



**HWM Global**

A Halma company

# Wastewater Solutions

**PRODUCT  
BROCHURE**

# About HWM Global

Since 1979, our people and products have been setting the standard for how the world better manages clean water, wastewater, and energy with innovative, data-driven solutions designed and manufactured for performance and accuracy. Through experience, technical expertise, and a commitment to advanced technology, HWM Global is a respected leader in the industry with a reputation for quality and service. As a wholly owned subsidiary of Halma PLC, we're part of a global group of life-saving technology companies dedicated to growing a safer, cleaner, and healthier future for everyone, every day.

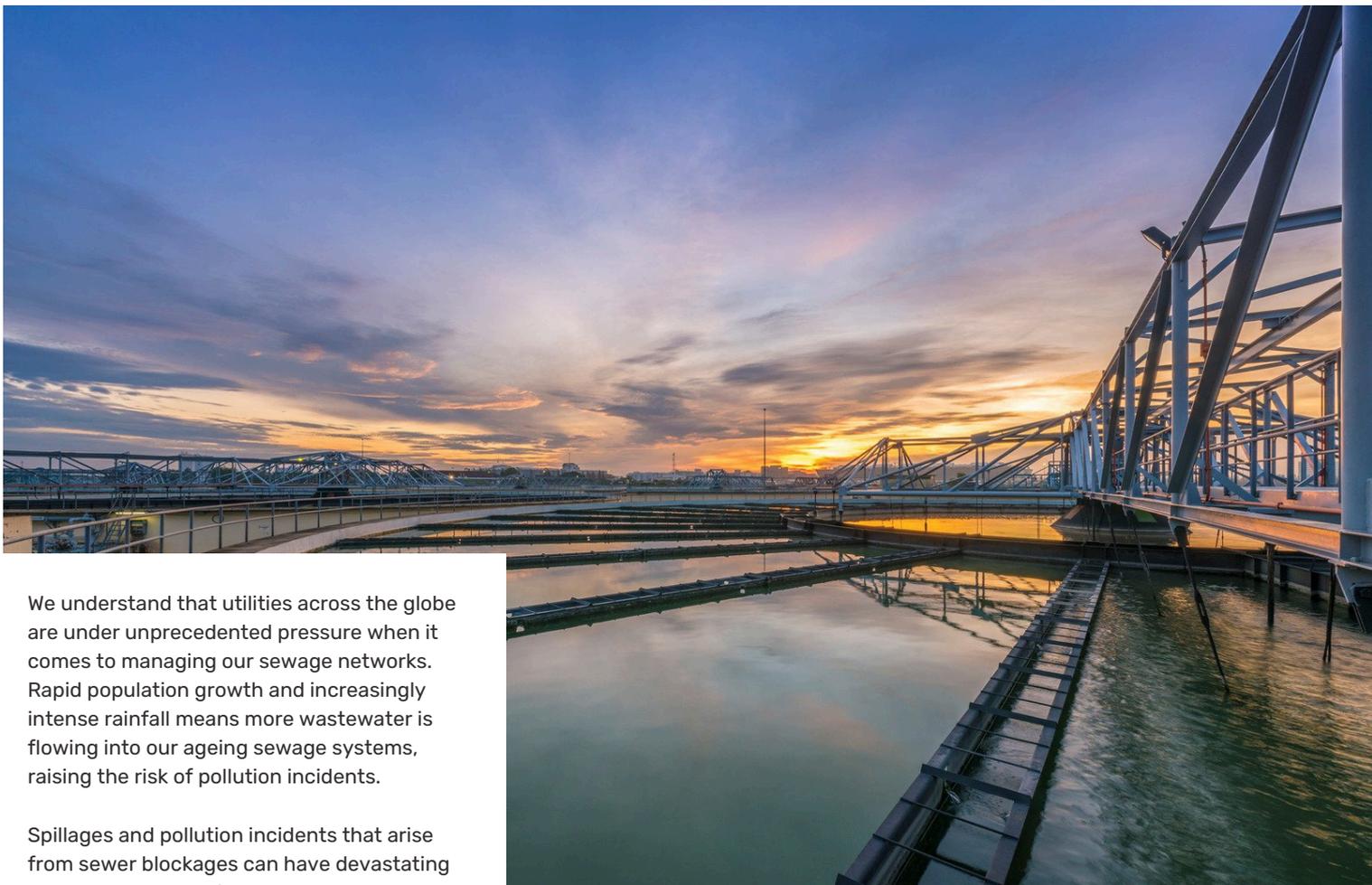
Whether you'd like to learn more about our full line of products or discuss the right products for the unique challenges of your network, our specialists are here to help with in-depth industry knowledge and technical expertise.

