south east water

Tonbridge and Malling Borough Council

31 January 2024

Agenda Item 5

About us – your local drinking water company

We supply fresh, clean drinking water to **2.3 million** customers

On average, we treat and pump **520 million litres** to customers each day

Each of our customers use an average of **150 litres** a day

We operate **88 treatment works**

Deliver water 24/7 through **9,000 miles** of pipe

Manage **33 sites** of Special Scientific Interest

Undertake **500,000** water quality tests each year

More than **1,000** employees

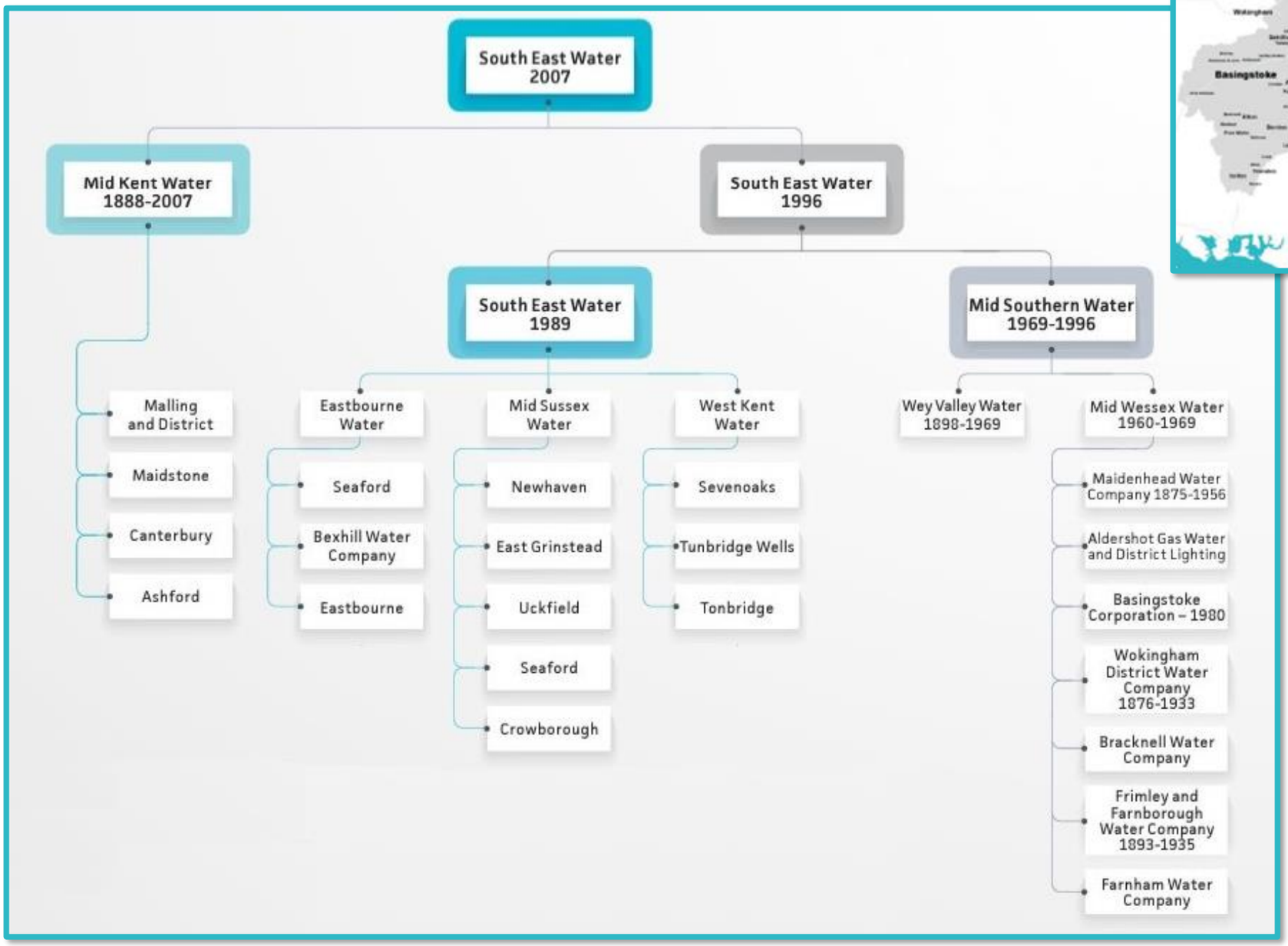
Our purpose

To provide today's public water service and create tomorrow's water supply solutions, fairly and responsibly, working with others to help society and the environment to thrive.

