Frome Infiltration Reduction Plan Summary

This provides an update on 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 2017 – March 2018

Regional groundwater in 2017/2018, was relatively low compared to previous winters but experienced a very wet period at the end of March and into April 2018 causing groundwater levels to rise. The groundwater did not reach critical levels and the sewerage system was not overloaded. A significant length of sewers was lined to make the system more watertight.

Action Plan

Annual activity
- Pro-active maintenance of vulnerable sewers including 6 monthly routine jetting.
- Monitoring of system performance using telemetry.
- Review data, update reports and meet with stakeholders for annual update and share findings, as necessary.
- Promote a multiple agency approach to managing solutions during periods of high groundwater levels.

Completed to date
- Proactive inspection using CCTV of vulnerable public sewers.
- Analysis of inspection data to identify infiltration.
- Analyse flows in sewers using flow survey and modelling.
- Commission pump station survey and asset update.
- Appraise incidents of sewer and surface water flooding.
- Review of historic telemetry and rainfall records.
- Carry out significant infiltration sealing of sewer and manholes where deemed cost-effective, targeting work according to study findings.
- Raise awareness about mechanisms of sewer overloading and need for risk-based approach for improvements.
- Routine review of telemetry and compare with borehole, watercourse, rainfall data and customer incidents to assess infiltration levels.

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<tr>
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<th>2015-2016</th>
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<tbody>
<tr>
<td>Length of sewer inspected (m)</td>
<td>3464.72</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Length of sewer sealed (m)</td>
<td>-</td>
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<td>501.5</td>
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Medium term
- Targeted infiltration studies and CCTV informed by analysis of previous surveys.
- Identify road and gullies and other impermeable areas connected to the foul sewer and separate where appropriate.
**Long term**
- Liaise with the Environment Agency about groundwater warning service.
- Inspect and remediate where appropriate private drainage networks.
- 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 Sewage Treatment Works. 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.