

Hallen Infiltration Reduction Plan Summary

This provides an update on the last year's groundwater situation, what mitigation actions, if any, were taken and a summary of our action plan to prevent flooding due to groundwater infiltration of our sewer network.

April 2024 – March 2025

Regional Summary

2024 continued to be a very wet year in the Wessex Water region, with above average rainfall in the majority of months. In particular, groundwater levels rose dramatically in September 2024, where the region recieved over 250% of the monthly average rainfall. This resulted in many catchments experiencing inundation from groundwater much earlier than usual.

Whilst December was relatively dry, above-average rainfall for the remainder of the autumn and winter meant that groundwater levels remained elevated until March, at which point the drier weather enabled the majority of catchments to recover.

[Record-breaking rainfall for some this September - Met Office](#)

Local Summary

Groundwater reached critical levels and the sewers were unable to cope. Two flooding incidents attributed to inadequate hydraulic capacity (IHC) were reported.

Action Plan

Annual Activity

Review asset and operational data and update annual reports.

Continue monitoring system performance using telemetry, rainfall records and local groundwater levels to inform the operational response during high-groundwater periods, and to monitor changing infiltration levels in the catchment.

Use machine learning to predict flows in sewers and proactively identify blockages and other issues.

Proactive inspections and maintenance of sewerage assets.

Completed

Installed in-sewer monitors at key locations to better understand flows in the network.

Reviewed incidents of sewer flooding.

Inspected public sewer network to identify points of infiltration.

Sealed sewers and manholes to prevent groundwater infiltration.

Undertaken pumping station or flow surveys to analyse flows in sewers.

Upgraded pumping stations where appropriate, to improve the reliability and performance of the site.

Completed (cont.)

Updated the catchment hydraulic model.

Medium Term

Undertake pro-active inspection of public sewers and manholes using CCTV to identify points of infiltration.

Infiltration sealing of sewers and manholes, where deemed cost-effective, targeting work according to study findings.

Implement a scheme to improve the local water recycling centre (WRC).

Long Term

Identify road gullies and other impermeable areas that are connected into the foul sewers.

Inspect private gullies, drains, and manholes where applicable.

Install permanent flow meters at key pumping stations to continuously record pump performance.

Consider sustainable solutions to rainwater management, for example above-ground attenuation and property-level interventions.

When Necessary

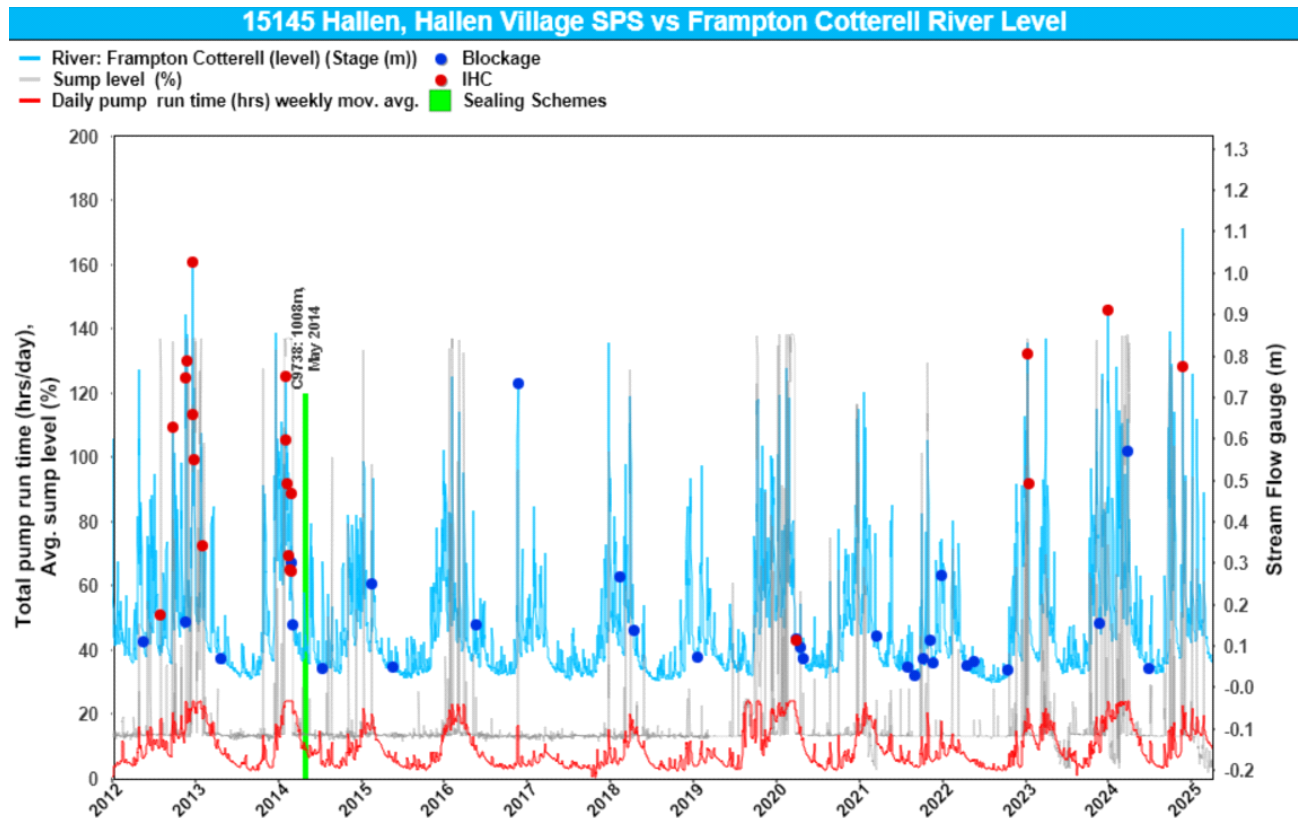
Implement emergency tankering procedure for preventing restricted toilet use and sewer flooding during high groundwater periods, in order to protect public health.

Implement Operational Mitigation Action Plan (OMAP) for discharging excess flows to the environment as a last resort, when tankering would not prevent restricted toilet use or sewer flooding, and public health is at risk.

Implement a scheme to address capacity issues in the sewer network.

Current Performance

The graph shows incidents against the river level, measured at Frampton Cotterell as an indication of local groundwater levels, and flow at Hallen Village pumping station. Despite sewer sealing in 2014 the pumping station is still affected by groundwater infiltration and incidents due to inadequate hydraulic capacity (IHC) have continued to be reported during wet winters during heavy rainfall.



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24	2024-25
Length of sewer inspected (m)	1,246	-	-	-	588	447
Length of sewer sealed (m)	1,008	-	-	-	-	-