Our vision

To be the water company people want to be supplied by and want to work for.

History of South East Water



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How Tonbridge and Malling is supplied

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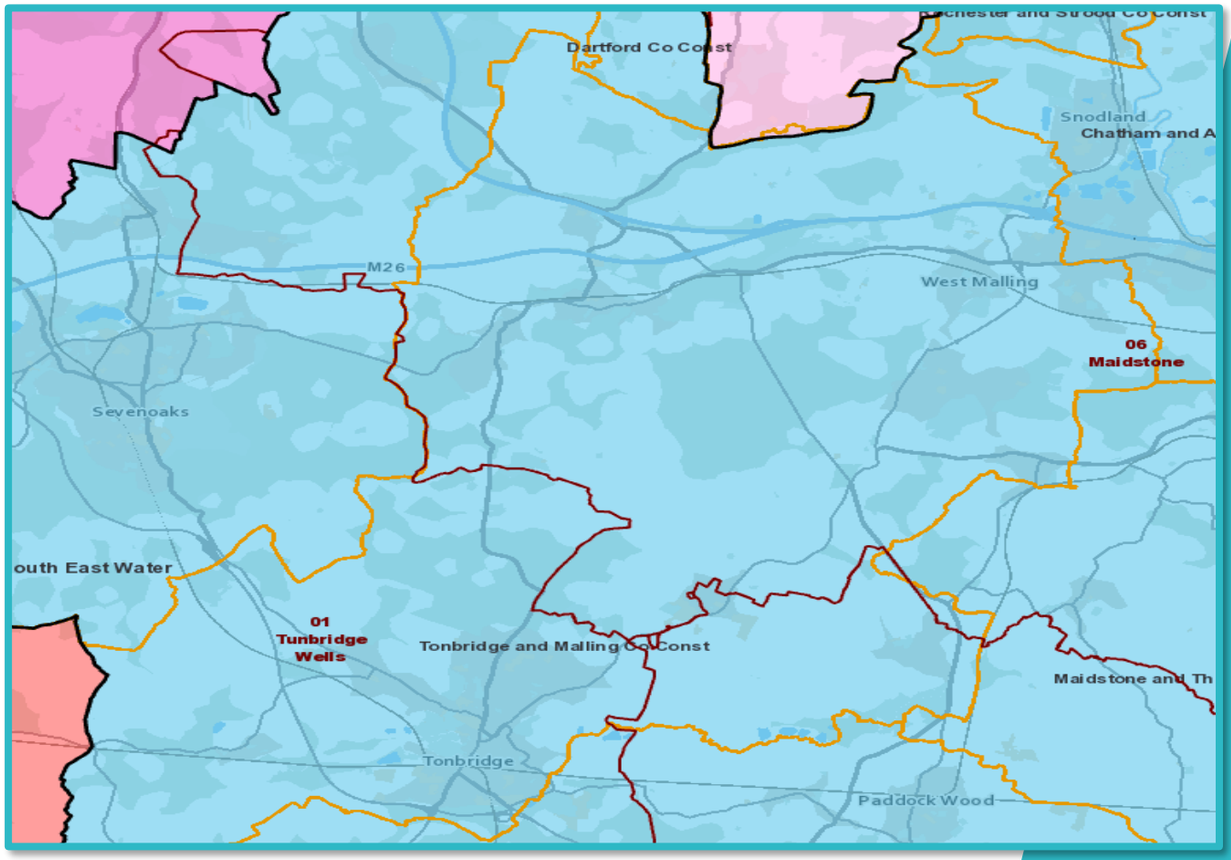
How Tonbridge and Malling is supplied with drinking water

- Water zone boundaries and Local Authority boundaries do not match

- Tonbridge and Malling (orange boundary) spans three of our water resource areas (red boundary):
  - Zone 1 - Tunbridge Wells
  - Zone 6 - Maidstone
  - Zone 7 - Bewl and the Weald

- The middle part of zone 1 is supplied by our water treatment works at Pembury, Tonbridge and Saints Hill, but also has transfers from Sevenoaks

- The west part of zone 6 is supplied by our water treatment works at Trosley, but is supported from the Maidstone area and Bewl Water in zone 7



