

Water Resources Management Plans Consultations

Climate Change and Ecological Emergency Working Group
16 February 2023

Consultations

Coordinated consultations on Water Resources Management Plans across south east England, including:

- **Water Resources South East** – Draft Regional Plan for South East England – Futureproofing our water supplies (2025-2075)
- **Affinity Water** – Draft Water Resource Management Plan (2025-2075)
- **South East Water** – Draft Water Resources Management Plan (2025 to 2075)

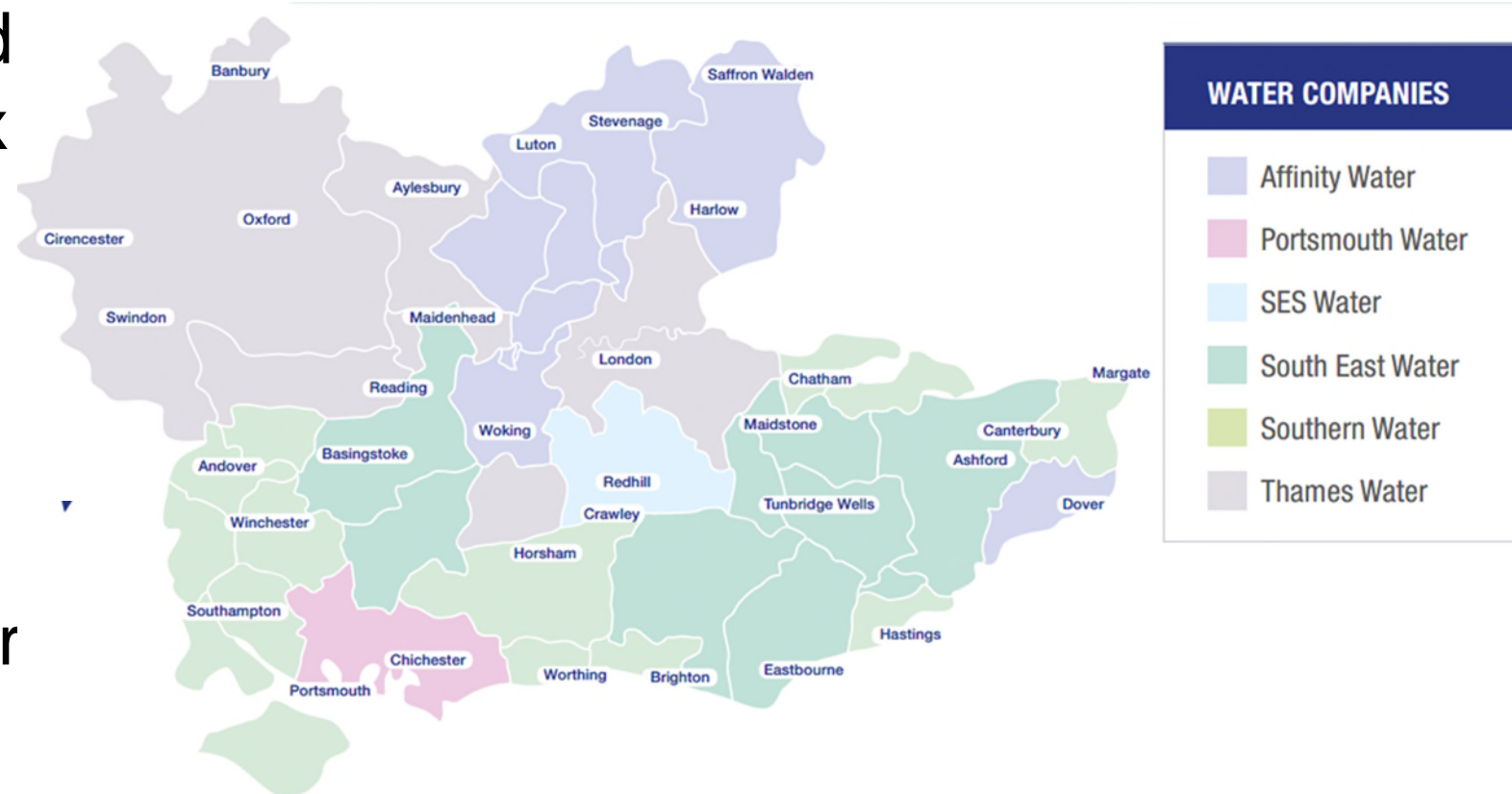
Closing date for all consultations is 20 February 2023

