

Sydling St Nicholas 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 groundwater in Sydling St Nicholas reached critical levels multiple times during the winter of 2024/25 yet there was only one incident was attributed to inadequate hydraulic capacity (IHC). No mitigation works were carried out in the catchment.

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

- Investigated nature-based solutions in the catchment.
- Inspected public sewer network to identify points of infiltration.
- Inspected private gullies, drains or manholes to identify points of infiltration.
- Sealed sewers and manholes to prevent groundwater infiltration.
- Highway outfalls inspected and cleared of silt build-up

Completed (cont.)

Undertake remedial works at a property-level.

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

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

Reviewed incidents of sewer flooding.

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

Updated the catchment hydraulic model.

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.

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.

Medium Term

Implement Nature-based Solutions in the wider catchment.

Long Term

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

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

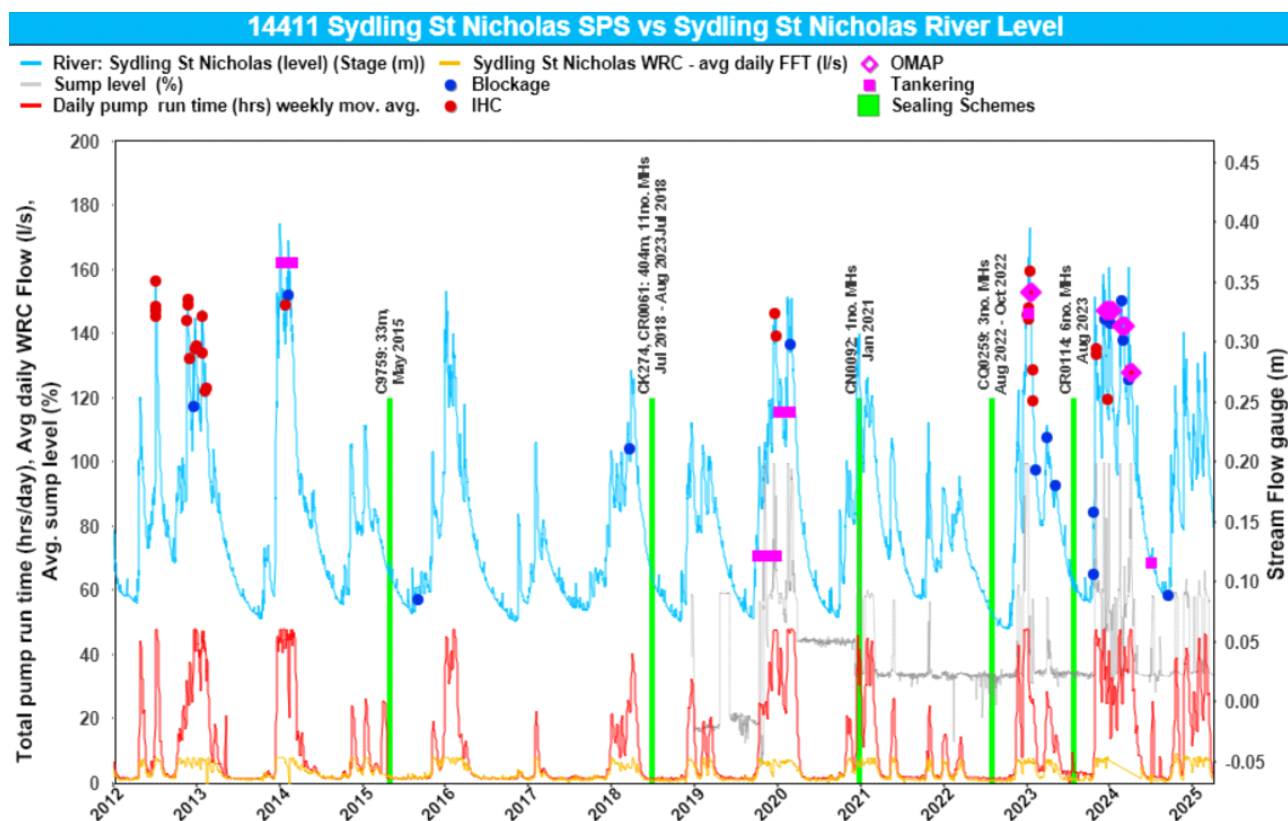
When Necessary

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 compares operational incidents with the telemetry at Sydling St Nicholas Sewage Pumping Station (SPS) and local river levels. There is a clear correlation between pump run times and river levels (an indication of groundwater levels) showing the impact that infiltration has on the local network. Sewer lining and manhole sealing has had a positive effect, as the number of incidents attributed to inadequate hydraulic capacity (IHC) have reduced (eg. compare 2013 & 2015). However, there remains the need for the Operational Mitigation Action Plan (OMAP) during very high groundwater levels, as evident during the winters of 2019/20, 2022/23 & 2023/24, when the network became inundated.



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24	2024-25
Length of sewer inspected (m)	4,410	1,439	-	-	374	-
Length of sewer sealed (m)	422	-	-	-	370	-