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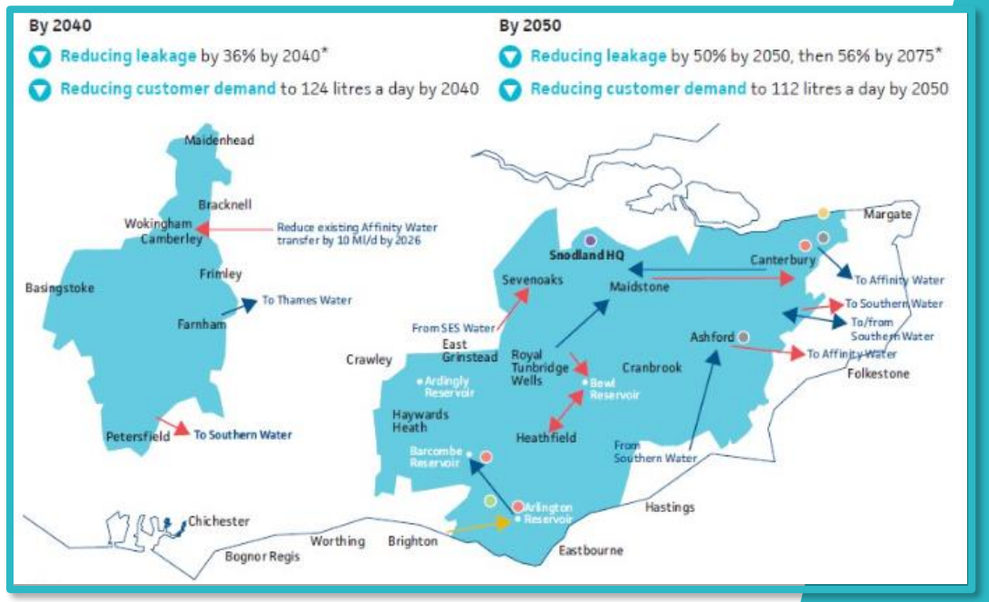
The impact of COVID and Climate Change on recent events and our business plan

Our Water Resource Management plan and regulatory cycles

Water companies are regulated by different government bodies

- OFWAT are the economic regulator, managing how water companies are financed and set the charges for customer bills. Investment plans and water charges are agreed as part of companies' business plans, which are for five-year periods. The next period starts in April 2025. OFWAT is now reviewing our PR24 business plan.
- Environment Agency (and Defra) govern how we abstract water from the environment and any discharges back into the environment
- The Drinking Water Inspectorate (DWI) govern water quality, security and emergencies



Ahead of each business plan cycle we set out how we will manage our water resources in our Water Resource Management plan:

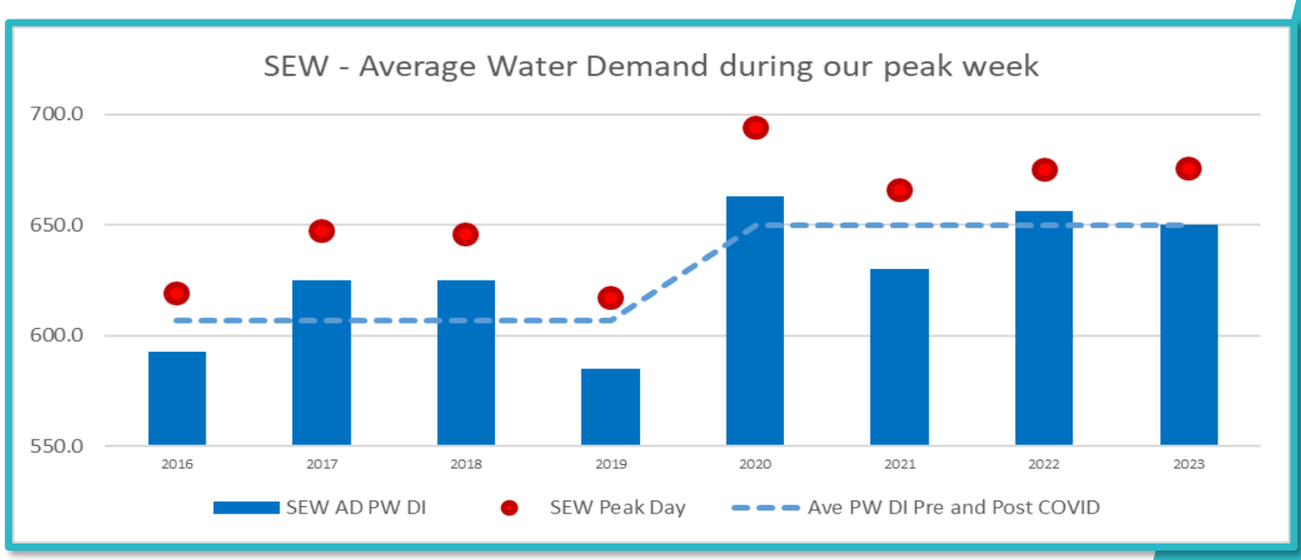
- WRMP is a long-term plan, looking ahead into the future to secure water supplies
- We have a collaborative approach working with water companies across the South East and share water resources. SEW is a net importer of water from other companies
- WRMP proposes new **reservoirs** in Broad Oak & Arlington along with; **water recycling schemes** and a **desalination plant**.
- WRMP considers how we can protect the environment by reducing our abstraction from some catchments
- WRMP targets significant reductions on **leakage**
- A focus on reducing average **consumption** for both household and business users
- New **water pipelines** to enable water to be transferred around our network