Water Resources South East

Draft Regional Plan for South East England
'Futureproofing our water supplies'

Water Resources South East

- One of five regional groups across England
- WRSE – alliance of six companies supplying drinking water across south east England
- New non-statutory regional plan to guide statutory plans of water companies
- First time a regional plan has been prepared to consider needs of south east

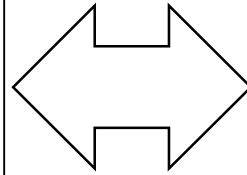


Water Resources South East

Managing demand and supply against a growing population and impacts of climate change

Demand

- Metering technology
- Working with domestic and business customers
- Government intervention (e.g. standards for white goods and new buildings)
- Drought restrictions



Supply

- Reservoirs
- Groundwater boreholes
- New treatment works
- Water recycling
- Desalination
- Transfers between regions
- Transfers within region
- Network upgrades

Water Resources South East

- ‘Adaptive planning approach’ – looking to 2075
- Projections of different levels of population, impacts of climate change and water demand
- Nine alternative pathways – decision points in early years and continued monitoring
- ‘Reported pathway’ – to meet:
 - Environment Agency guidelines
 - Population growth in line with local plans
 - Environmental improvement required by regulators
 - High climate change scenario
 - One in 500 year drought resilience by 2040

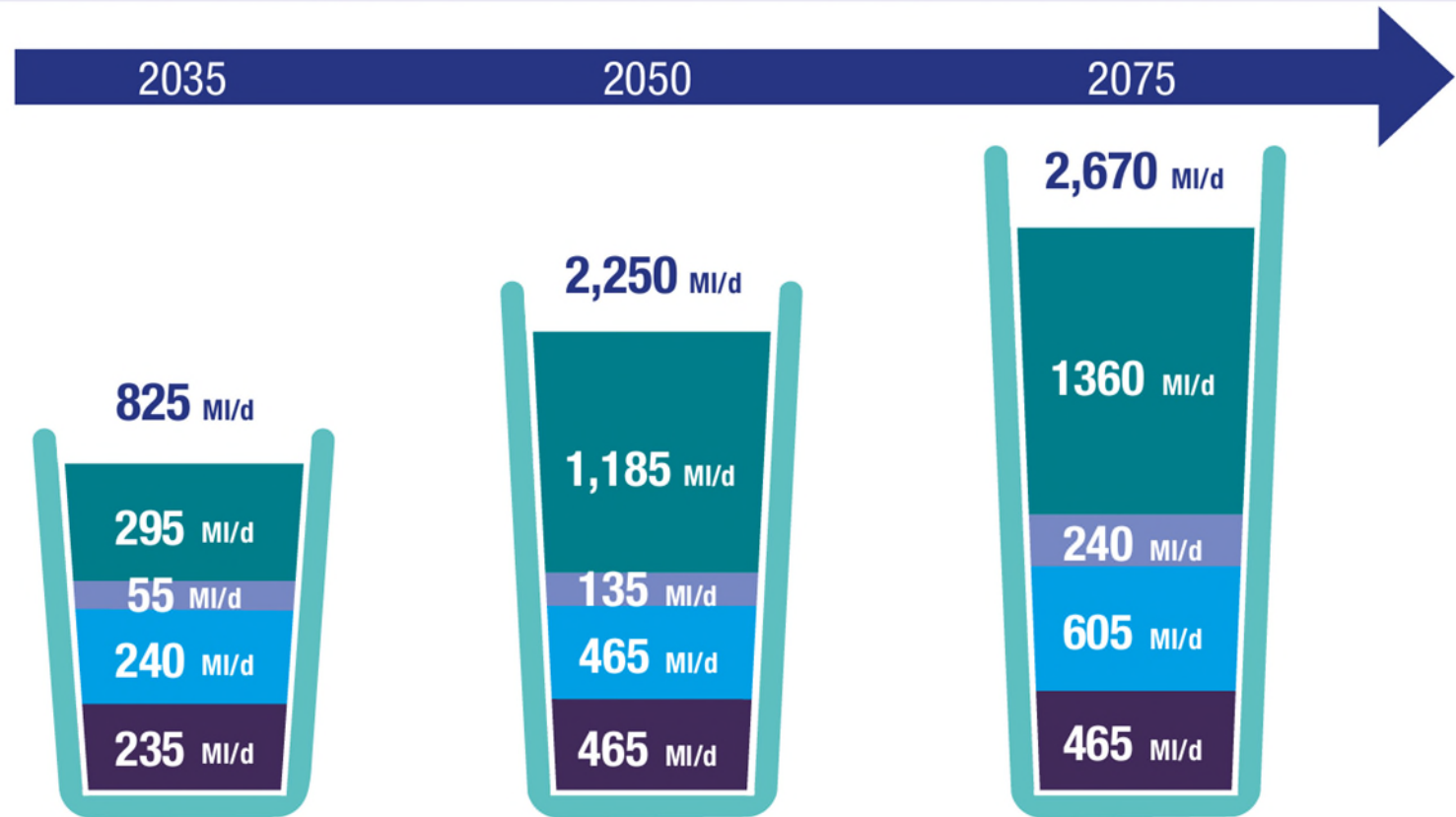
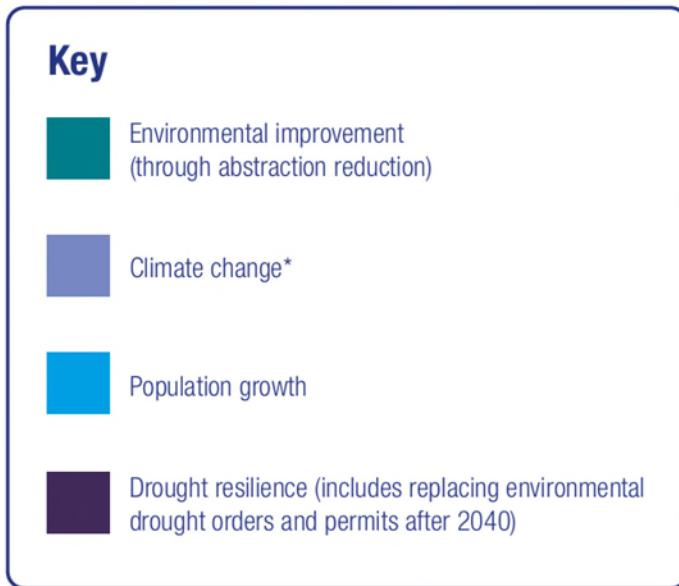
Water Resources South East

