Clapgate Wimborne 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 Clapgate Wimborne catchment reached critical levels during 2024/25 and while there were no reported flooding incidents, several incidents of backing up due to inadequate hydraulic capacity (IHC) were reported. Tankering was carried out in the catchment between September 2024 and March 2025 to relieve the network.

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.
Proactive inspections and maintenance of sewerage assets.

Completed
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.
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.

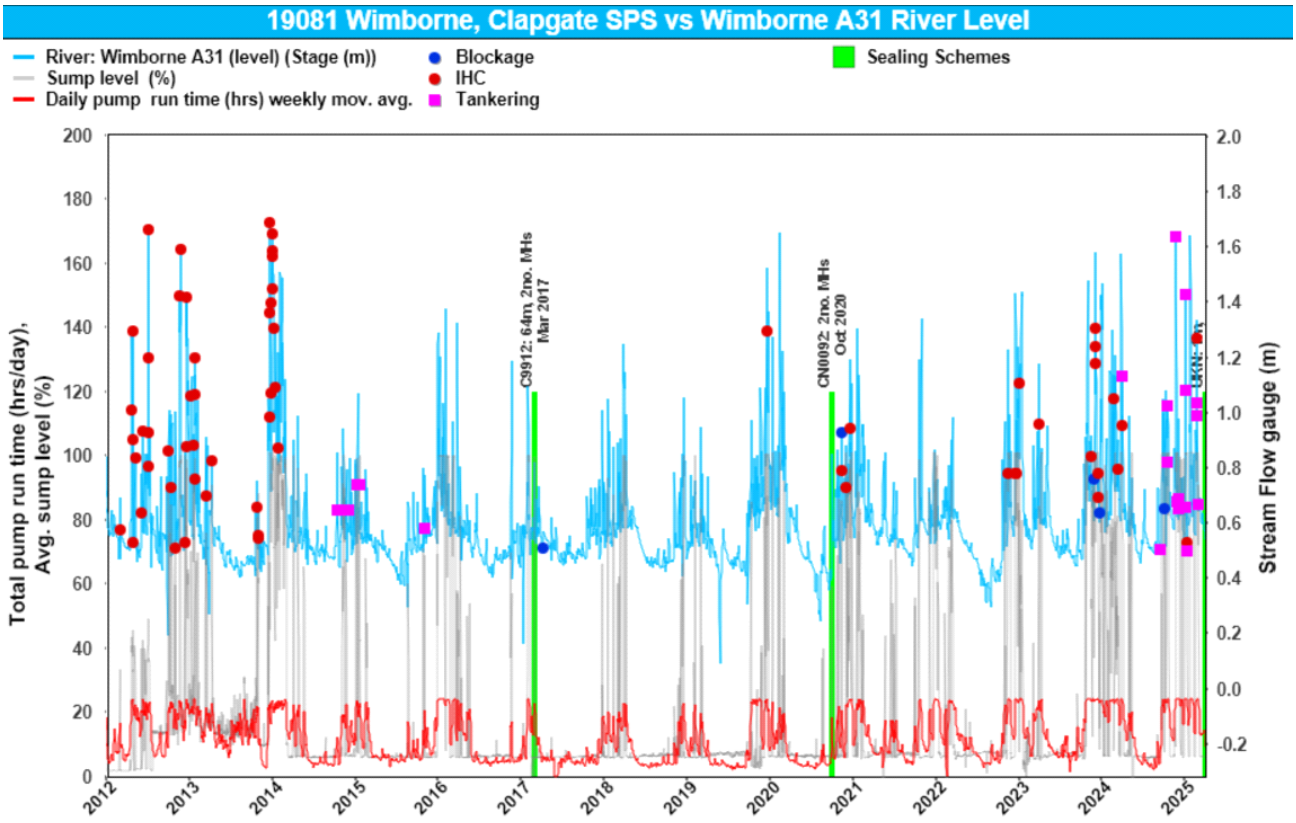
Short Term (cont.)
Use machine learning to predict flows in sewers and proactively identify blockages and other issues.
Install in-sewer monitors at key locations to better understand flows in the network.
Infiltration sealing of sewers and manholes, where deemed cost-effective, targeting work according 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.
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.

Current Performance

This graph shows incidents against river level (as measured at Walford River Gauge) and the flow at Clapgate Sewage Pumping Station (SPS). Incidents caused by inadequate hydraulic capacity predominantly occur when river levels are high in the area, suggesting groundwater inundation to be the main cause of flooding in Clapgate Wimborne, as evident during winter 2023/24. Sewer and manhole sealing was undertaken in 2017 and 2020, however the network continues to become inundated during high groundwater levels.



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24	2024-25
Length of sewer inspected (m)	2,045	-	-	1,443	-	-
Length of sewer sealed (m)	67	-	-	-	-	-