Customers are using water differently since Covid-19

During lockdown, we saw a change in how people led their lives. The biggest impact was they were at home more often. This especially affected commuter areas; **Tunbridge Wells, Ashford & Haywards Heath**.

During lockdown, we saw nearly a **20% increase** in household water consumption.

We have met that demand by increasing production and working our production assets harder. It has reduced the margin for error in our network, as there is now less spare capacity.



- This increased demand wasn't factored into our PR19 business plan, which inhibits investment in the short-term
- As lockdown measures eased, patterns of water use changed, particularly during hot periods
- Demand for water during hotter periods has increased by **7% on average** but in some areas by **more than 10%**
- We are building in more schemes to improve resilience to these changing patterns

Climate Change and Weather extremes

Drought and Summer heatwaves

- Summers are getting warmer in the UK and temperatures are increasing globally
- Each year we see new records for heat or dry weather conditions
- In 2022, we had our first ‘Red’ weather heat event, which caused wide-scale water supply disruptions
- We have introduced temporary use restrictions (TUBs) often referred to as Hosepipe bans in 2022 and 2023 to help manage the demand for water
- Demand for water in our Kent Region has exceeded what we can produce at times. We then rely on our treated water storage to cope

Flooding

- Despite very dry summer periods, we are also experiencing much wetter winter / autumn periods
- We have seen flooding impact some of our sites. Our assets are protected, but if we can’t access the site, we can’t operate it
- Heavy rainfall and burst rivers can make treating water much harder. The water becomes cloudy and full of impurities that need to be removed before it can be pumped to our customers

Climate Change and Weather extremes

Storms

- The number and impact of storms seems to be increasing
- Increasingly, we are becoming reliant on diesel generators to power our sites when power supplies are disrupted
- Due to environmental risks, we cannot permanently locate diesel generators at each site, so we have several mobile units that we can move around, but this does take time. Intermittent power supplies can be as disruptive as no power at all

Freeze / Thaw

- We are seeing more changeable weather patterns more frequently. Freeze / Thaw events are triggered when the weather moves from very cold (freezing) conditions to warmer temperatures suddenly. We have just experienced another event quickly followed by another storm. These changes in weather cause the ground to contract and then expand suddenly, leading to an increase in burst pipes, both on our network and on customer supplies
- Typically, we see more bursts on customers' pipework than our network, as the pipework is not as deep

What are we doing in the short term to fix the problems?

What we've done since December 22 to improve resilience

	Project completed	Improvement
1	Rehab. of Trosley Boreholes (Ryarsh) completed Jan/Feb2023	Increased yield and improved supplies to local WTW
2	Rehab. of Bewl Boreholes March / April 2023	Increased yield and improved supplies to local WTW
3	Pembury WTW upgrade to improve site output during peak demand	22.5 million litres of water storage
4	Aylesford paper mill development – temporary site	Increased water production capacity
5	'Aqualerter' customer text messaging system implemented	Better more timely customer communications
6	Brand new booster pumps at Blackhurst	Increased resilience to the boosted areas
7	Refurbishment of booster pumps at Bloodshots	Increased resilience
8	Pembury: Increased water flow (approx. 2 Ml/D) and refurbished pumps	Increased performance and resilience
9	Pembury: New valves and flow meters	Increased performance and resilience
10	Pembury Borehole replacements	Increased performance and resilience

Recent outages: What have we learned / What next?

