

## Frome 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.

The wet well level only reached a critical level once, which is reflected in the lack of incidents reported. The level reached peaks of around 80% during the winter and on one occasion, on the 23rd October 2019; both pumps failed, resulting in the wet well reaching 100%. Both pumps turned on shortly after the wet well reached 100% causing the levels to drop

### Action Plan

#### Annual activity

- Continue monitoring system performance using telemetry.
- Promotion of multiple agency approach. Regular meetings with lead local flood authority and other risk authorities where appropriate.

#### Completed to date

- Reviewed and analysed flows in the sewers, historic telemetry, rainfall and borehole data and used hydraulic modelling where required.
- Reviewed existing boreholes.
- Proactively inspected vulnerable sewers, assessed and surveyed the pumping stations and updated records where necessary.
- Analysis of inspection data to identify infiltration.
- Commissioned pump station survey and asset update.
- Appraised incidents of sewer and surface water flooding.
- Carried out significant infiltration sealing of sewer and manholes where deemed cost-effective, targeting work according to study findings.
- Raised awareness about mechanisms of sewer overloading and need for risk-based approach for improvements.

	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Length of sewer inspected (m)</b>	3,464.72	-	-	-	-
<b>Length of sewer sealed (m)</b>	-	-	501.5	-	-

Short term

- Further liaising with the Environment Agency regarding groundwater warning modelling and service.

Medium term

- Targeted infiltration studies and CCTV informed by analysis of previous surveys where cost beneficial.
- Infiltration sealing of sewer and manholes where deemed cost-effective.
- Commission a further pump station survey for Spring Garden Sewage Pumping Station (SPS).

Long term

- Inspect and remediate private drainage networks where appropriate.
- Investigate options for surface water separation if cost beneficial.
- Monitor and regulate surface water disposal to prevent misconnection of surface water and foul sewers.

**Current Performance**

This graph shows incidents against groundwater level (as measured at Barcombe Farm borehole) and the flow at Frome Water Recycling Centre. Post 2014 there have been no flooding incidents in the Spring Gardens SPS catchment. The wet well levels give an indication of some infiltration but significant improvements after sealing in 2017 can be seen, with no flooding reported. Groundwater levels have not reached the highs experienced in 2014 therefore mitigation measures and this action plan are still in place. The level reached peaks of around 80% during the 2019/20 winter, except for on 23<sup>rd</sup> October 2019, when both pumps failed to turn on resulting the wet well reaching 100%. There were no incidents during this reporting period.

