

CASE STUDY



from
Southern
Water.

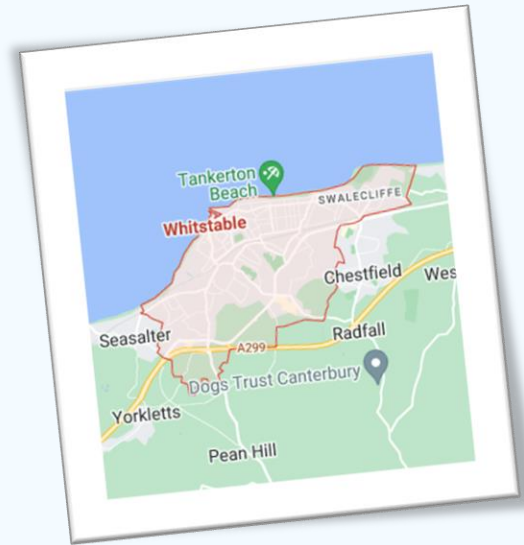
Upgrading infrastructure to slow the flow in Whitstable

Background

Whitstable is a town in the Canterbury district, on the north coast of Kent. Approximately half the sewers serving Whitstable are separate foul and surface water pipes, the other half are combined sewers. The flow in Whitstable is processed by the Swalecliffe Wastewater Treatment Works.

Swalecliffe's storm tanks were not being used to full capacity, and as a result the site was using its long sea outfall around 100 times a year. To prevent this, we wanted to find a way to use this storage while staying within the permits and guidelines set by the Environment agency (EA).

It takes time and careful research to get the evidence needed for a permit change, however we must sometimes go beyond permits to make the changes necessary at the scale required.



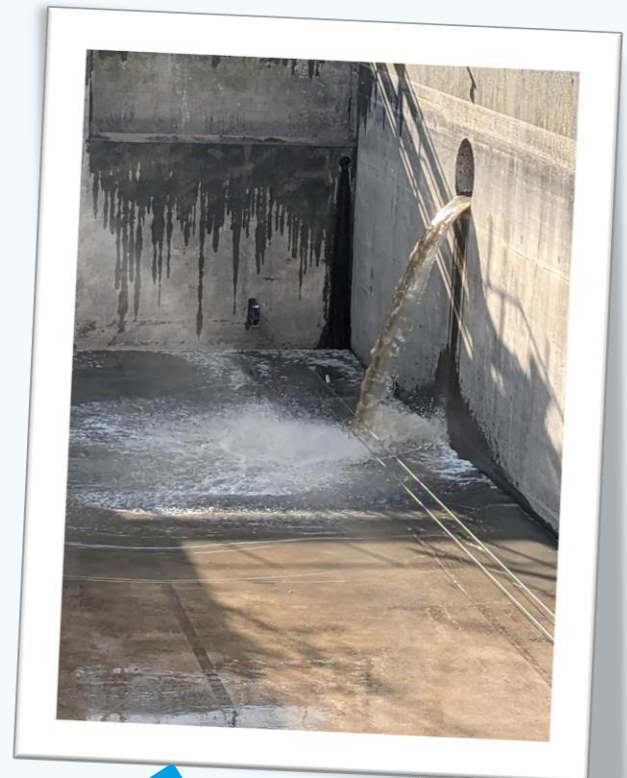
Our approach

- **Partnership:** We worked with the EA to get new permits that allowed us to optimise the site to make the most of the available storage.
- **Strategic planning:** Together with the EA we devised a complex engineering solution to completely overhaul the way the site worked.
- **Upgrading infrastructure:** We installed new chambers and pipework which enabled us to redirect 450 litres of storm water per second during heavy rainfall and store it in the 1,800 cubic metres of extra storage capacity.

Outcome

The work was completed in August and immediately started preventing storm overflow releases from the long sea outfall at Tankerton Beach.

We'll continue to monitor the results, however from the data we have gained so far as well as predictive modelling we estimate that storm overflows will be reduced by 20-30%.

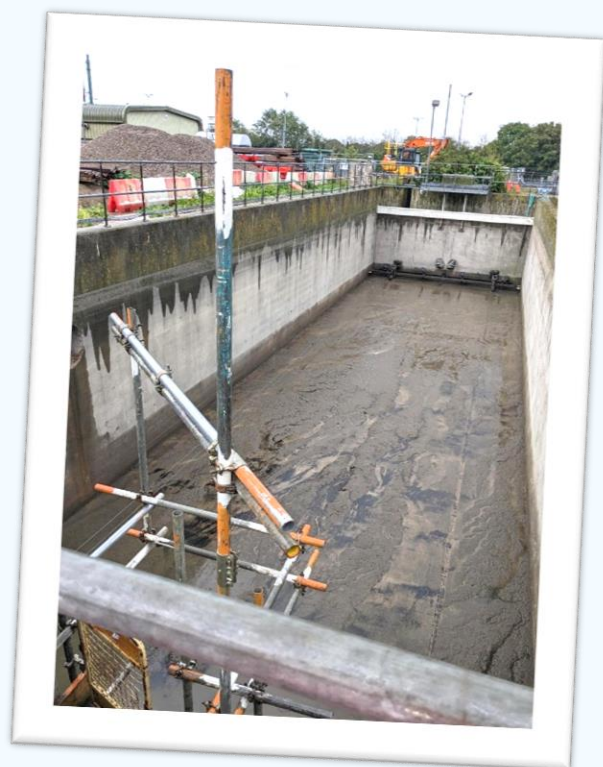


Capturing storm overflows in storage tanks

Advantages

- Reduced storm overflows.
- Used existing infrastructure rather building new structures.
- Optimised infrastructure that will support the treatment works and reduction of storm overflows for decades to come.

1,800,000 litres
of storage!



Costs

The installation of the new chambers and pipework cost a total of £750,000. Southern Water is investing over £25 million on upgrades to the Swalecliffe Wastewater Treatment works, including the replacement of the storm overflow pipe.

On top of this, further investment is planned in the local area to reduce and slow the amount of surface water entering the system in the longer term. We're using mainly nature-based solutions to achieve this, with a strong focus on maintaining and boosting community green spaces and local biodiversity.

Contact details

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