Between December 2022 and now, we have made significant progress in the provision of alternate water during incidents. Our new Alternative Water Manager is leading a complete review of all alternative water practices

This bespoke plan now includes new strategies to support schools, hospitals, care homes and livestock (both commercial and non-commercial) and continues to be monitored and updated to ensure its efficacy.

We have created new teams and appointed permanent, focused roles to manage our incident responses

Whilst we won't get everything 100% right, bottled water stations will be set up quicker remaining stocked for longer periods of time. We will build on this improvement.

Following the December 2022 incident, we reviewed our incident communication tool – In Your Area, and deemed it no longer suitable for our purposes. Instead, we have built our own alternative.

Since June 2023, our new tool – Aqualerter has now launched. We now reach approximately 75% of customers by SMS, with regular updates during supply interruptions. It has been used on several occasions already, with customer feedback being very positive.

What is the longer term plan and how can you help?

Network capacity:

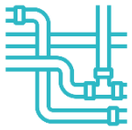
On 31 August, we published our revised Water Resources Management Plan (rWRMP). In our revised plan, we detail the need to increase the water resources available across our regions, whilst working with customers to reduce water consumption.

Between 2025 – 2040 our preferred plan includes:

Leak reduction and water efficiency activities – saving an additional 34 million litres of water a day

New smart meter installation programme with trials starting in 2025 and full roll out from 2027 onwards. The goal is to provide smart meters in 90 per cent of our homes by 2035

Reduce non-household consumption with measures such as business smart meters and water efficiency audits



New pipelines to increase the amount of water moving between water companies and within our supply area

Network capacity:

Schemes to improve our network connectivity at a local level and allow the reduction of our abstractions that could impact on the environment

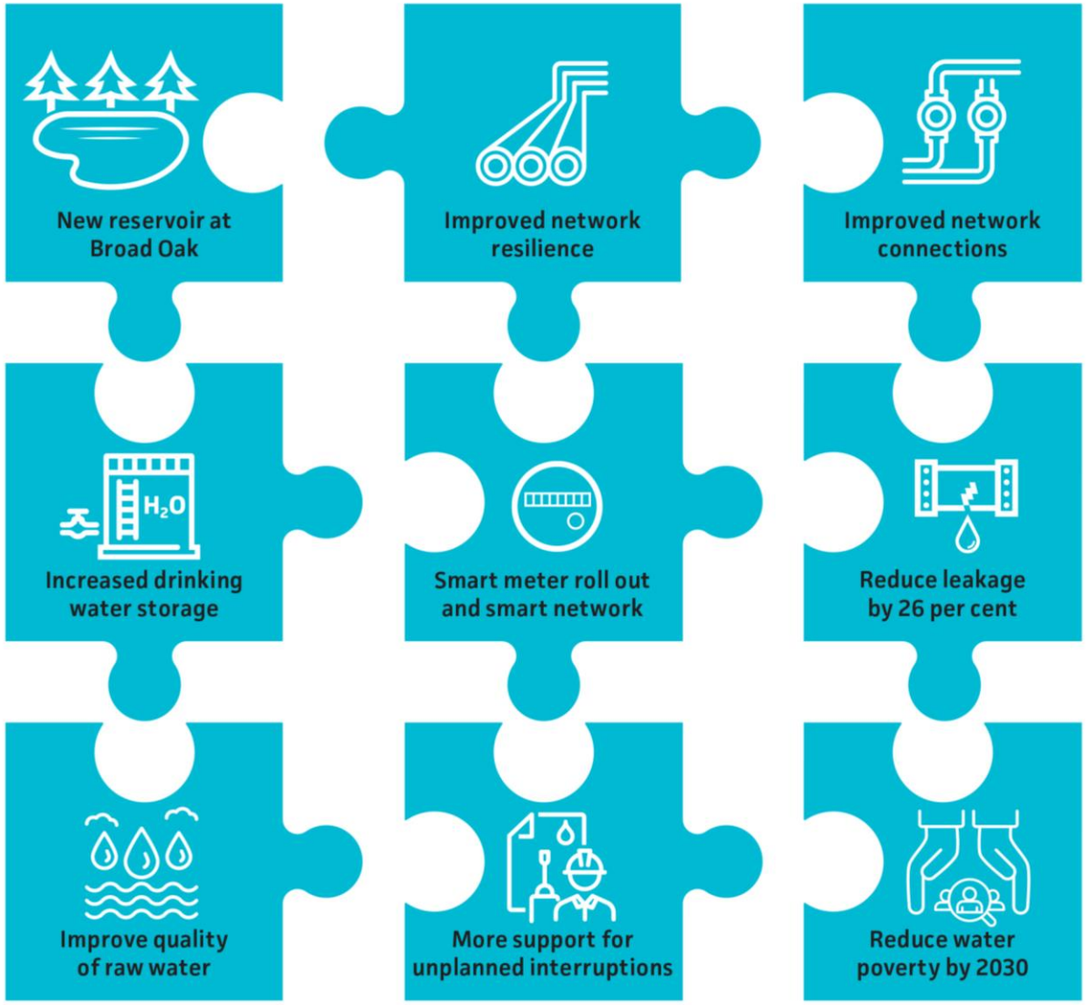
Further development work and feasibility studies on schemes such as new Arlington reservoir, Peacehaven recycling and Reculver desalination

