Shapwick Edington 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

Local groundwater levels in Shapwick and Edington were high during the winter of 2024/25, however no incidents were reported that were attributed to inadequate hydraulic capacity (IHC).

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.
Undertake pro-active cleaning (jetting) of sewers to maximise capacity.
Proactive inspections and maintenance of sewerage assets.

Completed
Installed permanent flow meters at key pumping stations to continuously record pump performance.
Reviewed incidents of sewer flooding.
Upgraded pumping stations where appropriate, to improve the reliability and performance of the site.
Installed sealed covers on manhole chambers vulnerable to overland flow or river water entering through the cover.

Completed (cont.)

Updated the catchment hydraulic model.

Inspected public sewer network to identify points of infiltration.

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

Sealed sewers and manholes to prevent groundwater infiltration.

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

Short Term

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

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

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

Long Term

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

Inspect private gullies, drains, and manholes where applicable.

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

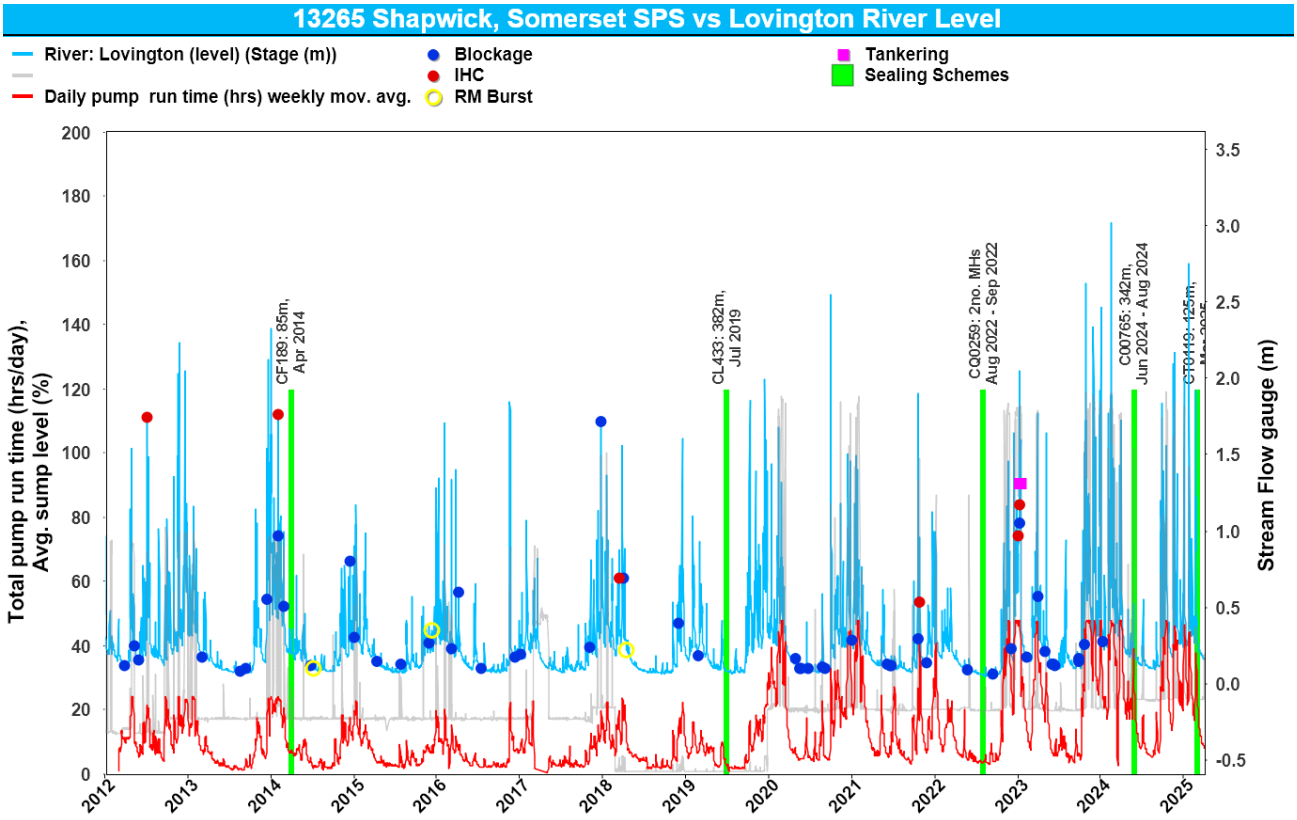
When Necessary

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.

Current Performance

The below graph shows incidents against river level (as measured at Somerton) and the telemetry at Shapwick sewage pumping station (SPS). Although significant sewer rehabilitation has been completed, infiltration still affects the sewer network, demonstrated by the levels at Edington and Shapwick SPSs remaining high for prolonged periods of time during the winter months.



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24	2024-25
Length of sewer inspected (m)	16,642	-	7,839	652	276	715
Length of sewer sealed (m)	1,484	1	1	13	-	754