

# Improving water quality across the South East



Since we were privatised in 1989, we've made significant investments of more than £10 billion and increased the volume of wastewater that is fully treated before release back into the environment from 50% to 95%. We're now focused on tackling that last 5%.

## The Victorians designed our wastewater network

The 'combined sewer' was built to carry both wastewater from homes and businesses, as well as 'clean' rain-water run-off from roads and urban areas. This approach was only changed in the 1960s, with new wastewater networks designed to transport only wastewater, with rainwater being diverted back to the environment.



Despite more than £10 billion of investment into our wastewater sites and networks, much of the 39,900-kilometre network that winds its way across our region still needs to be managed.

## The Victorians didn't design our sewer network to deal with rapid urbanisation and climate change

We're already seeing the impacts of climate change on regional weather patterns, delivering longer, drier summers and winters and more frequent periods of heavy rainfall. For example, this autumn saw the fastest seasonal rainfall change ever, with no rainfall in July and over 245% of the long-term average rainfall seen in November, with parts of our region, such as Shoreham and Brighton, recording their wettest months.

## Did you know?

**Our combined sewer system is similar to those found in other European countries – in fact, many of them copied our design.**

**In the United States they have separate storm channels (as seen in movies over the years, think Grease and Armageddon).**

This extreme weather, coupled with increasing populations and urbanisation, means that much of the ground that used to soak up the rain has now been paved over or built on. The knock-on effect of this is that the volume of water entering the sewers has increased.

Huge volumes of water now gather in the system very quickly during a storm – where the flow into our treatment works can increase ten-fold within a few hours. Instead of allowing that water to back up into homes, businesses and communities, the water is released via storm overflows. This is our only option to maintain wastewater treatment services for our customers during storm events and periods of increased flow.

## There's increasing pressure from the public to accelerate improvements.

We understand the volume of these storm releases is no longer acceptable to our customers or sustainable for our environment.

That's why we welcomed DEFRA's Storm Overflows Discharge Reduction Plan, published in August 2022, which aims to eliminate them completely by 2050, except for during unusually heavy rainfall. It calls for a "challenge" of an average of 20 pollutions per storm overflow, but as we were already achieving close to that, we wanted to go further and faster. We believe a step-change is required.

### What are we doing about the problem now?

We set up our Clean Rivers and Seas Task Force in 2021 to drive a rapid change in thinking in this area. Working with partners across our region, we're looking at ways to reduce the use of storm overflows, without risking flooding of our sites or customers' homes or businesses.

Working with local councils, landowners, communities, customers and the Highways Agency to slow the flow of rainwater run-off in some very simple ways, we can very quickly reduce our reliance on overflows. We have six pilot projects already set up, in Kent, Hampshire, East Sussex and the Isle of Wight, looking at:

- rainwater harvesting
- more permeable paving
- misconnections
- soak-aways (including tree pits)
- relocation of drains
- rain gardens, planters and greening of public spaces.

We've also invested in new, larger storm tanks at several of our key sites, which help us better manage the release of flood water during heavy rainfall.

#### Swalecliffe

- Working to reduce Swalecliffe's 74 hectares of hard surfaces.
- Separating the surface water and sewer network.
- Hotspot mapping shows us where to target solutions.



#### Margate

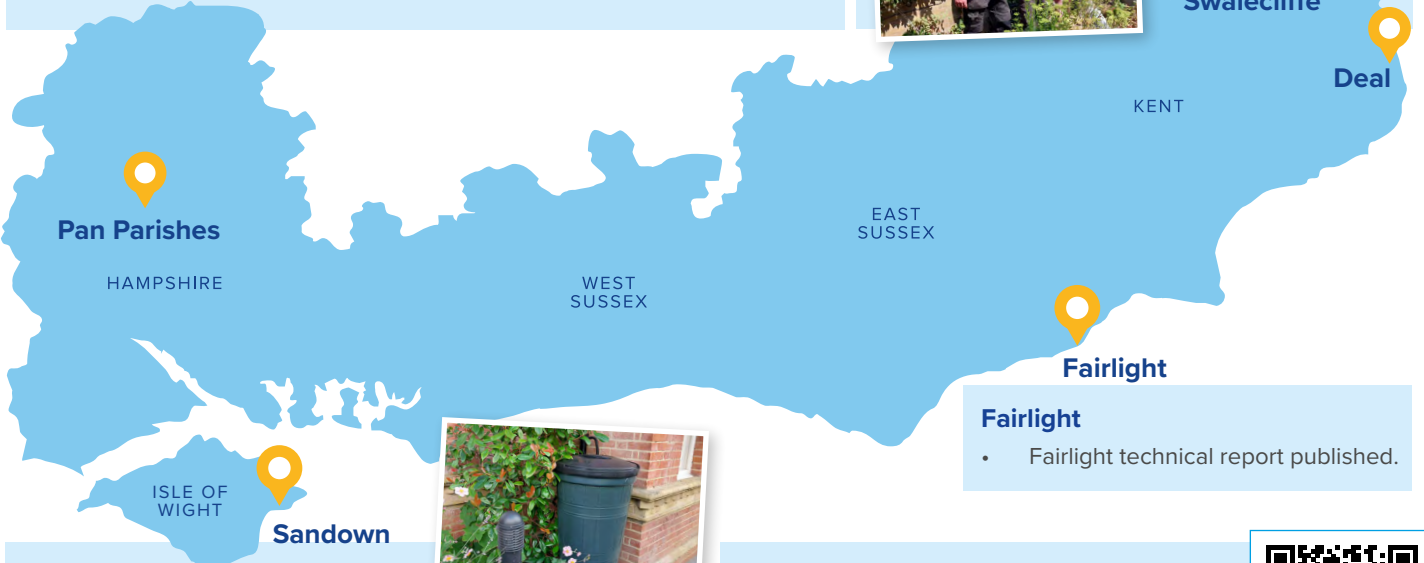
- Finding opportunities to increase surface water drainage with local councils. For example, reducing the amount of hard surfaces across Margate.
- Looking at opportunities to separate the surface water and sewer network and improve drainage.

#### Deal

- Installing smart or passive water butts or rain planters.
- Working with the local councils and highways to introduce roadside verges, parks and gardens and more green spaces.
- Engaging with schools.
- Surveying surface water connections.
- Introducing rainfall monitors and tracking the flow of surface water.
- Improving our Golf Road pumping station.
- Increasing our storm tank capacity.

#### Pan Parishes

- Sealing private pipework with an innovative chemical called Tubogel, as well as sealing the public sewer network to reduce groundwater infiltration.
- Exploring the creation of a local wetland.



#### Fairlight

- Fairlight technical report published.

#### Sandown

- Enhancing wastewater pumping station control, surface water removal and storage solutions.
- Trialling slow-drain water butts in Havenstreet.



Find out more about our Pathfinder projects. Scan the code or use the link below:

[southernwater.co.uk/pathfinder-projects](https://southernwater.co.uk/pathfinder-projects)

