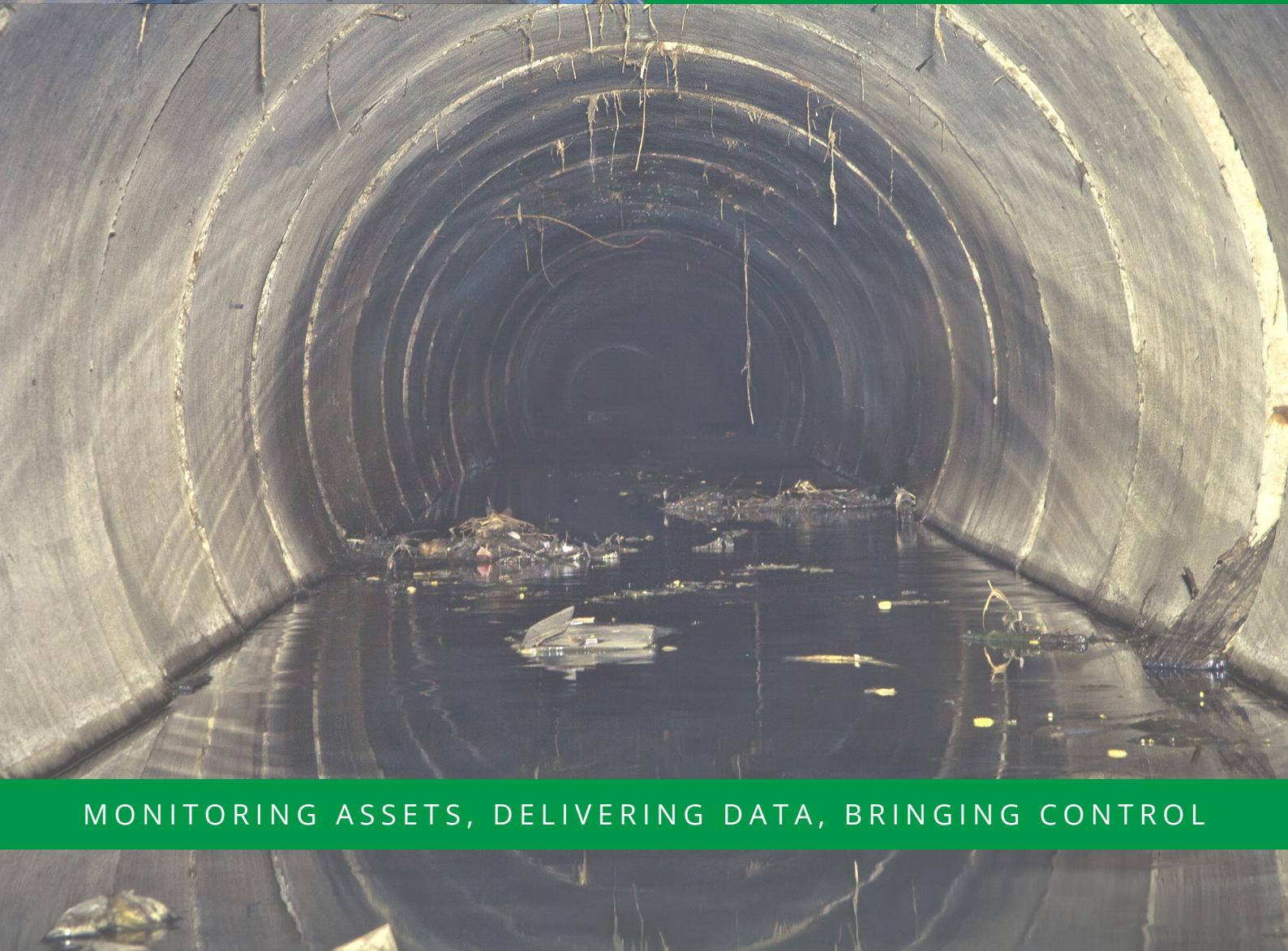




Experts in Waste Water Monitoring

for long term monitoring
and surveying in
waste water networks

PRODUCT CATALOGUE



MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

Who are HWM?



We are experienced and respected manufacturers of monitoring and telemetry equipment for water, wastewater and gas networks, together with telemetry AMR and facilities optimisation products.

Having serviced the clean water industry for nearly 40 years, we have combined advanced cellular communications technology with rugged, purpose-designed hardware to deliver a wide variety of robust and efficient network monitoring solutions.

We are dedicated to achieving our aim of **helping customers to save natural resources and reduce CO₂ emissions**.



Based out of our Head Office in South Wales, which incorporates a 400 year old, Grade II listed farmhouse, we design, test and manufacture all of our network monitoring solutions in-house.

