Hulton Lane Ends

Infiltration Reduction Plan

Last Updated: November 2024

United Utilities

Water for the North West

Executive summary

Hulton Lane Ends in Greater Manchester is currently in the survey stage (see Figure 1) to address infiltration and reduce spills at the Hulton Lane Ends Wastewater Treatment Works Storm Overflow (016950037SO). A desktop assessment concluded that infiltration is unlikely, surveys are underway to clarify this.

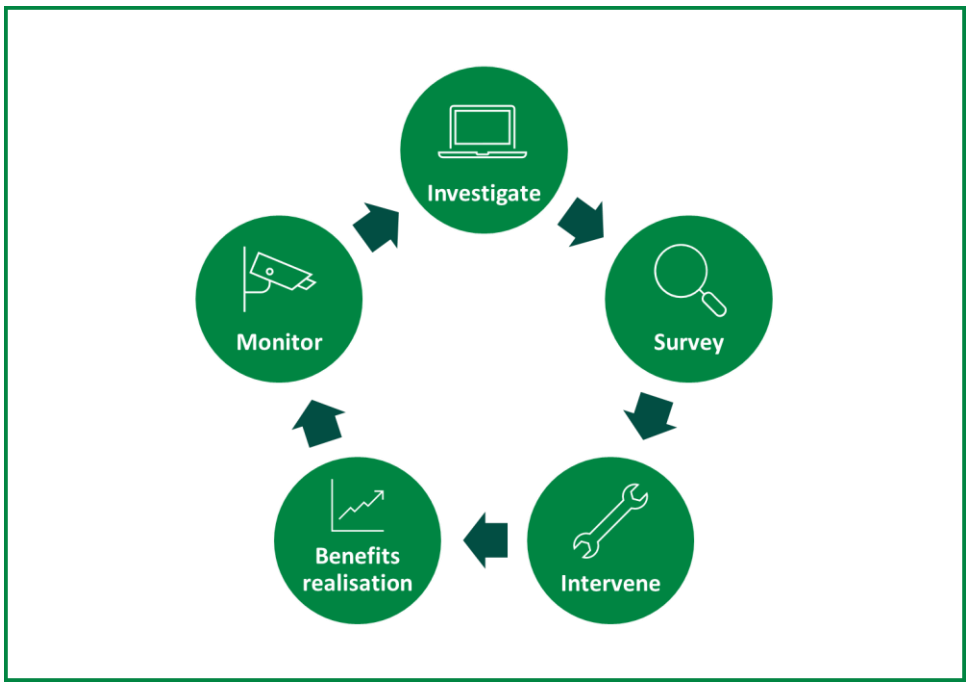

Figure 1: Iterative process to investigate, identify and address groundwater infiltration

Context

Sometimes, water can enter our wastewater pipes that they were not designed to receive. One source of these additional flows can be groundwater infiltration which can occur through pipe defects, leaky joints or issues with manholes. Extra water in the network can cause the sewer capacity to be exceeded, leading to sewer flooding or contributing to storm overflow activations.

As part of our ongoing work to maintain an effective network and achieve Better Rivers for the North West, our Infiltration Reduction Plans demonstrate our efforts to date and next steps to address infiltration and inflows in the catchment. This plan covers the Hulton Lane Ends drainage area and the associated overflow Hulton Lane Ends Wastewater Treatment Works Storm Overflow (016950037SO). In 2022, infiltration was identified as a potential leading cause of the storm overflow discharging. The purpose of this plan is to further investigate and address this.

Investigate

A desktop study was undertaken using available data to understand the extent of infiltration in the sewer network of the drainage catchment. The following data (where available) was analysed to determine the scale and location of potential infiltration:

- Relevant flow and depth data
- Operational information
- MCERTS Data
- Hydraulic models of the catchment

- River Levels
- Groundwater (borehole) data
- Spill analysis
- Topographical and Sewer maps

The assessment concluded that infiltration is unlikely in the catchment.

Survey

Comprehensive CCTV surveying of the area is planned for Winter 2024 to identify possible infiltration and inflows to the sewer. This may be extended to Winter 2025 if surveying is not conclusive. The CCTV survey information will then be assessed using Artificial Intelligence to identify outstanding infiltration and inflow issues that need addressing.

Next steps

Hulton Lane Ends is currently in the surveying stage of identifying and addressing infiltration (see Figure 1). If the CCTV survey reveals groundwater infiltration, interventions will be considered, and the site will follow an iterative intervention regime to monitor the efficacy of the solution. Remedial works at Hulton Lane Ends could include, but not be limited to, relaying sewers, lining sewers, sealing manholes or disconnecting inflows.