



**River Crane:  
urban catchment  
management.**

# River Crane: urban catchment management.

Catchment management is most often associated with rural, upland areas, and often focuses on tackling single issues like pesticides, phosphorus or nitrate. The River Crane catchment in west London is an example of a densely-populated urban catchment which presents a different kind of challenge, with a wide range of issues to address.

## Background.

London's rapid growth is quickly catching up with the extra capacity that was created by a major programme of improvements at the capital's largest sewage works in 2015. The challenge is greatest at our Mogden site in Twickenham, west London.

Wrongly connected household drains are a key source of problems in the Crane and wider Mogden sewage works catchments. These 'misconnections' send household waste into surface water drains, causing pollution in local rivers. In other cases they channel rainwater from domestic properties into sewers, using up valuable treatment capacity at our works.

With population growth of more than 15% expected in the sewage works' catchment area over the next 20 years, and very little space for changes within the boundary of the site, it's essential for us to find a solution elsewhere in the catchment.

## The project focus.

The huge amount of rainwater that flows into our pipes is the main issue we need to address. A more conventional approach to upgrading Mogden sewage works would cost around £250 million, with relatively high operating costs because of significant energy requirements. But this still wouldn't solve the underlying problems at source.

Instead, we're aiming to reduce the need for new infrastructure at the works at all. This project focuses on how an integrated upstream approach could address the wider issues in the River Crane catchment, and how it could reduce or defer the need for hard, end-of pipe solutions.



## Our programme of activities.

This project will work through the local catchment partnership to identify and deliver a programme of activities, many in collaboration with customers and NGOs, including:

- Detailed catchment modelling
- Improvements to the public sewer network, which could include restoring surface water outfalls, recommissioning redundant outfalls and creating new sections of foul sewer
- Property-level improvements, potentially including tackling misconnected drains, and installing water butts and planters
- Increased use of SuDS to manage surface water, including at schools
- Education and engagement, targeting the 60 schools in the catchment
- Extending the successful citizen science programme which is already underway

- **Densely populated urban catchment affected by a wide range of issues.**
- **Putting community engagement at the heart of catchment management.**

### Citizen Crane project.

Citizen Crane is a citizen science project to investigate the causes of pollution in the River Crane, and to identify and put in place measures to improve the condition of the river.

The project is now in its fourth year, and has provided a continuous dataset of water quality data for the catchment – by putting citizen science and community engagement at the heart of catchment management.

The project steering group includes members of the Crane Valley Partnership with Green Corridor (host of the partnership), Thames Water, the Environment Agency, Zoological Society of London, Friends of River Crane Environment and frog environmental all contributing.

### Outfall Safari.

One of the most important elements of the project has been Outfall Safari. Citizen Crane volunteers surveyed all the outfalls along 34 km of the main river corridor in the catchment, locating, photographing and assessing a total of 227 outfalls, using a methodology previously developed by Thames Water. Details of all polluting outfalls were passed to our Environmental Protection Team to follow up and take action.

Since creating the Outfall Safari methodology, 112 volunteers have been trained, and this approach has now been rolled out to more than 140 km of river corridors across Greater London.

More than 1,100 outfalls have been assessed and their details passed on to our team, the Environment Agency and the relevant catchment partnerships to take action by tackling the pollution that volunteers find - often from wrongly connected household drains.

Outfall Safari has improved public awareness of the risk of wrongly connecting drains, which has historically had little public visibility. This should help to cut the number of new misconnections, and more effective work to resolve existing problems when they're discovered.

Thanks to the success of this project, we're now supporting similar schemes on the River Cray in Bromley and Bexley, and the River Beam in Barking, Dagenham and Havering.

**Polluted surface water outfall.**



**Trained volunteers gathering data.**