We boast an innovative research, development and manufacturing facility and dedicated engineering and production teams, allowing us to deliver our industry-leading products to customers quickly.

Our unique Head Office also houses our advanced testing and development equipment. This includes our complex new test rig and our industry-renowned external leak site.

The test rig, which was developed to meet our own specifications, is built in three parts and allows the replication of a variety of network conditions. Our team of engineers and technical specialists use the test rig to support development of new technologies and to test upgrades of current products.

Our leak site is an underground network of pipes and valves designed to simulate leaks and generate authentic leak noise. While our technical teams use the leak site for product development, it is also a great facility to help train customers in leak noise detection.



Why monitor **Waste Water Networks?**

Challenges such as climate change and rapid population growth are adding additional demand to waste water networks that, in many cases, are already feeling the strain.

Both increased urbanisation (to meet the demand for new housing) and greater, more consistent quantities of rain water are having a direct impact on the capacity of waste water networks.

When pairing together the challenges of maintaining a Victorian-era sewer network with a growing population and climate change, water companies are finding themselves under increasing pressure to find smart, cost-effective solutions.

How do we monitor **Waste Water Networks?**

We have developed an innovative range of waste water network monitoring products that fall under the following categories:



The heart of our waste water monitoring system: highly-compatible data loggers that use advanced cellular telemetry to deliver customer data



Innovative, multi-application level sensors that provide accurate chamber level data



Flow sensors monitor the flow-through of a chamber, delivering reliable data and tackling flooding caused by pipeline blockages

Intelligens WW

ATEX Certified Data Logger

Intelligens WW: NBLoT-enabled data logger engineered for waste water applications

Intrinsically safe and built for compatibility, the versatile Intelligens logger can be tailored to meet a variety of specific user needs.

Intelligens WW is safe for use in explosive environments, and as such, is an ideal logging solution in combined sewer overflows, general sewer monitoring, storm drains, storage tanks and flood warning systems.



Key Features and Benefits

- NBLoT LTE-based cellular communication standard with fallback 2G capability
- Compatible with a wide variety of sensors and inputs
- IP68 rated, making it fully waterproof under pressured immersion

Intelligens WW is compatible with a variety of different sensors, including:-



Pressure Transducers



Doppler Velocity Probe



H₂S



Conductivity Sensors



Current Switches

SonicSens 3

Ultrasonic Level Sensor

SonicSens 3 is an intrinsically safe level sensor developed for use in multiple applications, including sewer level monitoring.

Through the use of ultrasonic technology, SonicSens 3 avoids contact with its environment, reducing contamination and lowering maintenance requirements.

Compatible with multiple HWM telemetry data loggers and certified for use in Zone 0 hazardous areas, SonicSens 3 is the ideal solution for remote and challenging installations.



Key Features and Benefits

- The intelligent SonicSens sensor is compatible with a variety of HWM data loggers
- Contains 'Unwanted Echo Filter' to remove noises caused by objects such as ladder rungs
- Simple to install, with multiple pre-set options in software, including automatic level/flow conversion



Intelligens Flow

ATEX Certified Flow Monitoring System

Intelligens Flow is a flow monitoring system designed for use in waste water applications including foul, combined and storm water sewers.

Built around an Intelligens WW data logger, flow velocity is measured by a Doppler-effect sensor that uses ultrasonic pulse technology. To generate level, a Piezo resistive probe is fitted, including a desiccant tube to maintain proper sensor function.

Non-contact level measurement can be achieved using a SonicSens ultrasonic sensor. Software within the unit can automatically be added depending on the nature of the application.

Key Features and Benefits

- NBLoT LTE-based cellular communication with 2G fallback
- Unit includes advanced data logging and alarm regimes
- Suitable for long and short term flow surveys

IS Log

ATEX Certified Data Logger

IS Log: intrinsically safe and highly versatile data logger

A multi-application solution, IS Log is compatible with a variety of sensors, including SpillSens, the ATEX certified digital float sensor, as well as ultrasonic and capacitance sensors and depth transducers.

This innovative logger uses the latest integral cellular telemetry technology to provide rapid data transmission at low cost.



Key Features and Benefits

- Compatible with a range of sensors, including SpillSens
- Certified for use in Zone 0 hazardous areas
- Advanced cellular telemetry options available
- Designed for easy integration into third party software via DataGate API



Case Study: OnSite uses HWM data loggers to measure rainfall events

To ensure sewer systems are operating effectively, and to reduce the risks of blockages, water companies often carry out flow surveys within their networks. A flow survey will indicate how the sewer is performing day-to-day, as well as how it copes with the added water from rainfall events.

