

Kaber

Infiltration Reduction Plan

Last Updated: March 2025



Executive summary

Kaber Waste Water Treatment Works Storm Overflow in Cumbria is in the monitoring stage (see Figure 1) to address infiltration at the Kaber Wastewater Treatment Works Storm Overflow (017670011SO). There was limited data available for Kaber to complete a desktop assessment and therefore, conclusions on the presence of infiltration could not be drawn at this level. CCTV surveys have not identified the presence of infiltration and remedial works are therefore not required.

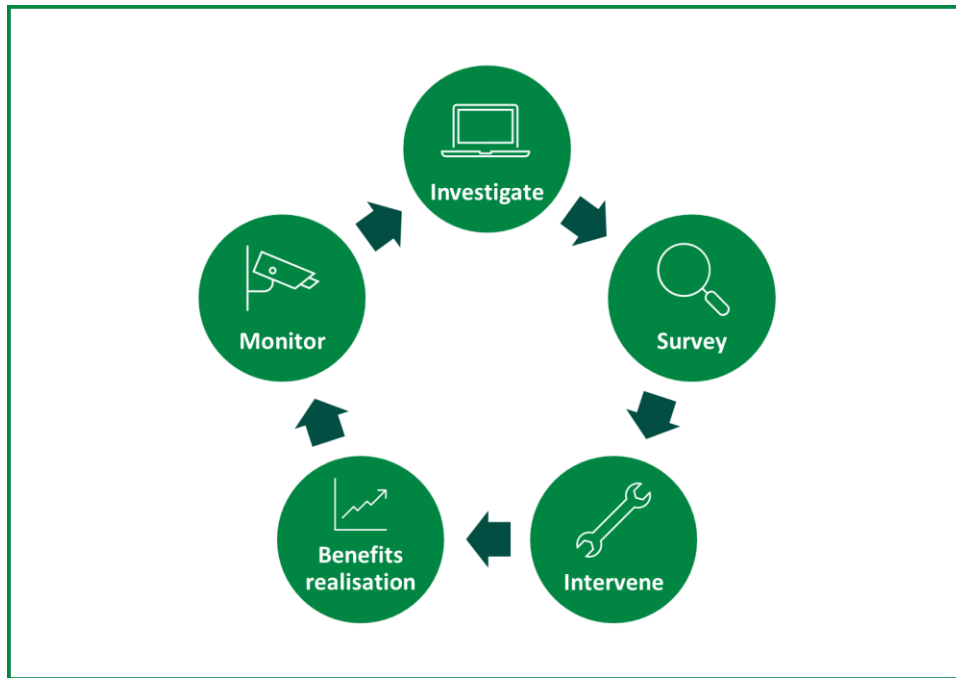


Figure 1: Iterative process to investigate, identify and address ground water infiltration

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 Kaber drainage area and the associated overflow the Kaber Wastewater Treatment Works Storm Overflow (017670011SO). In 2022, infiltration was identified as a potential leading cause of the storm overflow discharging. The purpose of this plan is to capture the process to investigate, identify and address significant groundwater infiltration.

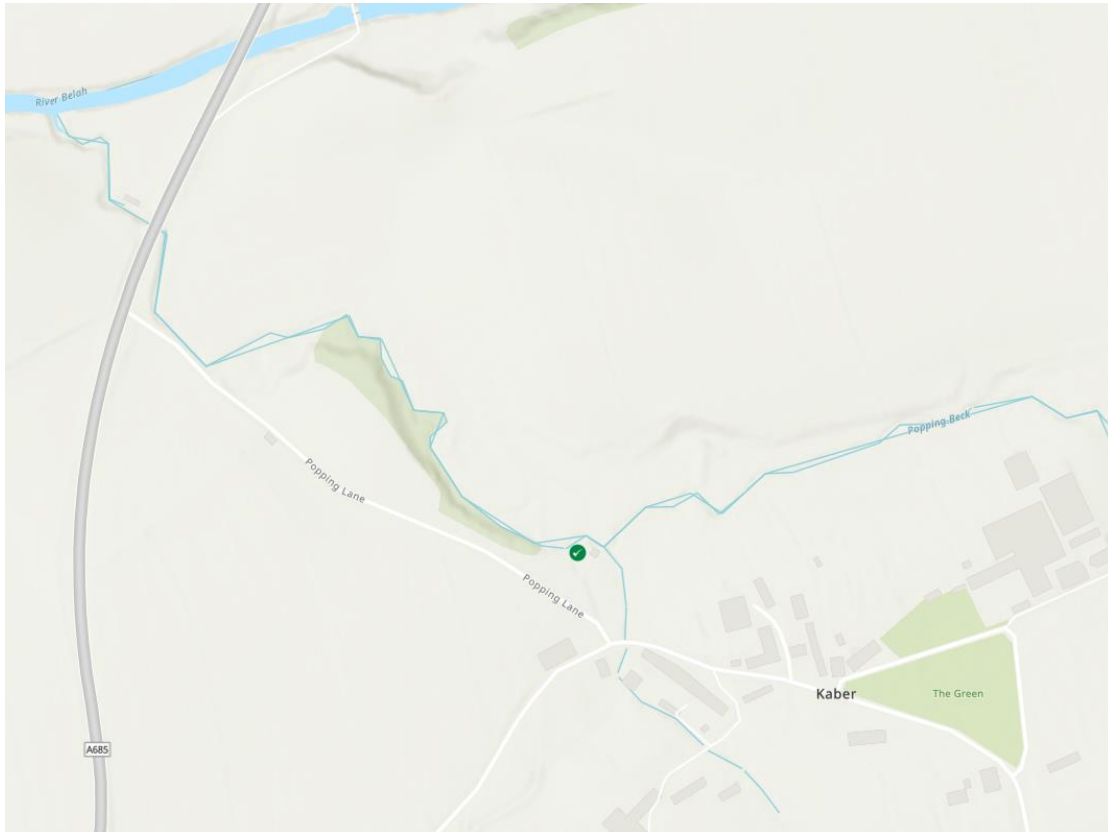


Figure 2: United Utilities – Better Rivers – Storm Overflow Map (October 2024). The green dot marks the Kaber WwTW Storm Overflow.

Kaber lies in the Eden District of Cumbria, around 32km southeast of Penrith. South of the River Belah and its tributary, Popping Beck.

Investigate

A desktop study was attempted using available data to understand the extent of infiltration in the sewer network of the drainage catchment. There was limited data available for Kaber and therefore, conclusions on the presence of infiltration could not be drawn at this level.

Survey

As recommended, over 700m of CCTV surveys were completed in Winter 2024 and identified areas of infiltration within the catchment. The CCTV surveys were reviewed by an engineer and assessed using Artificial Intelligence to rapidly identify and locate points of infiltration requiring remedial works. No infiltration was identified.

The network was also checked for inflows and no lateral connections are suspected of receiving flows not bound to receive.

Next steps

Kaber is now in the monitoring stage of identifying and addressing infiltration. The site will follow the iterative process displayed in Figure 1 to identify new points of infiltration, should they arise.