WASTE WATER

HWM

Waste Water
Product Brochure

2024

About **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 CO_2 emissions**.

Why monitor **Waste Water Networks?**

Water companies across the globe are under unparalleled 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, creating potential pollution incidents.

The spillages and pollution incidents that result from sewer blockages can have devastating consequences, particularly when these incidents happen customer-side.

Not only are clean-ups expensive, but news travels fast via social media and a water company can quickly take a damaging hit to their reputation locally, nationally and even internationally.

How we support monitoring **Waste Water Networks**

Combined Sewer Overflows

- Monitor CSO levels for spills
- Multiple alarm levels, with accelerated sample rate and dial-in frequency
- Monitor screen performance
- Manage cleaning regimes, for efficiency and effectiveness
- Alert emerging problems
- Asset performance
- Feed AI models
- Ensure efficiency of jetting and cleansing

Small Sewer/Customer Side

- Monitoring to avoid blockages and customer floods
- Avoid Pollution
- Improve ODI performance
- Manage cleaning regimes
- Easy installation
- Maintenance-free
- Constant tilt angle for predictive AI alerts

Telemetry Data Logging

- Quality
- Flow
- Level
- Multi-parameter
- Infiltration studies
- Conductivity
- Temperature
- Rainfall

Applications and **Software**

To deliver effective results, HWM products are supported by a variety of applications and software solutions.

Each of the bespoke apps and software solutions that supports our products is designed and programmed in-house by our dedicated team.

We have developed various applications and software solutions to support our range of loggers and sensors, including:

DataGate

DataGate is our online data server that provides fast, convenient and secure remote data management.
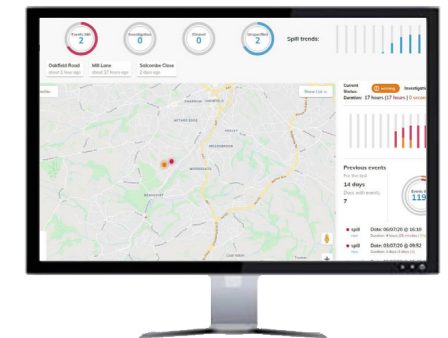
Through a variety of methods (FTP, VMN, modem etc.), DataGate has the capability to receive data from all mobile networks and processes over 1.7 million messages a day.

DataView

DataView is the customer-facing digital platform for viewing and analysing the data that has been collected in the field by HWM devices.
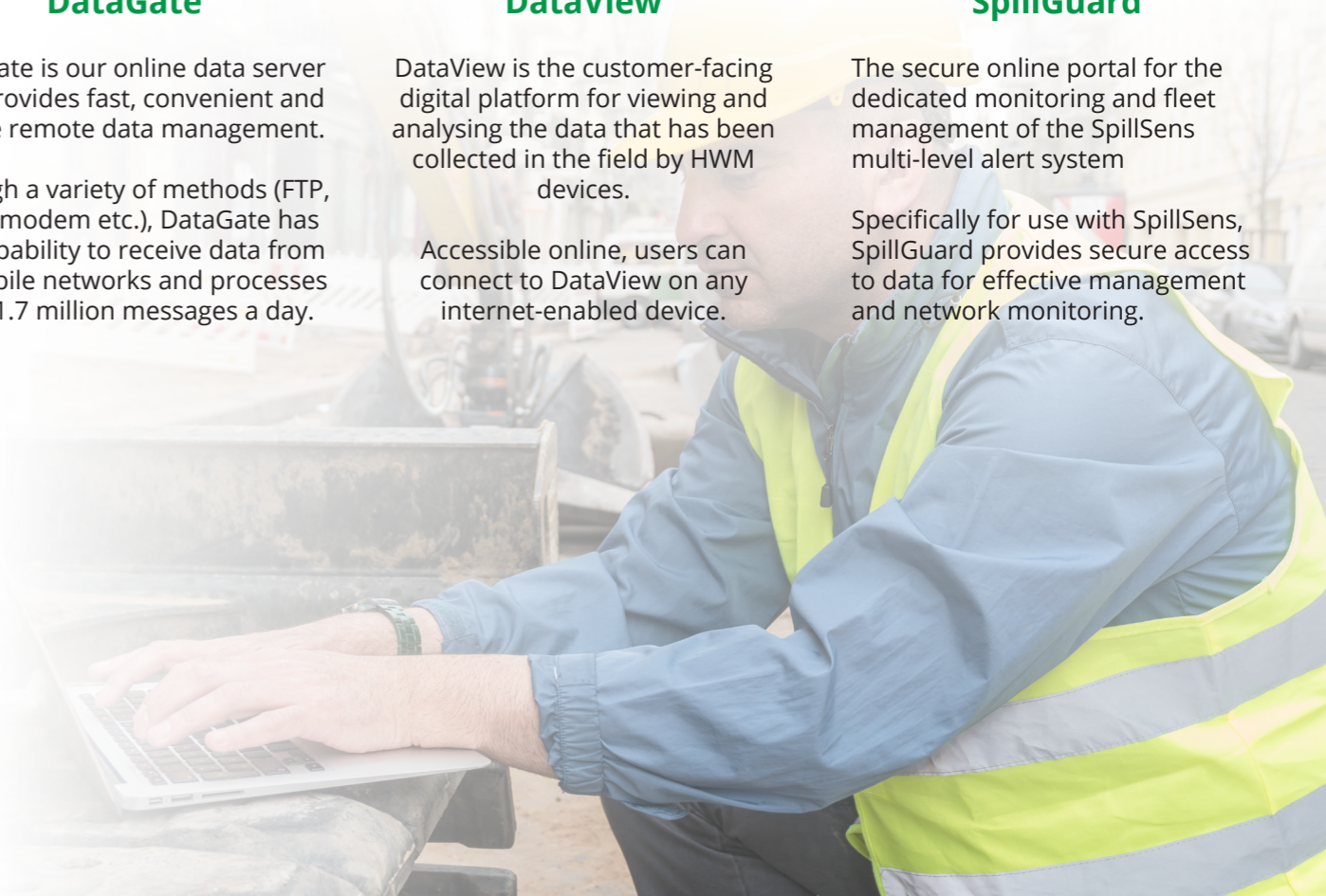
Accessible online, users can connect to DataView on any internet-enabled device.