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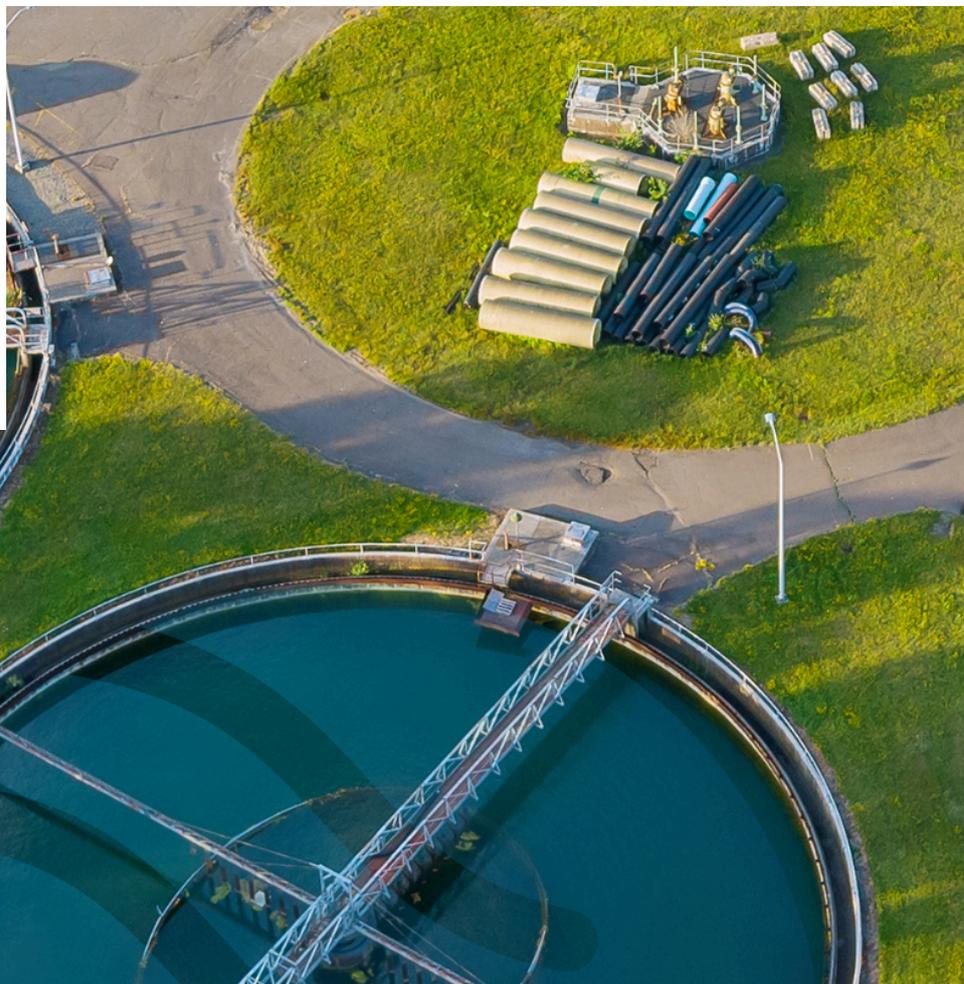




We understand that utilities across the globe are under unprecedented pressure when it comes to managing our sewage networks. Rapid population growth and increasingly intense rainfall means more wastewater is flowing into our ageing sewage systems, raising the risk of pollution incidents.

Spillages and pollution incidents that arise from sewer blockages can have devastating consequences, particularly when these incidents happen customer-side. Not only can clean-up efforts be costly, but with news spreading quickly through social media channels, a water company can suffer significant damage to their reputation at local, national, and even international levels.

This is why our wastewater solutions have been intricately designed and stringently tested to help solve the challenges of monitoring wastewater environments with uncompromised safety to manage compliance and to help keep critical resources flowing.





## MCERTS Event Duration Monitoring at CSOs

Data Loggers such as Intelligens WW are able to support multiple **MCERTS sensors** simultaneously, as well as achieve 'Right First Time' Deployment and hourly data transmission over long-term project installs.



