Sturminster Marshall and Shapwick
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 2018 and into April causing groundwater levels to rise. The groundwater did not reach critical levels and the sewerage system was not overloaded, however heavy periods of rainfall in April caused wet well levels to rise so mitigation works were carried out.

Action Plan

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

Completed to date
- Pro-active inspections using CCTV of vulnerable sewers.
- Analysis of inspection data to identify infiltration.
- Manhole sealing works during the dry weather months where it is most effective.
- Review and analyse flow in the sewers using historic telemetry, rainfall and modelling.
- Long term depth monitoring installed at key “hot spot” locations.
- Raise awareness of sewer overloading and the need for a risk-based approach to improvements.
- Overflow at Sturminster Marshall pumping station provided with pumped assistance.
- Major scheme to upsize sewers and significant sewer lining to make public and private sewers watertight.

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<th>2015-2016</th>
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<tbody>
<tr>
<td>Length of sewer inspected (m)</td>
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<td>Length of sewer sealed (m)</td>
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Medium term
- Pro-active maintenance of telemetry at sites in the area.
- Appraise options to increase capacity of the River Winterbourne, for example dredging.

Long term
- Liaise with the Environment Agency about their groundwater warning service.
- Monitor and regulate the surface water to prevent surface water to foul misconnections.
Current Performance

This graph shows incidents against groundwater level (as measured at Barcombe Farm borehole) and the flow at Stewards Lane Sewage Pumping Station. Prior to sewer sealing and maintenance works in 2015-2016 there was a clear correlation between groundwater levels and the number of flooding incidents recorded as inadequate hydraulic capacity (IHC) incidents. However, post sealing and maintenance, incident reports have reduced in number but there is still evidence of infiltration. Groundwater levels though have not reached the highs experienced in 2014 and so mitigation measures and this action plan are still in place.