

CASE STUDY SuDS

The ever increasing importance of effective SuDS

August 2017 marked the ten-year anniversary of Sir Michael Pitt's appointment by the *Secretary of State for the Environment, Food & Rural Affairs*, to chair the investigation into the floods that affected many regions of the UK and his subsequent **2007 Pitt Review**.

INDUSTRY
Utilities

PRODUCTS
& SERVICES
MSFM Flow
Monitor
Rain Gauge
Data
Screening
& Analysis

Out of the review, published in 2008, came **Schedule 3 of the Flood and Water Management Act (FWMA)**. Schedule 3 called for Sustainable Drainage Systems (SuDS) and the establishment of a SuDS Approving Body (SAB) to be set up within lead local flood authorities (LLFAs) up and down the country.

Although the establishment of SABs in LLFAs has been some time in the making and it is still unclear whether or not they will be fully implemented or the decision on SuDS will continue under the current planning system and local planning authority. One thing for certain is the need to make adoption of SuDS as easy as possible for all parties.

Detectronic was recently engaged in a project for a UK water company that, through no fault of its own, was faced with two Category 2 pollution incidents. We were asked to carry out a full investigation and analysis to include any SuDS in the vicinity.

OBJECTIVES

- To measure the flows and infiltration across the site.
- To discover if effluent was coming in through known connections.
- To analyse the efficacy and efficiency of any SuDS.

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PLANNING

Following initial discussions with the water company, their initial response to the two separate pollutions had been to propose an upgrade of the wastewater pumping station on the site at a cost of £2 million. This represented a significant investment for the water company and we wanted to discover if there was an alternative solution for them. We visited the site on several different occasions and, after consultation with the water company and the local developer who owns properties on the site in question, we devised a monitoring programme aimed at identifying specific issues and engendering an alternative successful solution.

IMPLEMENTATION

Our site teams installed **Detectronic MSFM Flow Monitors** at strategic points across the site as well as a **Rain Gauge**. During the installation and implementation process, we uncovered a SuDS installation upstream of the pumping station which had passed local planning authority approval as a suitable means of surface water removal. There had been no objection by the LLFA and or the Environment Agency as, on the original site drawing, the SuDS showed adequate and well thought-out implementation.

“With the highly accurate hydraulic data and analysis that our MONITORS, RAIN GAUGES and dedicated DATA CENTRE can deliver, we can ensure that all existing and future SuDS can be successfully monitored to be both reliable and effective, ultimately helping our clients to prevent flooding and pollution events, giving reassurance when it comes to adoption.”

ANALYSIS & REPORTING

On completion of the monitoring programme and following in-depth investigation and forensic analysis of the flows entering the wastewater pumping station, our dedicated **Data Centre team** delivered a comprehensive report. From that report we were able to prove that up to 47% of the flow in the wastewater system was actually from surface water inflows incorrectly entering the network upstream. Using the report and by working alongside the water company and developer, we were able to provide a solution to the issues which did not require the £2m pumping station upgrade and, with ongoing monitoring, we will continue to provide operational technical support with the maintenance of the SuDS to ensure its long-term efficacy.

RESULTS

There are many SuDS in operation across the UK but many are either not fit for purpose or haven't been adequately maintained which then leads to problems ranging from pollutions and sewage spills to localised flooding and devastating damage to homes and businesses. **By working collaboratively with this water company we were able to share our detailed knowledge and understanding of the problems posed by SuDS but also, most importantly, how to solve such problems and get the SuDS working for all the stakeholders involved.**



To learn more about the Detectronic, get in touch:

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