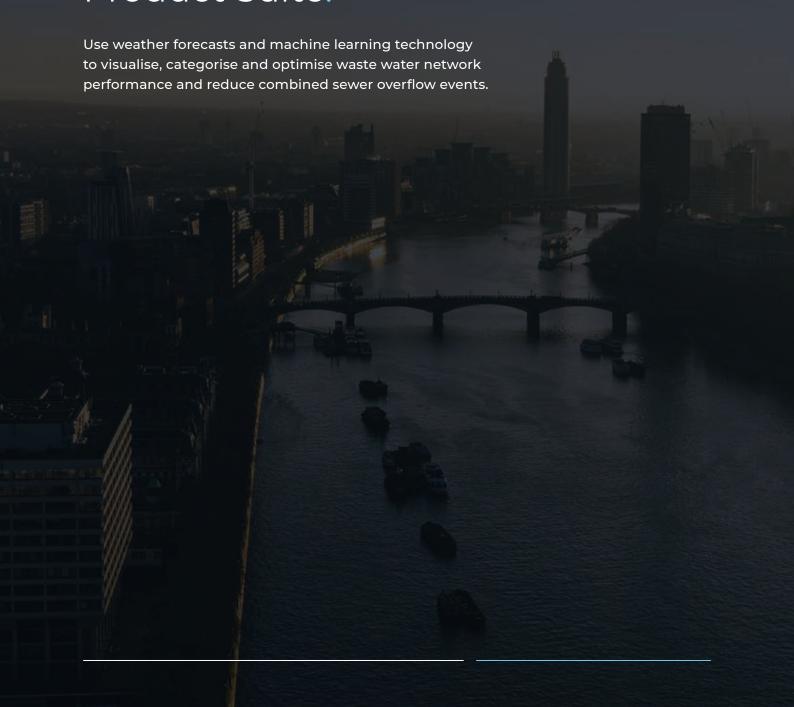


StormHarvester

Waste Water Networks Product Suite.





The StormHarvester Waste Water Networks Product Suite

Our product uses advanced machine learning software to analyse Waste Water Networks and make real time predictions to optimise network performance and prevent Combined Sewer Overflow (CSO) events.



96% ACCURACY ON CSO PREDICTIONS



30% REDUCTION ON CSO
DISCHARGE



8 TIMES CHEAPER THAN CAPITAL UPGRADES





SEAMLESS INTEGRATION
WITH SCADA SYSTEMS



EASY REPORTING AND COMPLIANCE



NO ADDITIONAL SENSORS
OR FLOW METERS REQUIRED



StormHarvester is a fundamentally new way to address sewer flooding.

The technology ensures that we are no longer reliant on desktop network modelling to predict sewer flooding, which simultaneously reduces our reliance on costly infrastructure upgrades as the primary solution to this critical problem.

By utilising actual data from within a waste water network in combination with

rainfall predictions, StormHarvester's machine learning technology gives unprecedented accuracy in CSO event predictions, as well as a range of other benefits in network performance analysis and reporting. Using StormHarvester to take control of pump runs ensures the optimum sequencing to maximise network capacity and reduce CSO event.

Waste Water Network Product Suite.







Network Analysis.

Instant visibility on overall network performance Real-time Predictions.

All the benefits of network analysis and...

Real-time warnings for CSO spillages and pipe blockages Automated Control.

All the benefits of network analysis, real-time predictions and...

Automated control of waste water networks in wet weather conditions to reduce combined sewer overflows

Find out more

Find out more

Find out more

in: /StormHarvester



StormHarvester

Network Analysis.

Network Assessment allows detailed assessment of waste water network performance quickly and easily. The system seamlessly integrates with most SCADA and cloud storage platforms to allow clear visualisation of individual asset and overall network performance over several years.

The Network Assessment software allows for quick and easy compliance reporting on all CSO and overflow events. The reason for the exact duration, severity and rainfall intensity during each individual CSO event can be simply identified and reported.





