Compton Dundon 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 the winter of 2017/18 were relatively low in comparison to previous winters but experienced a very wet period in early 2018 causing groundwater levels to rise. The groundwater reached critical levels and the sewerage system was overloaded in January 2018. Further lining work was undertaken following the investigation.

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 an annual update and share findings.
- Promote a multiple agency approach and communicate during periods of high groundwater levels.

Completed to date
- Procedure for recording, investigating and resolving incidents put in place.
- Historic telemetry and rainfall records reviewed.
- Pro-active inspection of vulnerable public sewers using CCTV undertaken.
- Analysis of inspection data to identify infiltration.
- Necessary pump station surveys and asset updates commissioned.
- Appraisal of flooding incidents.
- Educate some residents about mechanisms of sewer overloading and the need for a risk-based approach to improvements.
- Investigated watercourse monitoring in the local area as a possible indicator of groundwater levels.
- Review existing boreholes in the area.
- Routine review of telemetry compared with a variety of hydraulic factors to assess residual levels of infiltration.

<table>
<thead>
<tr>
<th></th>
<th>2015-2016</th>
<th>2016-2017</th>
<th>2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of sewer inspected (m)</td>
<td>2127</td>
<td>-</td>
<td>173</td>
</tr>
<tr>
<td>Length of sewer sealed (m)</td>
<td>-</td>
<td>-</td>
<td>184</td>
</tr>
</tbody>
</table>

Short term
- Analyse sewer flows using flow survey and modelling where appropriate.

Medium term
- CCTV and targeted infiltration studies according to analysis from previous surveys.
- Clear any build-up of silt where necessary.
• Remove road gullies and other impermeable areas connected to the foul sewers, where cost effective.

**Long term**
• Liaise with the Environment Agency about their groundwater warning service.
• Inspect private gullies, drains and manholes.
• Monitor and regulate surface water disposal, to prevent surface water to foul misconnections.

---

**Current Performance**

This graph shows incidents against groundwater level (as measured at Barcombe Farm borehole) and Ham Lane Sewage Pumping Station telemetry. Prior to the sewer sealing, to prevent infiltration, there was a strong correlation between groundwater level and Ham Lane Sewage Pumping Station sump level but post sealing, this relationship has reduced. However due to the sealing being carried out very recently it’s not possible to say yet whether it has been successful in reducing flood risk from infiltration.