SpillGuard

The secure online portal for the dedicated monitoring and fleet management of the SpillSens multi-level alert system

Specifically for use with SpillSens, SpillGuard provides secure access to data for effective management and network monitoring.

Level Monitoring **Products**

RadarSens: the intrinsically-safe level monitoring system using radar sensing technology to deliver cost-effective, battery powered waste water level monitoring

Cost-effective and simple to install, RadarSens is available with a variety of stainless-steel, non-drill brace bars or conventional wall brackets for '**right first time**' deployment.

A **laser alignment tool** (supplied separately) is available to check the device is level and aligned correctly during the rapid installation.

Sensors are **configured locally via Bluetooth** through our Deployment App, meaning that site data (including photographs) can be uploaded and accessed remotely. Through the app, **signal strength** and **sensor reflection tests** can be performed to significantly reduce the likelihood of call-in or poor data quality issues post deployment.

Key Features and Benefits

- intrinsically safe; ATEX-certified for use in Zone 0 hazardous areas
- advanced and cost-effective radar sensor delivers precise data for long-term network monitoring
- remote monitoring of sensor position, data quality and chamber temperature
- a range of easy-fit stainless steel wall brackets and non-drill installation brace bars are available
- drop-in laser alignment tool to ensure the sensor is positioned correctly
- compatible with NBIoT, LTE-M and 2G cellular networks for future-proofing
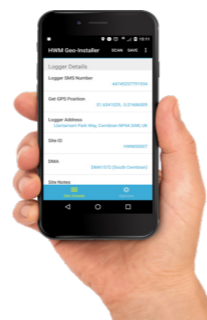
RadarSens
Radar Level Sensor

- Precise data via Radar
- Quick and easy to install
- Bluetooth connectivity
- Dynamic sensor health check
- Compatible with various HWM data loggers

IS Log
ATEX Certified Data Logger

- NBIoT cellular telemetry (2G fallback)
- Multi-application compatibility
- Intrinsically safe
- Wireless programming
- Easy software integration

Deployment App
Installation Support

- Simple to use
- Barcode scanning
- Accurate GPS
- Installation photos
- Automatic upload

SonicSens 3: the intrinsically-safe, ultrasonic level sensor developed for use in multiple applications, including CSO and sewer level monitoring

SonicSens 3 uses ultrasonic technology to monitor and **prevent surcharge** and **spill events**, ensuring cost-effective **compliance** and damage limitation.

When deployed to conduct Event Duration Monitoring at Combined Sewer Overflows (CSO), SonicSens 3 alerts to surcharges, **reporting event occurrence**, **time** and **duration**, and because it avoids contact with its environment there is little need for scheduled maintenance.

ATEX (Zone 0) certified for use in hazardous environments, SonicSens 3 is dependable and, when paired with our ATEX Battery Pack, can deliver **accelerated sample rates** and **increased dial-in frequency** whilst maintaining a **five-year battery life**.

Key Features and Benefits

- easy to install, with multiple pre-set options in software, including automatic level/flow conversion
- features an 'Unwanted Echo Filter' that can remove noises caused by objects such as ladder rungs
- intrinsically safe; ATEX-certified for use in Zone 0 hazardous areas
- avoids contact with its environment, reducing contamination and lowering maintenance costs
- the intelligent SonicSens sensor is compatible with a variety of HWM data loggers

SpillSens: the multi-alarm digital float sensor delivering early warnings of small sewer and customer-side blockages and overflows

Installed at a critical height in a chamber, SpillSens uses digital positioning technology to **monitor sewer levels** constantly and effectively.