When OnSite, one of the UK's leading waste water specialists, was looking to make their rain gauges more efficient, they required a data logger that has the ability to automatically upload the collected data to a central point. Not only would this save time, but it would also be more cost effective.



To meet OnSite's requirements HWM proposed **COMLog 2**, an innovative logger that uses latest cellular technology as automatically uploading data to a central server has numerous benefits for OnSite and their customers.

The data is available almost immediately, meaning it can be utilised more quickly and more efficiently. It is also much more cost-effective as automatic data transfer reduces the requirement for regular site visits for manual data downloads.



SpillSens

ATEX Certified Digital Float Sensor

SpillSens is a low-cost, multi-alarm digital float sensor designed to act as an early warning system for blockages and sewer overflows.

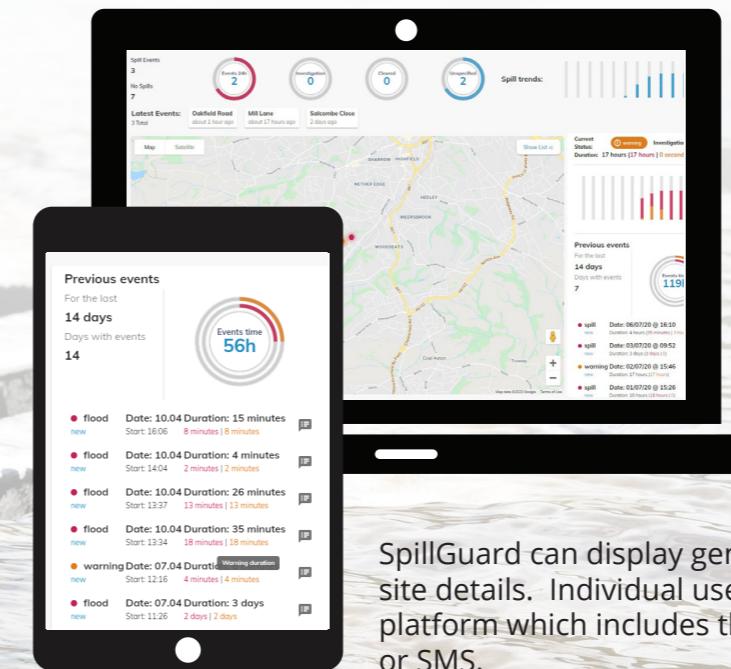
ATEX-approved and built to withstand harsh sewer environments, SpillSens uses digital positioning technology to monitor rising levels in the waste water network. Connected to an advanced data logger with integral telemetry, alert messages are transmitted to a dedicated user portal.

SpillSens is a simple to install, robust and cost-effective solution for long-term level monitoring in waste water networks.



Key Features and Benefits

- Three levels of alert (green, amber and red), based on the angle of the sensor
- Designed to have no moving parts, unlike traditional steel ball and micro-switch sensors
- Certified for use in Zone 0 hazardous areas
- Online data viewing via SpillGuard portal



SpillGuard

Online Data Viewing Portal

SpillGuard is the dedicated online portal for the monitoring and fleet management of HWM's unique multi-level alert system.

Using Google Maps, SpillGuard provides a detailed map interface which colour codes the status of each individual installation. Three alert levels can be supplemented with user-assigned statuses, such as "site under investigation" or "alert cleared".

SpillGuard can display general site statistics and trends, as well as specific site details. Individual users and reports are managed using an advanced platform which includes the option to forward alarm messages via e-mail or SMS.

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CLEAN WATER



WASTE WATER



GAS NETWORKS



AUTOMATED METER READING



FACILITIES MANAGEMENT

Clean Water Network Monitoring

With over 30 years in the water industry, HWM is skilled at addressing the challenges of water network monitoring. With increased pressure on water globally, we can solve the problems of effective water network management, providing data on performance and enabling effective network management.

Waste Water Network Monitoring

Control of waste water networks is a key public health challenge. Effective monitoring of waste water networks reduces both frequency and impact of pollution events. Permanent installation of remote monitoring equipment helps to alert network operators to immediate problem sites.

Gas Network Monitoring

Effective monitoring of gas networks has traditionally been a challenge, due to a lack of on-site power and deployment difficulty. Our gas products address these concerns, using our expertise in ATEX and low power design capabilities. This enables users to collect data about this critical infrastructure.

Automated Meter Reading

Accurate and consistent data is the foundation for effectively controlling energy usage and reducing waste. AMR delivers precise and timely consumption data for investigation and analysis of energy usage as well as exact billing.

Facilities Management

HWM has pioneered the development of wireless monitoring solutions for fixed network deployment. These can be combined with a variety of sensors, providing our partners with 'near real-time' data that they need to help their customers to eliminate waste, cut costs and reduce carbon emissions.



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