



**Outfall safari and
tackling
misconnections.**

Outfall safari and tackling misconnections.

Misconnections happen when wastewater or sewage pipes are mistakenly connected into surface water drains. This is usually accidental, but it's causing pollution in watercourses across the country. In the past, reports of polluting outfalls have often come from members of the public who happen to spot pollution entering our rivers. 'Outfall Safari' was created for volunteers to survey outfalls along rivers, and pass the details to our Environmental Protection Team to follow up and take action.

Background.

Foul sewers collect wastewater from toilets, sinks and appliances like washing machines and dishwashers, and take it to the nearest sewage works to be treated.

Surface water drains are separate - collecting rainwater that runs off roads and roofs. This water is then diverted to a local river or stream to prevent your home from flooding, while also boosting water levels in the environment.

The environmental impact.

If a property is misconnected, the wastewater will go straight into the river. Untreated sewage kills wildlife, damages the natural environment and puts our health at risk.

Are misconnections illegal?

Under Section 109 of the Water Industry Act 1991, it's unlawful to discharge foul water into a sewer provided for surface water when separate public sewers are provided for foul water and surface water. It's also an offence to put raw sewage into rivers and streams. Property owners could face the risk of an expensive bill to put this right. They could even be prosecuted and fined up to £50,000 if they don't do anything about it.

- **Misconnections are unlawful.**
- **We estimate as many as 60,000 properties are misconnected in our region.**
- **Volunteers can help us find and fix more misconnections.**



Volunteers on an outfall safari.

Outfall Safari.

Outfall Safari was developed and first run by the Citizen Crane project in the Crane Valley catchment. 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 the Outfall Safari methodology was created, 112 volunteers have been trained, and the approach has been used on 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 found by volunteers - 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 mean fewer new misconnections in the future, and more effective work to resolve them when they do appear.

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

Our catchment investigations.

Once a contaminated outfall has been discovered (in other words, when foul water is going where it shouldn't), we can trace the pollution back to its source.

During these investigations we can also identify other issues that cause pollution in local watercourses. In addition to misconnections, this can include private blockages and illegal fly tipping of trade waste.

We have a specialist pollution tracing contractor who investigates our sewer network to identify misconnected properties. We use a range of techniques including:

- Visual assessments.
- Dye tracing.
- CCTV.
- Wire caging.
- Water quality sampling.

Visual assessments.

Identifying the type of pollution in the local watercourse can give us an indication of where it's coming from. For instance, an outfall polluted mainly with grease and fat suggests that it could be from a local restaurant. Pollution often results in the growth of sewage fungus, a mass of filamentous bacteria that grows in response to excessive nutrients in the water.

We may also be able to spot misconnections by looking at the outside of properties. For example, we check all roof drainpipes and guttering for any additional connections. Sinks and washing machines should never be plumbed into drainpipes.



Polluted surface water outfall.



Dye tracing, sewage fungus and wire caging.

Dye tracing.

This involves putting a teaspoon of colourful, fluorescent dye down sinks, toilets, appliances and drainage gullies so we can follow where it goes. The bright dye shows where wastewater is flowing, and helps us check that properties are properly connected. The dye isn't permanent, and doesn't cause any staining.

CCTV.

We can use crawler CCTV systems to follow our network of sewers, and identify any misconnections where wastewater enters the surface water drains.

Wire caging.

We hang wire cages inside the drainage network to catch toilet and kitchen waste, and other evidence of pollution as it's flushed out of toilets and sinks, and flows down to the watercourse. This can also help identify problem areas in our catchments.

Water quality sampling.

Misconnections and the pollutions they cause are often difficult to detect, due to their intermittent nature and the fact they may not always be visible. However, the wide range of possible pollutants can all be sampled and checked for, monitored and used as indicators for the source of the pollution.

What can you do?

Taking the time to make the right connection can have huge implications for your local watercourses. Make sure your property is connected right first time - visit www.connectright.org.uk for more information and to find an accredited plumber.

**connect
right** ✓
Stop pollution

