 homes

