

## Barton Lane 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

- Pro-active maintenance of vulnerable sewers including 6 monthly routine jetting.
- Promotion of multiple agency approach. Regular meetings with the Lead Local Flood Authority and other risk authorities where appropriate.
- Continue monitoring system performance using telemetry and rainfall records.

#### Completed to date

- Proactive inspection using CCTV of vulnerable public sewers undertaken.
- Appraisal of flooding incidents.
- Reviewed and discounted local watercourse monitoring as a possible indicator of groundwater levels and trigger levels.
- Pro-actively inspected public sewers as set out in Sewerage Risk Management Manual.
- Analysed survey data to identify infiltration.
- Analysis of sewer flows using telemetry.
- Carried out manhole and sewer infiltration sealing of the public network where deemed cost-effective.
- Pump station surveys and asset updates.
- Informed customers on the mechanisms of sewer overloading and need for a risk-based approach to improvements. Wessex Water infiltration [video](#) added to website.
- Reviewed existing borehole data in the area.
- Routine review of telemetry compared with other data to assess residual levels of infiltration.
- Communicated with other authorities during times of elevated groundwater levels.

	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Length of sewer inspected (m)</b>	2,186	-	-	-	-
<b>Length of sewer sealed (m)</b>	13.5	-	298	-	-

Short term

- Liaise with the Environment Agency with regards to their groundwater warning modelling and service.

Medium term

- Pump station surveys and asset updates.

Long term

- Remedial works of private assets.
- Monitor and regulate surface water disposal to prevent surface water to foul misconnections.
- Consider sustainable solutions.
- Inspection of private gullies, drains and manholes.

**Current Performance**

This graph compares incidents against regional groundwater level (as measured at Barcombe Farm borehole) and the flow at Barton Lane Sewage Pumping Station (SPS), Ruishton. Prior to the sewer sealing, there was a strong correlation between the groundwater level and the flow at Barton Lane. Post sealing this relationship has reduced but is still visible. The last recorded incident due to inadequate hydraulic capacity (IHC) was recorded in April 2018, whilst groundwater levels were high and during severe weather.

During the exceptionally wet winter of 2019 /2020 the ground water level reached critical levels. The pumps at Barton lane SPS coped with the increased inflow and the only incidents recorded were due to blockages.

