

Case Study



FLOW SURVEY FOR 2,400 ACRE HOUSING DEVELOPMENT SITE

► INTRODUCTION

As part of the redevelopment of the former Royal Ordnance Factory site at Bishopton near Glasgow, a national client approached Detectronic to design and deliver a bespoke flow survey.

Home to one of the UK's largest brownfield regeneration projects, the client is transforming the 2,400 acre site into a new, multi-million pound development – Dargavel Village. Named after Dargavel House, a 16th century, Category B listed 'Tower House' located with the grounds of the complex, Dargavel Village will eventually be home to a thriving development of housing, commercial & community buildings, a community woodland park and recreational facilities.

► OBJECTIVES

Monitor the effect of rainfall across the entire site with a focus on managing its overall ecology and protecting water quality



► PLANNING AND IMPLEMENTATION

As part of their remediation of the site and with three different housing contractors planning and building hundreds of properties on the site, it was imperative that client's property management team understood the hydrology of the area.

In order to do that they needed a robust set of data to inform the planning and construction process.

After visiting the site and talking with the property management team, we implemented a four-month flow survey project and installed one rain gauge and five of our MSFM flow meters at strategic points across the development area.

During the four-months the rain gauge and monitors were in place, data centre teams collated and analysed data on a daily basis, submitted weekly reports to the property management team and directly reported any issues that arose.

Issues

There were only two notable issues

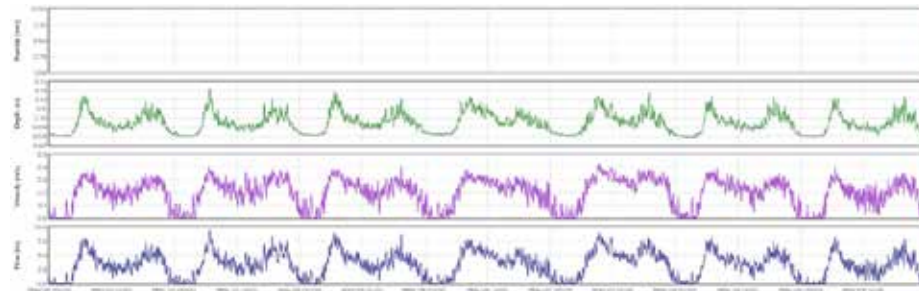
- A rise in depth
- A reduction in velocity on two separate occasions

Both of these were attributed to a failure at the local pumping station.

The flow survey led to client purchasing the equipment

► Results

A spokesman for the national client said: “All of the data gathered from the flow survey was shared with the respective water and sewage company (WaSC) and, as a result of the success of the project and the value of the information, we chose to purchase all of the equipment installed by Detectronic to use for long-term monitoring of the site.”



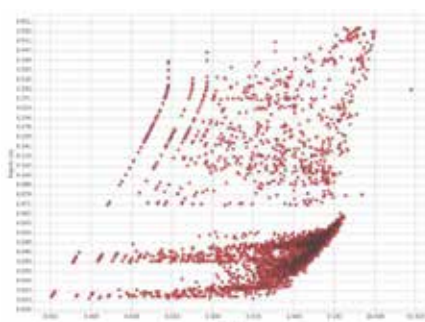
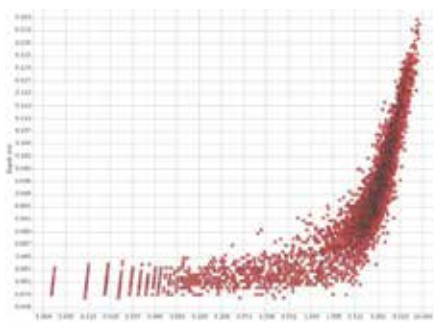
	Abs Max	Abs Min	Ave	Total (l)	Avg Daily Max	Avg Daily Min	Avg Daily Total (l)
Flow (l/s)	21.32	0.00	5.55	30,384,242	10.67	2.53	474,754
Depth (m)	2.40	0.00	0.30	n/a	0.39	0.23	n/a
Velocity (m/s)	0.57	0.00	0.28	n/a	0.43	0.15	n/a



MSFM Area velocity flow meter installed downstream.

Products and Services

- Flow survey
- Raingauge
- MSFM Flow Meters
- Data screening
- Weekly reports



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