## Sewer Level Monitoring

Advanced cellular telemetry sewer level monitoring solutions monitors and transmits wastewater network level data. **RadarSens** delivers accurate, real-time data for remote network monitoring using advanced radar sensing technology - built for reliability in demanding environments.



## Early Warning Blockage Detection

Multi-alarm digital float sensors deliver early warnings of small sewer and customer-side blockages and overflows. **SpillSens** is our simple & cost-effective solution that uses digital positioning technology to reliably deliver early warning of blockages and overflows.



## General Specifications

- **DataGate Web-based Software**
- **4G NB-IoT/LTE-M with 2G Fallback -**
- **5 Year Battery Life**
- **Intrinsically Safe**
- **IP68**



# MCERTS Event Duration Monitoring at CSOs

In England & Wales, since 2014, the Monitoring Certification Scheme (MCERTS) has been in place for environmental permit holders who produce potentially harmful emissions. The scheme is intended to assure regulators, industry, and the wider public that the data gathered and reviewed for environmental monitoring is accurate and trustworthy. Compliance with MCERTS ensures that all regulations are adhered to and that the environment is protected.

From April 2025, any new Event Duration Monitoring (EDM) system is subject to MCERTS standards, which specify minimum requirements for EDM installs. Our Data Loggers for MCERTS EDM at CSO Monitoring are stringently compliant and can be paired with our RadarSens or third party sensors for a complete solution.

## Intelligens WW

Our Intelligens data logger is at the heart of our flexible monitoring systems due to being versatile in its ability to be tailored to specific user needs.

Intelligens is a battery-powered and hugely compatible data logger, which is ATEX-certified for use in explosive environments and benefits from two-way communications for remote programming.

Intelligens is an ideal logging solution for combined sewer overflows, general sewer monitoring, storm drains, storage tanks and flood warning systems.



## Multilog IS

This intrinsically safe multi-channel data logger is ideally suited for environments where corrosion is a concern. Designed for compatibility, applications include: Level, Velocity & Flow Monitoring, Radar Level, Radar Velocity & Flow Monitoring, Water Quality Monitoring, Modbus and SD112 Sensor Telemetry and external power options.



# Proven Performance in Hong Kong's Challenging Sewers with our Intelligens Data Logger

Our Intelligens data logger is at the heart of our flexible monitoring systems, renowned for its versatility and ability to be tailored to specific user needs. This case study from Hong Kong vividly demonstrates how Intelligens' core features translate into real-world success, particularly in demanding applications like combined sewer overflows, general sewer monitoring, and flood warning systems.

## The Challenge: Proactive Management of Hong Kong's overburdened sewers

Hong Kong's dense urban environment faced significant challenges with its wastewater network. Frequent flooding and sewer overflows led to resident complaints and hygiene concerns, particularly in high-rise apartment areas. The existing reactive system, relying on CCTV and high-pressure jetting, couldn't pre-emptively identify blockages, which caused untreated sewage to flood streets and buildings. The utility urgently needed a proactive solution to get ahead of these critical issues.

## The Versatile and Compatible Heart of the Solution

The Hong Kong utility sought a robust monitoring system with highly versatile telemetry data loggers at its core. Intelligens was selected as this pivotal component, with 80 units deployed across the network.

- **Tailored to Specific Needs:** Demonstrating its versatility, Intelligens allowed the utility to customise its monitoring approach. In larger sewer mains, Intelligens loggers were connected to both velocity and level sensors. Near residential and business properties were equipped with level sensors. This tailored deployment, made possible by Intelligens, provided comprehensive network coverage.
- **Cost-Effective for Wide Deployment:** Intelligens' competitive pricing enabled the utility to implement a mass deployment, achieving the widespread visibility needed to manage their extensive network effectively.

## Engineered for Demanding Environments

Hong Kong's sewers are particularly hazardous, making equipment reliability and safety paramount. Intelligens is ATEX certified, ensuring it meets the rigorous standards required for operation in potentially explosive environments found within the sewer network. This certification provided essential assurance of its dependability in such high-risk conditions.

