CASE STUDY

Expanding the surface water system to **reduce flooding 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 Kent which lies where the North Sea and the English Channel meet. During heavy or persistent rainfall, Albert Road in Deal was subject to persistent flooding of the highway, footpath and local homes.

The surface water sewer was too small and unable to carry away the amount of water that built up during heavy rainfall. Over time an increase in hard surfaces in the community have contributed to more surface water entering drains rather than being soaked up into the environment.

To balance this, we wanted to upgrade the sewer system and infrastructure to be better able to cope with the volumes of rainfall experienced in Deal.

In the Clean Rivers and Seas Task Force we are proud to be taking an industry leading 'Pathfinder' approach to managing excess water, carrying out extensive trialling and testing to find the best solution to make sure our initiatives are as effective as they can possibly be. This approach was used to create a four step plan to tackle the flooding in Deal. We then worked collaboratively to make improvements across private and publicly owned infrastructure as well as our own, to maximise results and scale the benefits.

Our approach

- **Research:** We carried out a comprehensive study of the catchment to understand the reason for flooding. We discovered Albert Road is the lowest point in the catchment, so excess water naturally flows there, collects in the road, and causes flooding.
- **Strategic planning and partnership:** We worked with our technical advisors Stantec to survey infrastructure in Albert Road and the surrounding area to better understand the options available to solve the problem.
- **Upgrading infrastructure:** With the help of local contractors Cappagh Browne, we set out to optimise the sewer and add in new chambers to increase surface water capacity. We also installed a special opening on the outfall pipe called a 'headwall'. This headwall will prevent blockages and erosion to the pipework and surrounding infrastructure.

New, larger pipework to handle more flow

Outcome

The project was completed in June 2022. We've used what we've learned from this optimisation to help us plan for future projects with similar circumstances. Our Pathfinder approach is centred around constantly learning, and using what we've learned to make sure we're always improving.

Together with step one of the process in partnership with Kent County Council to increase surface water drainage in Albert Road, flood events in the area have reduced dramatically. These projects combined immediately reduced the need for local tankers to remove excess water.

Benefits

- Fewer tankers needed to pump away flood water, therefore less disruption for residents.
- Decreased costs as a result of not needing tanker call-outs and incident cover for floods.
- Reduced flooding in Albert Road and the surrounding area.
- Increased customer satisfaction, stakeholder relationships and community engagement.

More information

The Clean Rivers and Seas Task Force

North Kent and the East pathfinder projects

Clean Rivers and Seas Plan (interactive map)

November Task Force Update

Headwall to prevent blockages and erosion