

Barton St David 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 received 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

Barton St. David Sewage Pumping Station (SPS) recorded high wet well levels at times during the winter of 2024/25, correlating with high ground water levels. Two incidents attributed to inadequate hydraulic capacity were recorded as a result of inundation of the sewer 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.

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 review of incidents of sewer flooding suspected to be affected by groundwater infiltration.

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.

Installed sealed covers on manhole chambers vulnerable to overland flow or river water entering through the cover.

Completed (cont.)

Investigated nature-based solutions in the catchment.

Updated the catchment hydraulic model.

Inspected public sewer network to identify points of infiltration.

Identified road gullies and/or impermeable areas connected to the foul network.

Inspected private gullies, drains or manholes to identify points of infiltration.

Sealed sewers and manholes to prevent groundwater infiltration.

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

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.

Short Term

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

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

Inspect private gullies, drains, and manholes where applicable.

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).

Medium Term

Implement Nature-based Solutions in the wider catchment.

Long Term

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

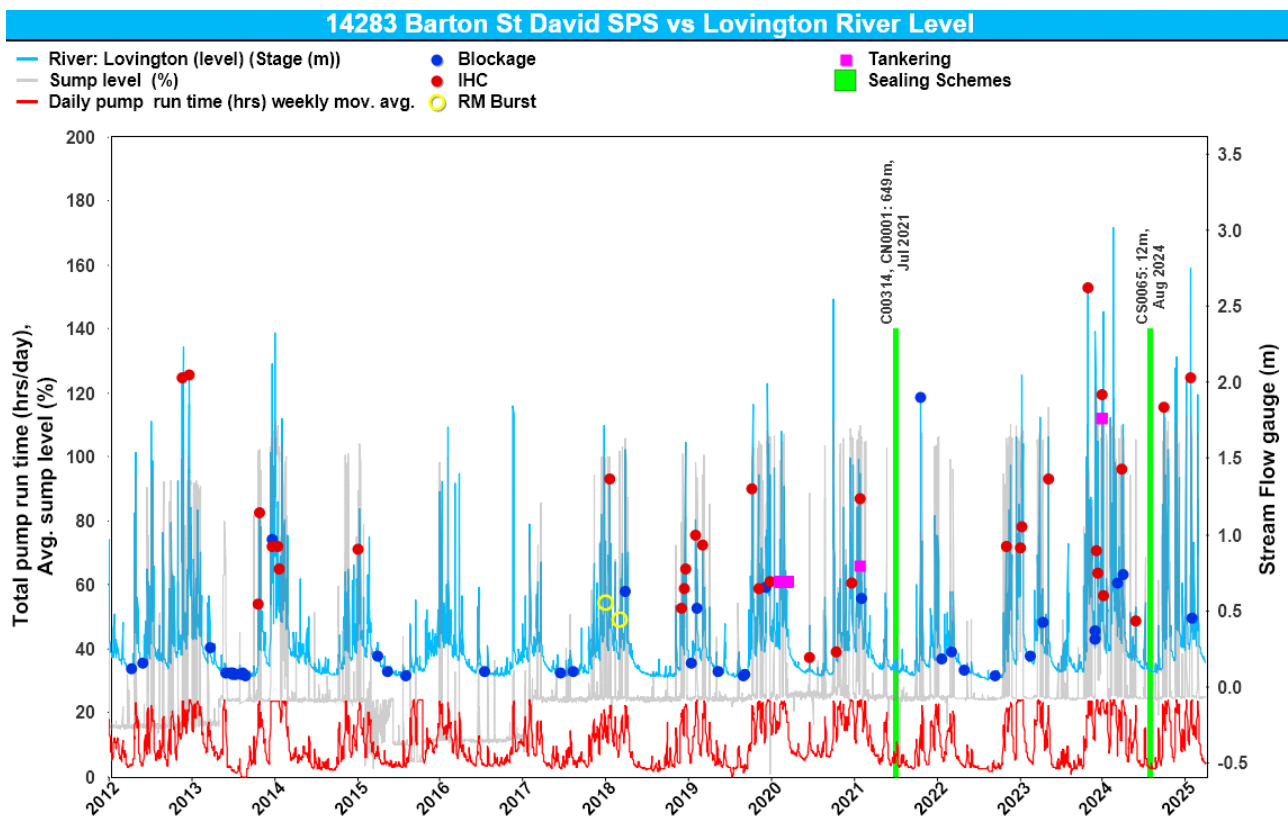
When Necessary

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 compares operational incidents against the river level at Lovington and the flow at Barton St David Sewage Pumping Station. Telemetry at Barton St David shows a strong correlation with river levels, demonstrating the impact of infiltration on the network. River levels and local groundwater were very high during the winter of 2022/23 and 2023/2024, resulting in an increase of incidents attributed to inadequate hydraulic capacity (IHC) despite sealing works in the catchment carried out in August 2021 (note: significant sealing works are planned upstream in the catchment in 2025/26).



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24	2024-25
Length of sewer inspected (m)	10,853	-	2,567	75	2,053	1,961
Length of sewer sealed (m)	30	-	890	-	-	37