## Reliable Data and Remote Management

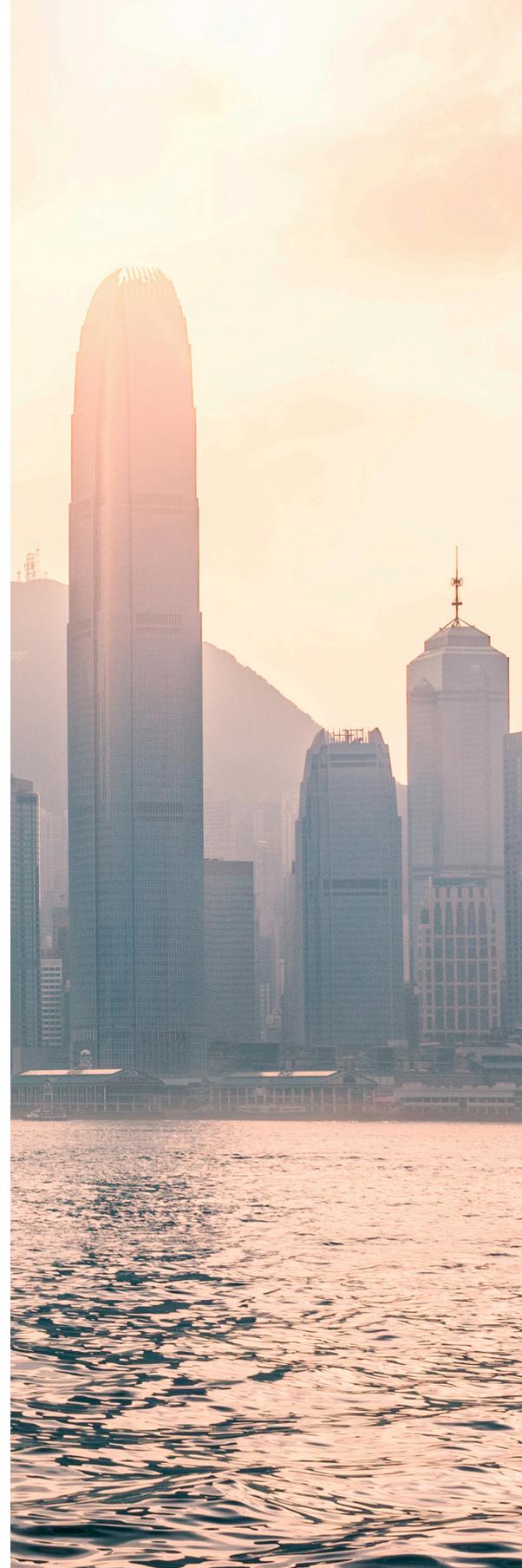
- **Two-Way Communications for Remote Programming:** Intelligens benefits from two-way communications, enabling remote programming and configuration. This crucial feature allows operators to adjust settings, update firmware, or troubleshoot units without costly and time-consuming physical site visits, further enhancing operational efficiency.
- **Advanced, Reliable Data Transmission:** The system's effectiveness hinged on consistent data transmission, an area where Intelligens excels. Its advanced modem (LTE-M and NB-IoT-enabled with 2G fallback) ensured continual data flow even in challenging underground environments, future-proofing the investment.
- **Seamless Data Integration:** The utility was impressed by the smooth transfer of data from our DataGate platform to their own systems. This seamless integration provided vital, real-time information to the control room for day-to-day operations and to their modelling team for long-term planning and network understanding.

## The Impact: Intelligens Powers Proactive Control

By leveraging the Intelligens data logger, the Hong Kong utility transformed its sewer management from reactive to proactive. Fluctuations in depth and velocity data now indicate potential blockages, enabling investigation and correction before flooding and pollution incidents occur. This not only mitigated negative press but also allowed for better network understanding, forecasting trouble spots, and managing the impact of extreme weather events.

## The Conclusion: The Ideal Logging Solution

The Hong Kong deployment of Intelligens is a powerful testament to the capabilities of this innovative data logger. Its versatility, exceptional compatibility, ATEX certification, robust battery life, and advanced two-way communications make it the ideal logging solution for critical infrastructure like combined sewer overflows, general sewer monitoring, storm drains, storage tanks, and flood warning systems. Intelligens empowers utilities to take control, improve performance, and protect communities.



# Sewer Level Monitoring

## RadarSens Level Monitoring System

### RadarSens

RadarSens is our cost-effective and easy-to-install level monitoring system that uses radar sensing technology to effectively monitor level in wastewater networks. RadarSens is certified for use in hazardous environments and fully compatible with our range of data loggers including our IS Log, RadarSens includes a variety of different deployment features to ensure a quick and 'right-first-time' deployment. Our RadarSens technology has been providing accurate data that helps water companies prevent spills in wastewater networks.

### IS Log

At the heart of our wastewater monitoring solutions is **IS Log**, an advanced, battery powered data logger built to be paired seamlessly with a wide range of sensors, including **RadarSens** to provide a complete sewer level monitoring solution.