- Two time periods:
 - **2025 to 2035** – Critical schemes that water companies must progress, required for all future pathways
 - **2035 to 2075** – More uncertain, schemes depend on which scenario occurs
- Regional plan updated every five years to inform water companies' five year business plans
- Water companies currently supply **6 billion litres / day**
- Need to supply additional **2.7 billion litres / day** by 2075

Water Resources South East

Projected water needs for 'reported pathway'

Figure 5: South East England's future water needs under our reported pathway (million litres per day is represented by MI/d)



*Climate change represents how much water will no longer be available from our existing water sources. The impacts of climate change are also included in the three other areas.

Water Resources South East

Efficient use of water and minimal wastage

- Reducing leakage by at least 50% by 2050
- National target to reduce household consumption to 110 litres/person/day by 2050 - draft plan assumes fall to 115 litres/person/day by 2050 across south east
- Dependent on Government policies (e.g. water labelling, minimum standards for products, building regulations)
- Drought management – still needed in first 10 years

Water Resources South East

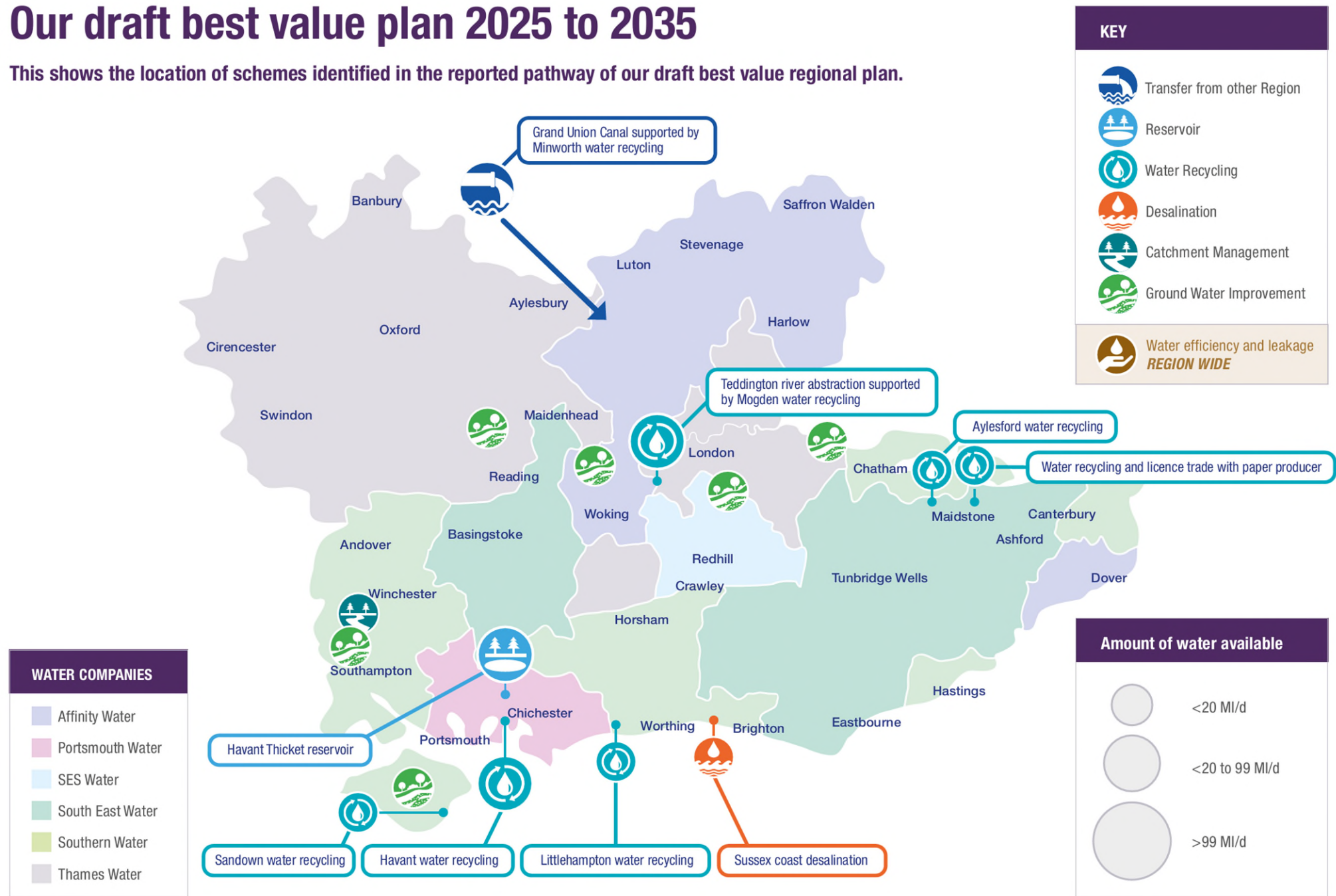
New sources of water

- **Reservoirs** – including Havant Thicket, nr Chichester (under construction), Broad Oak, Abingdon and others (planned)
- **Water recycling** – six schemes for completion by 2035, others longer term (including Hythe water recycling by 2045)
- **Improved groundwater abstraction and storage**
- **Desalination** – Sussex scheme being investigated, other schemes dependent on pathway (including Hythe beach desalination by 2041)

“Desalination is energy intensive and costly to operate. It produces more carbon emissions than most other options and abstracting seawater from some locations could have an impact on the coastal environment”

Our draft best value plan 2025 to 2035

This shows the location of schemes identified in the reported pathway of our draft best value regional plan.



Draft best value plan 2025 to 2035
Critical schemes that water companies must progress

Our draft best value plan 2035 to 2075

This map shows the location of the main schemes in the reported pathway of the draft best value regional plan.



