Muckleford 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 levels in 2017/2018, was relatively low compared to previous winters but experienced a very wet period at the end of 2017 until April 2018 causing groundwater levels to rise. The sewers reached critical levels during the winter but no incidents due to inadequate hydraulic capacity (IHC) occurred, so no mitigation works were carried out.

Action Plan

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

Completed to date
- Review existing assets and operational data.
- Procedure for recording, investigating and resolving incidents in place.
- Undertake proactive inspection using CCTV of vulnerable sewers
- Analysis of inspection data to identify infiltration.
- Analyse flows in the sewers using flow survey and modelling.
- Undertake further infiltration sealing where cost effective and targeted according to study findings.
- Identify areas of infiltration in private drainage.
- Review existing boreholes in the area.
- Review of telemetry and compare with data collected from the area to assess residual levels of infiltration.

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<th>2015-2016</th>
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<tr>
<td>Length of sewer inspected (m)</td>
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<td>Length of sewer sealed (m)</td>
<td>154</td>
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Short term
- Commission pump station surveys for Frampton Muckleford and Frampton Southover.

Medium term
- CCTV and targeted infiltration studies according to analysis from previous surveys.
- Identify road gullies and other impermeable areas connected into the foul sewers and remove them where cost effective.
Long term
- Liaise with the Environment Agency about their groundwater warning service.
- Inspect and remediate where appropriate private drainage networks.
- 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 telemetry at Muckleford SPS. Prior to the sewer sealing in August 2015 there is a strong trend between the pump run times at Muckleford SPS and the groundwater levels. This trend is still evident following the sewer sealing, however there have been no incidents due to inadequate hydraulic capacity (IHC) since, and so the sewer system has been able to cope with the levels of infiltration it experiences.