**Our ATEX Certified IS Log Data Logger and RadarSens Sensor for a complete Sewer Level Monitoring Solution.**

# Early Blockage Detection

## SpillSens Digital Float Sensor

Installed at a critical height in a chamber, SpillSens uses digital positioning technology to monitor sewer levels constantly and effectively delivering early warnings of small sewer and customer-side blockages and overflows.

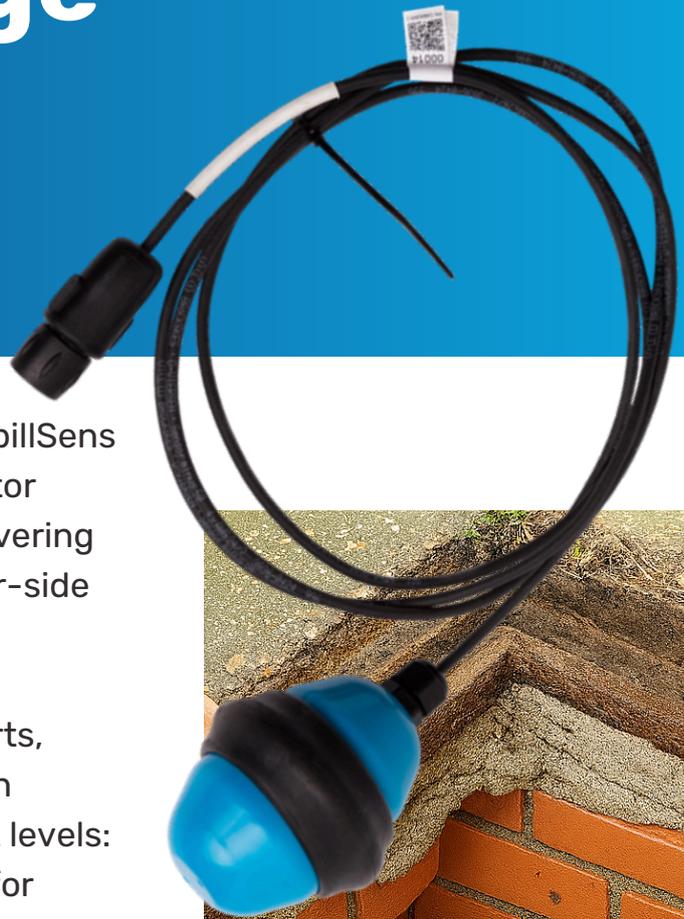
SpillSens is designed to have no moving parts, unlike traditional steel ball and micro-switch sensors and is programmed with three alert levels: green for normal, amber for rising, and red for critical.

Overall, our SpillSens innovation is ideal for incident prevention, supporting compliance with outcome delivery incentives helping utilities protect the environment by reducing pollution incidents.



### IS Log

At the heart of our wastewater monitoring solutions is our **IS Log** - An advanced, battery powered data logger built to be paired seamlessly with a wide range of sensors, including **SpillSens** to provide a complete solution for early warnings of sewer blockages and overflows.





## King's Award Winning SpillSens

The King's Awards for Enterprise are the most prestigious awards, honouring and celebrating business excellence across the UK. Kelly Macfarlane, Managing Director of HWM Global, stated:

"HWM is honoured to be awarded the King's Award for Enterprise for Innovation 2023 for our multi-alarm digital float sensor, SpillSens."



### Simple, Innovative, and Impactful

SpillSens was specifically designed to reduce the number of polluting spills from blockages in small diameter (domestic) sewers. We designed a low-cost, simple to install product suitable for mass deployment across the sewer network, to maximise its impact for water companies and the customers they serve.

# DataGate

All captured data is seamlessly delivered to our DataGate software where it is aggregated, analysed, and visualised. DataGate is our online data server that provides a comprehensive platform for remote management of all your data needs, from real-time monitoring to historical analysis. Its intuitive interface allows for easy navigation and insight generation, empowering users to make informed decisions quickly. With DataGate, you have a powerful tool at your fingertips to turn data into actionable intelligence.

**74M**  
Data Points

**4M**  
Messages

**650K**  
API Requests

DataGate processes more daily transactions than the entire UK CHAPS Banking system handles in a month. That means, on average, we're operating at a scale that rivals the daily volume of UK credit and debit card activity.





# HWM Global

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**Innovations that keep  
critical resources flowing.**