Glasson

Infiltration Reduction Plan

Last Updated: July 2026

United Utilities

Water for the North West

Executive summary

Glasson in Cumbria is currently in the monitoring stage (see Figure 1) to address infiltration and reduce spills at the Glasson Pumping Station Storm Overflow. An initial desktop assessment concluded that there was no evidence of infiltration. CCTV surveys completed in Autumn/Winter 2024 did not identify groundwater infiltration. The area is being monitored to identify any new points of infiltration, should they arise.

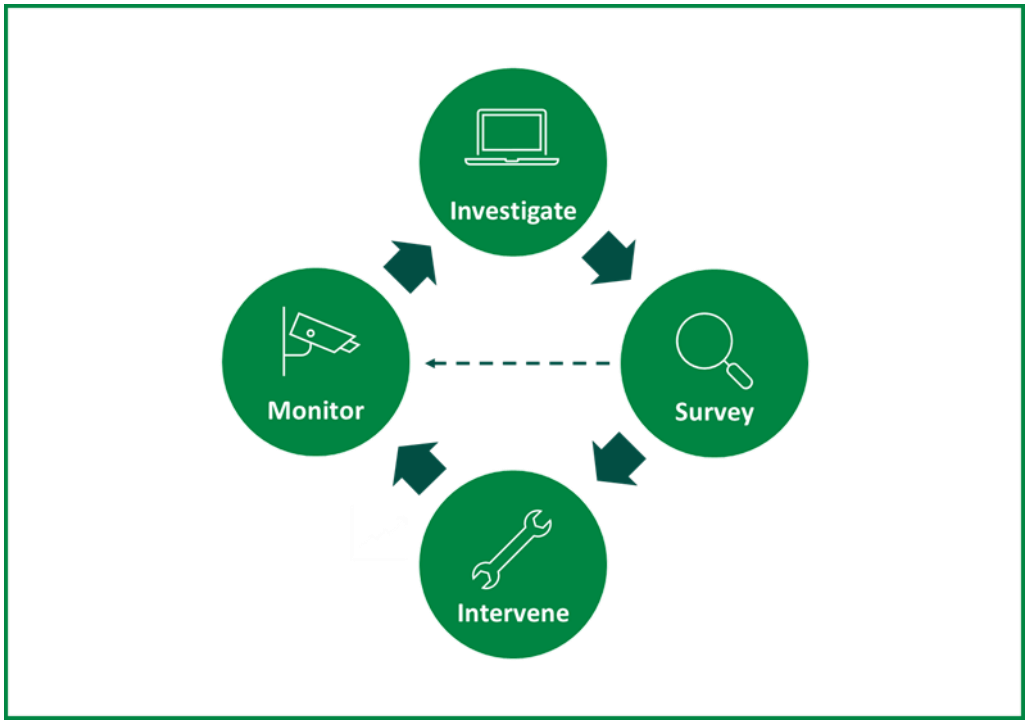

Figure 1: Iterative process to investigate, identify and address groundwater infiltration

Context

Sometimes, water can enter our wastewater pipes for which 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 Glasson drainage area and its associated overflow, Glasson Pumping Station Storm Overflow. 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.

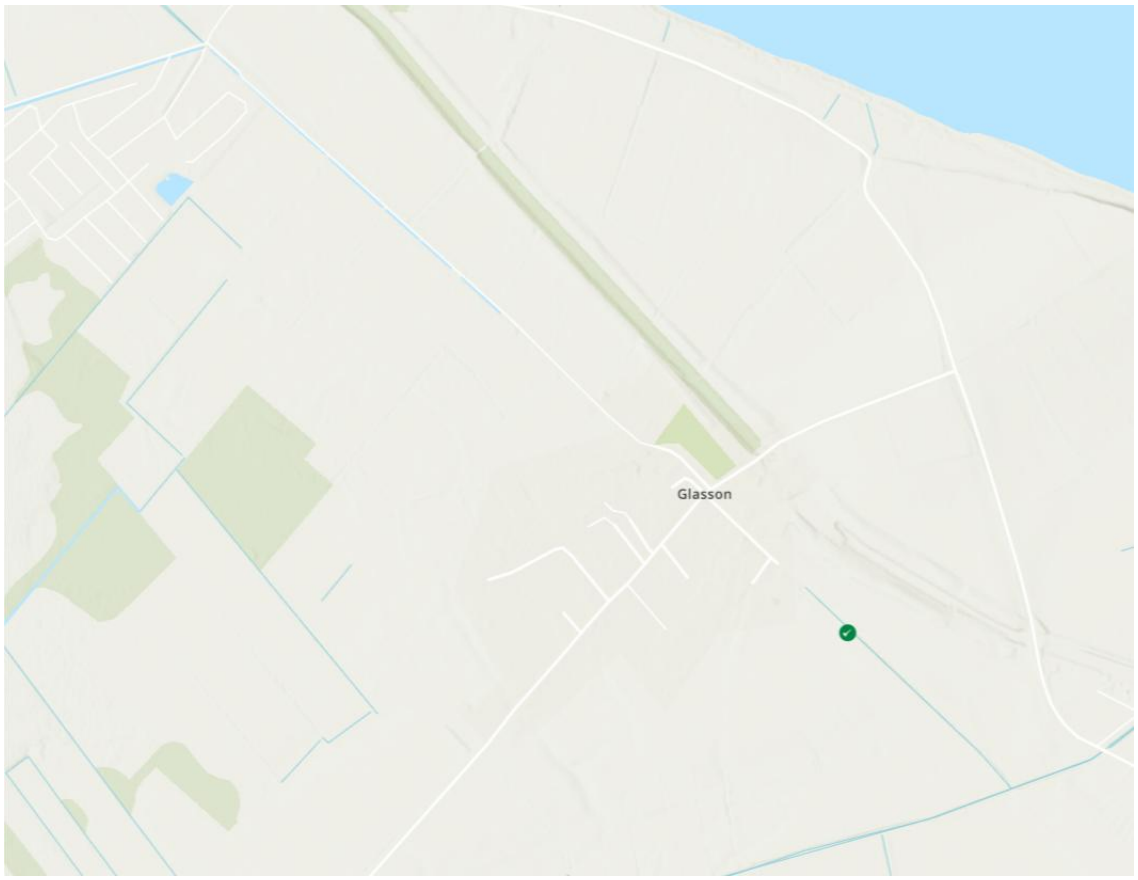

Figure 2: United Utilities – Better Rivers – Storm Overflow Map (November 2024). The green dot marks Glasson Pumping Station Storm Overflow

Glasson is a village in Cumbria, located 8 miles north-west of Carlisle and inland of the Solway Coast at the mouth of the River Eden. It sits north of the Drumburgh Moss Nature Reserve and east of the Glasson Moss Nature Reserve. Surrounding land is mostly flat agricultural land.

Investigation

An initial 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 there was no evidence of infiltration upstream of the overflow. Further observations also indicated no significant issue with infiltration in the catchment and the model verification supported this.

Survey

We completed 106m of CCTV surveys in Autumn/Winter 2024. The surveys were assessed using Artificial Intelligence to rapidly identify and locate points of infiltration. They were then reviewed by an engineer to assess for any required remedial works. In line with the desktop study, no active infiltration was found and therefore no interventions were required.

There were lengths where encrustation was present which could be an indication of historic infiltration. Therefore, further surveys may be required to confirm that there is no infiltration when the water table is at its highest.

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

Next steps

Glasson is currently in the monitoring stage of identifying and addressing infiltration. The site will follow the iterative process shown in Figure 1 and continue monitoring to identify any new points of infiltration, should they arise.