

CASE STUDY



from
Southern
Water.

Using multiple approaches to slow the flow in Deal

Deal: four step process

1. Increase roadside drainage
2. Expand surface water system
- 3. Install smart water butts**
- 4. Optimise Golf Road WPS**

Background

Deal is a coastal town in the South of Kent, which lies where the North Sea and the English Channel meet. Residents of Deal have long suffered the effects of excess surface water, with roads, footpaths and even homes being subject to flooding. This flooding is caused by heavy rainfall, which combination with an increase in impermeable ground, causes huge influxes of surface water that have nowhere to go.

Our approach

- **Infrastructure improvements:** We're upgrading and optimising our infrastructure and systems to manage heavier flows of rainwater.
- **Partnership:** We're working closely with Deal Water Action Task Force as well as local authorities, businesses, and homeowners so we can make the biggest impact possible.
- **Sustainable Drainage Systems (SuDS):** We're using a variety of SuDS to increase natural drainage and manage excess surface water.
- **Putting misconconnections right:** Surface water misconconnections (otherwise known as illegal connections) can really affect how well sewer systems handle rainwater. Many of these misconconnections are on private pipework, so we're seeking permission from landowners to put them right.

Outcome

- **Smart water management:** We've installed 50 [smart water butts](#) for residents in Deal. The smart butts are solar powered and can predict incoming rainfall. When rain is expected, they slow-drain themselves in advance to make space for the roof water run-off from the expected rainfall.



- **Pipework improvements:** We've upgraded a surface water pipe to redirect flows away from Albert Road to Matthews Close Dyke during heavy rain.
- **Infrastructure optimisation:** We're upgrading infrastructure and control systems at our Golf Road pumping station to help us manage heavier flows of rainwater.



Phase one of this project saw an overall improvement of the site and areas of work, including making the transfer pumps safer to lift with the installation of a dedicated power supply to the pump lifting hoist, removal of a redundant chemical tank taking up valuable space, and improved access to the infrastructure to aid maintenance and checks.

- **Sustainable drainage:** We supported Kent County Council through the planning and upgrading of their roadside drainage gullies in Albert Road.
- **Slow-drain water butts:** We've sent out over 3500 letters in the Deal and Walmer area to offer residents free [slow-drain water butts](#) to manage excess surface water. We're working with local company Mechanica, to install them. We're also investigating large roofs in the area that may be suitable for raingarden planters.

Advantages

- Reduced storm overflows and flooding.
- Increased customer satisfaction.
- Long-term partnerships built with local authorities.
- Made use of existing infrastructure rather than building new structures.
- Optimised infrastructure that will support the reduction of storm overflows for years to come.

Feedback

Councillor Trevor Bond, Dover District Council, Kent County Council, and member of the Deal Water Action Task Force, said:

"People of Deal welcome this initiative by Southern Water as yet another step in addressing the flooding problem that has plagued us for the last 20 years. It is great to see residents are environmentally conscious and want to work with us to reduce flooding.

"One of the most pleasing aspects of Southern Water's Pathfinder project has been the positive reaction of residents who have received a water butt or planter."