KEY

- Transfer from other Region
- Reservoir
- Water Recycling
- Desalination
- Aquifer Storage Recovery
- Water efficiency and leakage **REGION WIDE**

WATER COMPANIES

- Affinity Water
- Portsmouth Water
- SES Water
- South East Water
- Southern Water
- Thames Water

Amount of water available

- <20 MI/d
- <20 to 99 MI/d
- >99 MI/d

Draft best value plan 2035 to 2075 - for reported pathway

Broad Oak reservoir by 2036

Dover recycling by 2057

Hythe recycling by 2045

Hythe beach desalination by 2041

Affinity Water

Draft Water Resources Management Plan (DWRMP) 2024

Affinity Water DWRMP - 2024

- Affinity Water supply area is subject to the highest demand for water in the country per person, at 157 litres per day on average (national average of 145 litres).
- Dour zone (which sits standalone from the central supply area) including Folkestone & Hythe District, is better placed to cope when compared to the main supply area, although a higher level of abstraction will be needed in the Dour zone in future.
- Target to halve leakage by 2050
- National support for usage target to 110 litres/person/day by 2050, but needs Government action on appliances and building regulations

Affinity Water DWRMP - 2024

- None of the proposed Strategic Resource Options directly impact/influence the Dour zone (Water Resource Zone 7).



Dour zone WRZ7

Affinity Water DWRMP - 2024

Supply strategy for the Dour zone (WRZ7)

- Demand management sufficient to maintain balance, unless the high environmental destination target needed.
- Nearly all feasible resource developments would have to be developed in order to meet high environmental destination targets.
- High environmental destination targets would include continuing existing transfers from Southern and South East Water and increases in imports.

Affinity Water DWRMP - 2024

Supply strategy for the Dour zone (WRZ7)

- Resource developments includes the Hythe beach wells desalination scheme (5 million litres/day) but has been identified within the Habitats Regulations Assessment (HRA) as having a potentially significant effect on a designated site.
- As the Hythe water recycling scheme does not carry an HRA risk, Affinity Water have scheduled the recycling scheme first so the beach wells desalination scheme is deferred until 2047, even under the high environmental destination scenario.

South East Water

Draft Water Resources Management Plan (DWRMP) 2025-2075

South East Water DWRMP 2025-2075

- South East Water supply drinking water to the northern area of Folkestone & Hythe District.
- Average water use across the supply area is 150 litres / person / day.
- Challenges include: a growing population, uncertainty around climate change and changing rainfall patterns, and protecting the natural landscape and wildlife.
- Alongside the **preferred plan**, South East Water have developed an **alternative plan**.

South East Water - Preferred Plan

Key priorities include:

- Reducing leakage – using technology to find and fix leaks.
- Providing large-scale infrastructure such as reservoirs, water recycling plants and desalination schemes.
- Reducing the amount of water abstracted from the environment by 158 million litres/day by 2050 to support habitats.
- Supporting customers to reduce demand for water through, for example, smart metering and water efficiency initiatives.
- Reducing household water use down to 112 litres/person/day by 2050 through a focus on changing long-term water use behaviour.

South East Water - Preferred Plan

2025 to 2040

- Leak reduction and water efficiency activities.
- New pipelines to increase water moving between water companies and within the supply area.
- A new reservoir at Broad Oak (near Canterbury) in 2036 – to provide an additional 22 million litres/day.
- A new groundwater source, via a licence trade near Maidstone.
- Sub-zonal schemes to improve network connectivity.

2041 to 2075 (long-term options)

- Additional pipes to increase water movement between water companies and within supply area.
- Peacehaven water recycling facility.
- Desalination at Reculver.
- Water treatment works improvements near Ashford by 2061.
- New reservoir at Broyle Place or Arlington by 2075.