Programmed with three alert levels, SpillSens indicates green when conditions are normal, amber when levels are rising and red when critical levels are reached.

Ideal for **Incident Prevention Monitoring**, SpillSens supports compliance with **Outcome Delivery Incentives** and helps to protect the environment by **reducing pollution** incidents.

ATEX (Zone 0) certified, SpillSens is dependable and, when paired with our ATEX Battery Pack, can deliver **accelerated sample rates** and **increased dial-in frequency** whilst maintaining a **five-year battery life**.

Data Logging **Products**

IS Log: an advanced data logger, IS Log is ATEX-certified and built for compatibility, pairing seamlessly with a wide range of sensors

Intrinsically-safe and highly versatile, IS Log is designed to be a cost-effective, multi-application solution. It is compatible with a wide range of sensors, including our **SpillSens** digital float sensor, ultrasonic level sensors, depth transducers, flood alert sensors and more.

IS Log is **battery powered**, meaning no mains connection is required for deployment, and as standard, delivers a **five-year battery life** at typical call-in rates.

IS Log also benefits from our advanced modem, which is capable of connecting via **NBIoT** or LTE-M for low-powered data transmission. Where NBIoT is not available, then a **2G fallback** is in place to ensure consistent data transfer.

Key Features and Benefits

- compatible with a wide range of sensors, including ultrasonic and depth transducers
- intrinsically-safe and ATEX-certified for use in Zone 0 hazardous areas
- battery-powered, with a typical five-year battery life
- advanced cellular telemetry and integration into third party software apps.
- online data viewing via DataGate and EnviroView platforms

Multilog 2 WW: the robust, multi-input communications platform designed for environmental and waste applications where ATEX certification is not required

Built to withstand the conditions encountered within waste water environments, Multilog 2 WW is specifically designed to be **compatible** with a variety of third-party sensors, including **RavenEye**, **MicroFlow-i**, **dBi** and **VEGAPULS**.

Including four sensor connections and delivering up to 8 logging channels, Multilog 2 WW is highly versatile and is suitable for a wide array of applications, including **depth**, **flow** and **quality** data logging, battery telemetry for third party **radar depth** and **velocity** sensors and **Modbus** sensor telemetry.

Designed specifically for non-ATEX applications, Multilog 2 WW is housed in a drop tested non-metallic casing and has non-metallic connectors to prevent against corrosion in harsh environments.

Key Features and Benefits

- serial and analogue input for connection to SonicSens 3 and various other sensors
- four sensor connections with up to 8 data channels
- external battery input to support accelerated dial-in or powering of third-party sensors
- NBIoT/LTE-M based cellular communication as standard with fallback 2G capability
- firmware and programming changes made remotely for efficiency and cost-effectiveness

Intelligens WW

The truly flexible, NBIoT-enabled data logger engineered for a variety of waste water applications including **CSO monitoring** and **flood warning** systems.

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**.
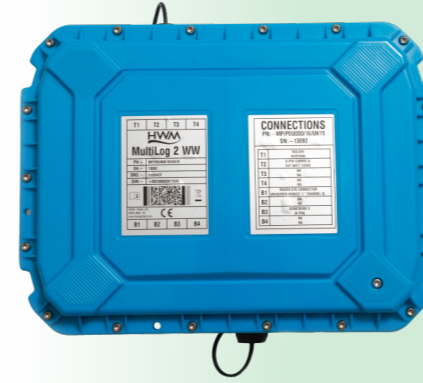
Multilog IS

The intrinsically safe, **multi-channel** data logger suited for environments with **corrosion** concerns.

Equipped with our advanced modem and capable of connecting via **LTE-M** or **NBIoT**, Multilog IS is a highly effective, battery powered data logging/RTU solution.

Typical applications include: Level, Velocity and Flow Monitoring, Modbus, SDI12 sensor telemetry and more.

COMlog 2

The **highly-versatile** data logger designed to be a cost-effective **multi-application** logging solution.

Developed for **flexibility**, COMlog 2 is compatible with any sensor or meter that has a volt-free pulsed output, using **accumulative pulse counting technology** to calculate index readings against a known volume.

Intelligens Flow

The intelligent flow monitoring system designed to measure **flow** in **part-filled** pipes and **open channels**.

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.

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.

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.

THE KING'S AWARDS FOR ENTERPRISE 2023 INNOVATION

ISO 9001 QUALITY MANAGEMENT　ISO 14001 ENVIRONMENTAL MANAGEMENT　ISO 27001 INFORMATION SECURITY MANAGEMENT　ISO 45001 HEALTH & SAFETY MANAGEMENT

CYBER ESSENTIALS

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MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

A **Halma** company