Easy reporting and compliance for 1,000s of pumping chambers instantaneously



- Quickly identify the reason for and the severity of each individual overflow and CSO event (including rainfall intensity during the event).
- Dry Weather Flow in each chamber determined without additional flow meters.

- Instant visibility on historic pumping chamber performance.
- Quickly compare yearly/quarterly chamber performance over several years.
- Easily identify asset locations and details.





StormHarvester Real-time Predictions.

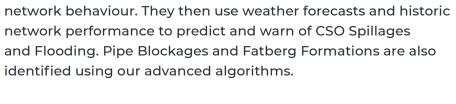
Once integrated, our machine learning quickly studies the



96% accuracy on CSO predictions



Automated Warning and Reporting System









- Accurate predictions of Spill Events
- Real-time alerts for CSO spillages, pump stoppages and network blockages
- Accurate Inflow predictions to WWTW
- Real time dynamic network visualisation



StormHarvester

Automated Control.

Once integrated, the StormHarvester automated control system uses machine learning to predict overflows and automatically operate the relevant parts of the network to reduce spillages.







The StormHarvester System system uses weather forecasts and historic network performance to predict future network behaviour. Once a potential flood/overflow event is identified, the system runs thousands of scenarios in real time to determine the optimum operational sequence to minimise or prevent overflows. The system then automatically operates the infrastructure according to this sequencing.

Using StormHarvester's Automated Control System ensures that all available volume within the network is utilised prior to spilling. This means that the effective storage volume within the network is greatly increased at a fraction of the cost, time and disturbance of installing additional storage via hard infrastructure (concrete tanks and pipes).





NORTHUMBRIAN WATER living water

Case Study

Northumbrian Water Waste Water Networks.

StormHarvester and Northumbrian Water have worked together since early 2018 to analyse pumping chambers in Newcastle-Upon-Tyne in Northern England. This discrete network was chosen due to the location of CSO's and pumping chambers within the Catchment and past rainfall events in the area.

96%

accuracy on CSO spill predictions

30%

reduction on CSO spills

Three years of data from 12 pumping chambers and CSOs were analysed using the StormHarvester software suite. The analysis allowed Northumbrian Water to easily visualise their network performance and quickly identify, quantify and rank assets to see how they were performing or if they had particular sensitivities to rainfall.

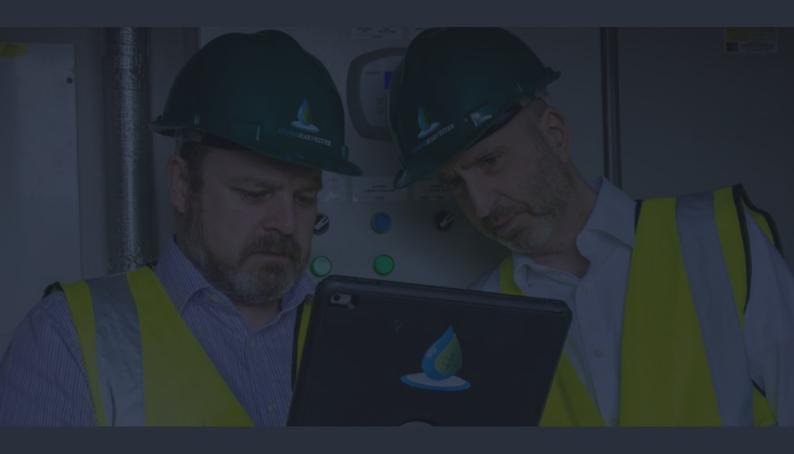
The results of the analysis determined that on average a 30% reduction in CSO spillages was achievable across the catchment using StormHarvester's real time controls.

"The StormHarvester product suite allowed us to easily visualise historic data from a section of our waste water network. It allowed us to assess our network performance and quickly identify sites with particular sensitivities to rainfall. The StormHarvester team were easy to work with and have always been quick to respond and adopt to our particular requirements"

Linzie Pentleton – Asset Investment Programme Manager – Northumbrian Water







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