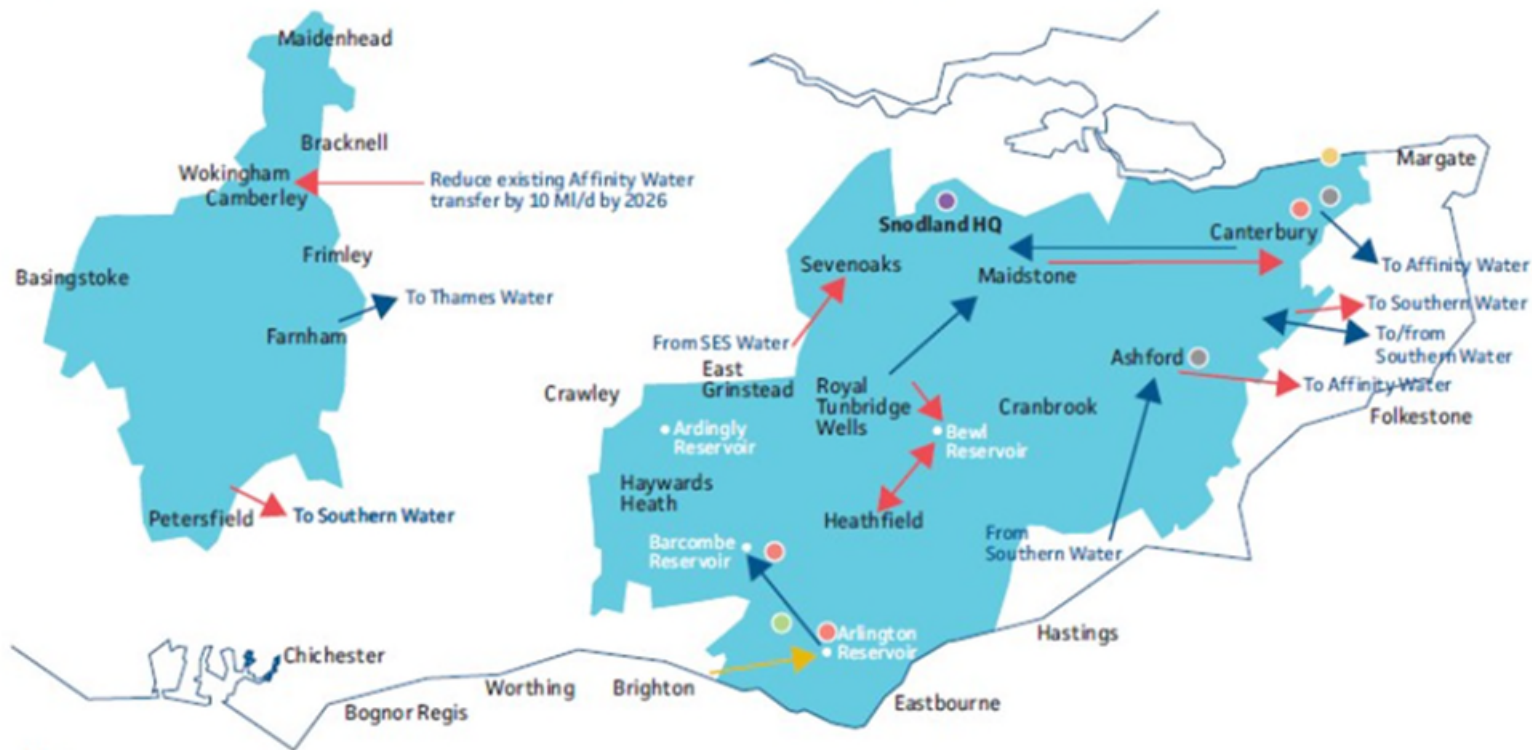
The Plan

By 2040

- Reducing leakage by 36% by 2040*
- Reducing customer demand to 124 litres a day by 2040

By 2050

- Reducing leakage by 50% by 2050, then 56% by 2075*
- Reducing customer demand to 112 litres a day by 2050



Key

2025 to 2040

- New reservoir at Broad Oak, Canterbury
- Water transfers 2025 to 2040
- Licence trade and site improvements

2041 to 2075

- Desalination
- Water Treatment Works improvements
- Conjunctive use of ground and surface water on the River Ouse
- Water transfers 2041 to 2075
- New reservoir at Broyle Place or Arlington
- Water recycling

South East Water - alternative plan

Delivering some solutions earlier than proposed in the Preferred Plan in case reductions in demand do not occur. It also includes more added environmental value and wider benefits for communities.

The alternative plan includes:

- Bringing forward plans to build the Broad Oak Reservoir in 2033 instead of 2036 to provide an additional 22 million litres/day.
- A second reservoir at Arlington, East Sussex in 2041 to be delivered instead of the proposed recycling facility at Peacehaven water treatment works.
- Bringing forward / introducing a series of new pipelines to transport additional volumes of water around the South East Water supply area.

Southern Water

- Southern Water do not provide potable water to Folkestone & Hythe District but do deal with the wastewater.
- Southern Water produce a Drainage and Wastewater Management Plan (DWMP).
- An updated DWMP will be published 'soon' - **It is not part of this consultation.**

Comments?