Wishford 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

The groudwater in the Wishford catchment reached critical levels this year following periods of continuous rainfall with several incidents attributed to inadequate hydraulic capacity (IHC) being reported throughout the winter. In help alleviate the sewer network, tankering was carried out at Wylye, Chequers Cottage sewage pumping station (SPS) in November 2024, however the Operational Mitigation Action Plan (OMAP) was instigated between November 2024 and March 2025 to prevent flooding, loss of service and protect publich health. Tankering was also carried out in Hanging Langford in March 2025 to assist with pumping station maintenance.

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.
Install in-sewer monitors at key locations to better understand flows in the network.
Undertake pro-active cleaning (jetting) of sewers to maximise capacity.
Proactive inspections and maintenance of sewerage assets.
Implement a scheme to improve the local water recycling centre (WRC).

Completed
Investigated nature-based solutions in the catchment.
Updated the catchment hydraulic model.
Implemented Nature-based Solutions in the wider catchment.
Inspected public sewer network to identify points of infiltration.
Installed permanent flow meters at key pumping stations to continuously record pump performance.
Sealed sewers and manholes to prevent groundwater infiltration.
Upgraded pumping stations where appropriate, to improve the reliability and performance of the site.
Inspected private gullies, drains or manholes to identify points of infiltration.
Undertaken pumping station or flow surveys to analyse flows in sewers.
Reviewed incidents of sewer flooding.
Implemented a scheme to address capacity issues in the sewer network.

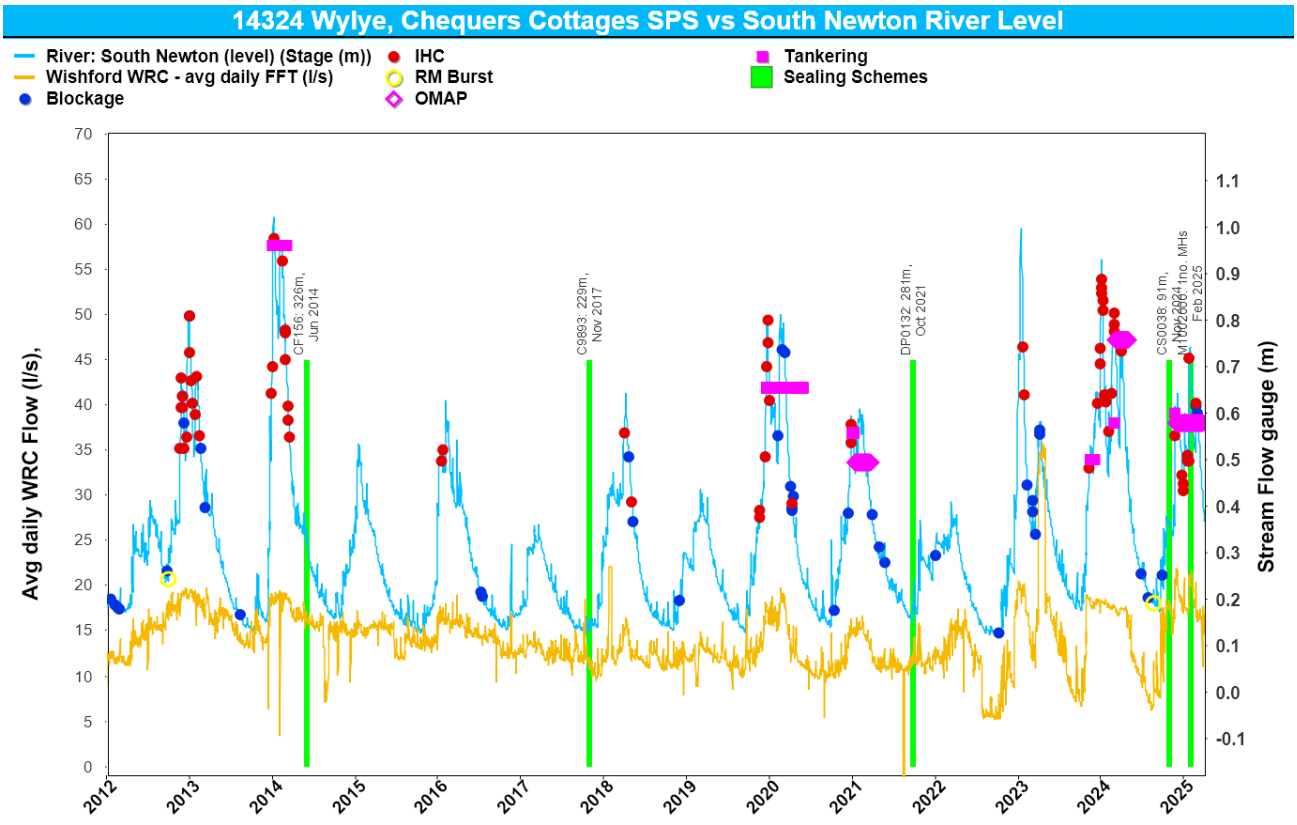
Short Term
Undertake pro-active inspection of public sewers and manholes using CCTV to identify points of infiltration.
Install permanent flow meters at key pumping stations to continuously record pump performance.
Infiltration sealing of sewers and manholes, where deemed cost-effective, targeting work according to study findings.
Upgrade pumping stations where appropriate, to improve the reliability and performance of the site.

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 graph below compares operational incidents with the flow at Wishford Water Recycling Centre (WRC) and groundwater at Stoford Cross. Groundwater levels were extremely high during the winter of 2024/25 and performance at various sewage pumping stations (SPS) in the catchment coincided with the rise in groundwater levels. This indicates the area is still affected by infiltration. However, the general trend is that dry weather inflow at Wishford WRC has decreased, demonstrating the positive impact of the long-term sealing works. In particular, sealing in August 2022 dramatically reduced flow to the WRC.



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24	2024-25
Length of sewer inspected (m)	16,783	5,126	793	325	2,071	1,081
Length of sewer sealed (m)	1,754	-	669	22	-	380