Fordingbridge 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 2023 – March 2024

Regional Summary

The Wessex region experienced incredibly wet weather across 2023-24, with higher-than-average rainfall in nine months during the period. February 2024 was both the warmest on record and the wettest in 30 years, with the 12-month sequence to the end of February being the wettest since our records began in 1911.

Groundwater levels rose rapidly during the autumn, and whilst drier weather in January 2024 provided a brief reprieve, levels remained high for the majority of the winter.

Warmest February on record for England and Wales - Met Office

Local Summary

Record-breaking rainfall throughout 2023/24 drove very high levels in the River Avon throughout most of the year, especially the autumn and winter. However, there were no incidents reported due to inadequate hydraulic capacity.

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.
Proactive inspections and maintenance of sewerage assets.

Completed
Undertaken pro-active cleaning (jetting) of sewers to maximise capacity.
Updated the catchment hydraulic model.
Reviewed incidents of sewer flooding.
Inspected public sewer network to identify points of infiltration.
Sealed sewers and manholes to prevent groundwater infiltration.
Undertaken pumping station or flow surveys to analyse flows in sewers.

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

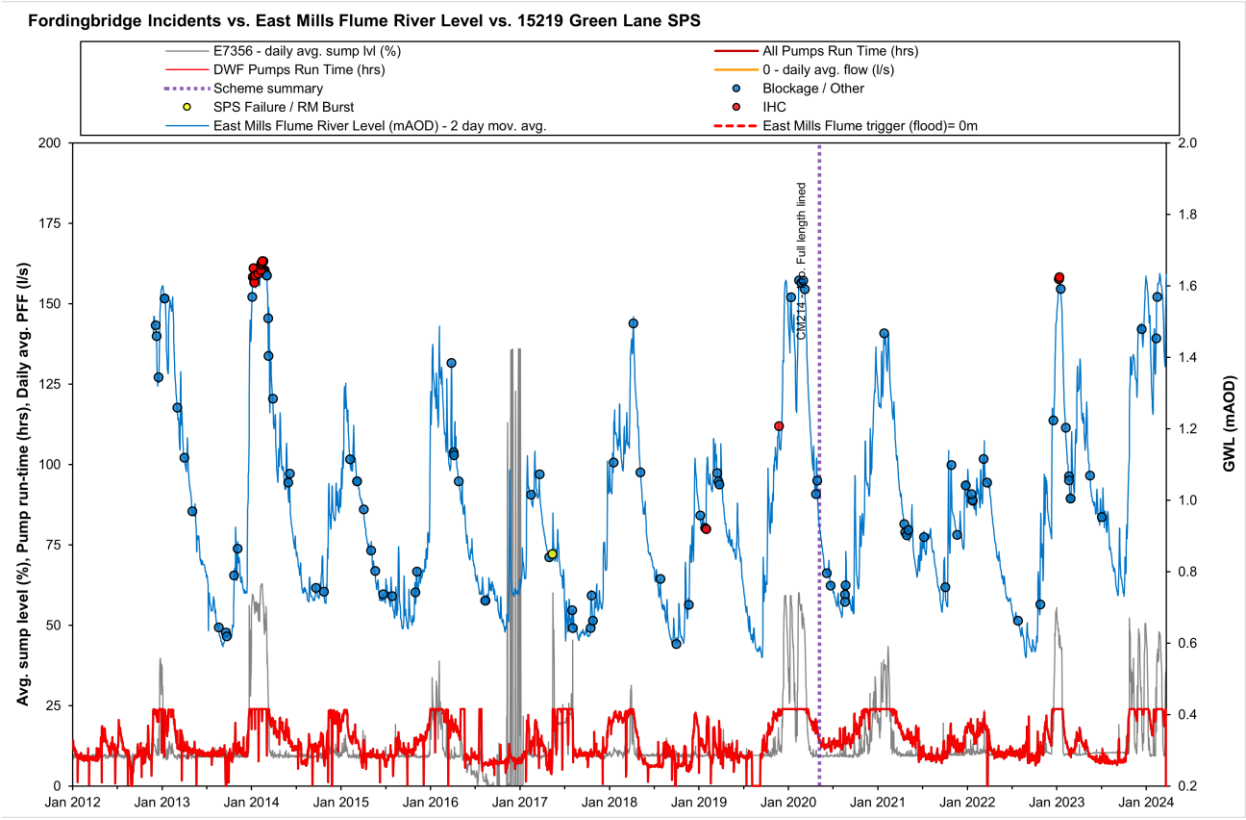
Medium Term
Undertake pro-active inspection of public sewers and manholes using CCTV to identify points of infiltration.
Infiltration sealing of sewers and manholes, where deemed cost-effective, targeting work according to study findings.

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 in-sewer monitors at key locations to better understand flows in the network.
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.
Upgrade pumping stations where appropriate, to improve the reliability and performance of the site.
Implement a scheme to improve the local water recycling centre (WRC).

Current Performance

The graph below displays incidents against river levels (as measured at East Mills Flume, an indication of groundater levels) and the telemetry at Green Lane Sewage Sewage Pumping Station (SPS). It is clear from pump run times that infiltration has an effect on the sewerage network, however incidents attributed to indequate hydraulic capacity (IHC) have tended to occur when the river level is extremely high, or when high river levels coincided with torrential rainfall. This trend was very clear through the wet winter of 2023/24, showing that high levels of infiltration are still present in the catchment.



Inspection and sealing since 2011

	2011-20	2020-21	2021-22	2022-23	2023-24
Length of sewer inspected (m)	2,992	-	-	1,602	2,000
Length of sewer sealed (m)	48	62	-	-	2