

Oaksey and Eastcourt 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 2019 – March 2020

Following above average rainfall in June, the summer of 2019 was relatively dry. However, in late Autumn 2019 regional groundwater levels rose sharply and remained high throughout the winter, reaching the highest levels since 2014. February 2020 was particularly wet with 151mm of regional rainfall equating to 228% of the monthly average, as well as the average annual rainfall for the preceding 12 months being 122% of the long-term average.

Action Plan

Annual activity

- Monitor the systems performance using telemetry.
- Review data, update reports and meet with stakeholders for an annual update to share findings.
- Promote a multiple agency approach and communicate during periods of high groundwater levels.

Completed to date

- Procedure for responding to, investigating, resolving and recording operational contact incidents.
- Reviewed historic and current telemetry and rainfall records and update.
- Communicated with other authorities during times of elevated groundwater levels.
- Undertook pro-active inspection of public sewers as set out in Sewerage Risk Management Manual and identified infiltration using CCTV.
- Analysed flows in the sewers, using historic and current telemetry, rainfall, flow surveys and modelling where appropriate.
- Sewage pumping station surveys completed, and assets updated where necessary.
- Appraisal of flooding incidents.
- Carried out manhole and sewer infiltration sealing of the public network where deemed cost effective.
- Reviewed existing regional borehole data.
- Risk modelling of Wessex Water Assets to plan which catchments require proactive surveys as set out in Sewerage Risk Management Manual.
- Considered the construction of local boreholes and installation of web-based auto logging telemetry in order to monitor groundwater levels.
- Wessex Water infiltration [video](#) added to website.

	2015-16	2016-17	2017-18	2018-19	2019-20
Length of sewer inspected (m)	-	-	4,631	-	488
Length of sewer sealed (m)	116	-	-	596	7

Short term

- Produce Operational Mitigation Action Plan.
- Liaise with the Environment Agency regarding their groundwater warning modelling and service.
- Continue sewer and manhole sealing of the public system where proven to be cost effective based on proactive inspections.

Medium term

- Commission further pump station surveys of Oatridge Farm sewage pumping station (SPS) where necessary.

Long term

- CCTV and targeted infiltration studies according to analysis from previous surveys of s105a sewers.
- Where areas of infiltration in private drainage systems are found, pass information on to the council for further action. Wessex Water to consider funding private improvements.
- Review long term options for monitoring and improving data collection for example EDM.
- Inspection of private gullies, drains and manholes.
- Monitor and regulate surface water disposal to prevent surface water to foul misconnections.

Current Performance

This graph shows incidents against regional groundwater level and Oatridge Farm SPS telemetry. Prior to the sewer sealing, to prevent infiltration, there was a strong correlation between groundwater level and Oatridge Farm SPS sump level/ pump run time. Post sealing there remains a strong correlation between the rise in groundwater levels and incidents attributed to inadequate hydraulic capacity (IHC). Groundwater levels in 2019/20 rainfall peaks like those experienced in 2014. Further sealing out of groundwater infiltration into the sewer network is planned for 2020/21.