Longer term options from 2040 to 2075 include:

Additional pipelines to increase amount of water moving between water companies and within our supply area

New reservoir at Arlington (Sussex) – providing an additional 18 million litres of water a day, as well as scheme to improve our pipe network's connectivity by 2057

This is the boldest and most ambitious plan we have ever submitted



Headline investment

£1.9bn

Average Bill – 2025: £231.93

Average Bill – 2030: £277.48

Increase of 19.6% or £3.79 / month

*Based on comparison to 2017/18 baseline

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How will the £1.9bn be invested?

Proposed investment in running the network - £1.061bn (+20%)

Investment area	£
Day to day running costs	£532m
Rates, licence charges etc	£116m
Maintaining assets	£373m
New development connections and associated network upgrades	£40m

Proposed investment in enhancing the network - £831m (+330%)

Investment area	£
Water resources – new water and demand reduction	£389m
Environment – improvements and studies	£96m
Water quality – prevent raw water deterioration	£57m
Emergency planning / cyber security	£45m
Resilience – storage and interconnectivity	£231m
Carbon – various including electrifying fleet	£13m

Improving resilience – PR24 Business plan proposals

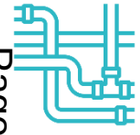
1	New pipeline from Bewl WTW to Best Beech and Cottage Hill drinking water storage tanks increasing supply flexibility
2	Increasing the water treatment capacity at Bewl WTW to providing 23 and then 30 million litres of water a day
3	Pembury WTW upgrade providing an additional 3 million litres per day to 50,000 customers in Tunbridge Wells / Tonbridge
4	Building a new WTW at Aylesford, providing 19 million litres of drinking water a day for the Maidstone, Tunbridge Wells and Ashford area
5	A new main from Tonbridge to Bloodshots Reservoir with installation of upsized boosters at Bloodshots increasing resilience
6	Enhancement at Pembury WTW and Tonbridge WTW to reduce risk of unplanned outage and supply interruptions driven by extreme weather events such as flooding, heatwave and freeze-thaw
7	New Stocks to Iden trunk main to be laid increasing the flexibility of how we move water around the network
8	Increasing the number of meters installed in the network helping us to identify more leaks, ground movement and analyse water use and using smart meters to measure real time changes in demand
9	Broad Oak reservoir near Canterbury will increase drinking water storage capacity across Kent
10	Additional tankers to support incident management through this transition phase
11	Kippings Reservoir (bypass) to Pembury giving improved reliability and continuity of service
12	Pembury Contact Tank Bypass offering improved resilience and flexibility
13	Increasing number of tanker injection points providing improved continuity of water supply during incidents

How can Tonbridge and Malling help us meet our targets:

Support our plans, we need everyone to understand the challenges:

- Water Resources Management Plan (rWRMP). In our revised plan, we detail the need to increase the water resources available across our regions but these take time to build.

- PR 24 Business plan proposes new schemes to make our system more resilient and more equipment to respond to climate change like more fixed generators



- We will need planning permissions for new pipelines to increase the amount of water moving between zones within our supply area

Between 2025 – 2040 we are forecasting increased housing growth, this new demand for water needs to be offset with savings on leakage and water efficiency:

- Ensure all new properties and convertions are water efficient, where possible specify water efficiency measures like grey water recycling as part of the planning permission

- We need to fix leaks quicker – we can often be challenged by highways teams which treat these as non-urgent works, road closures can be particularly challenging

- Help us reduce non-household and household consumption at existing buildings by retro-fitting water efficiency measures, do all council properties have a water butt?

Thank you for listening.

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