



Scottish Water Aganova Case Study



Pipeline inspections for Scottish Water using Aganova's Nautilus technology

Client

Scottish Water is a publicly owned, independently regulated water company in Scotland, supplying water and wastewater services to households and businesses across the country.

Established in 2002, Scottish Water provides excellent customer service by delivering high levels of water quality, whilst protecting the environment and supporting sustainable communities.

Challenge

In March 2025, Scottish Water needed to inspect a 29.2km cast iron raw water pipeline between Baddinsgill and Pateshill near Edinburgh.

The DN600 pipe was gravity-fed and its remote location made traditional leak detection difficult due to limited access and lack of consistent monitoring points.



Solution

[Hydrosave](#) was contracted by Scottish Water to conduct internal inspections on the pipeline. To deliver the best results, we partnered with [Aganova](#), a leader in leak detection technology, using its proprietary Nautilus sphere solution.

Key features:

- The state-of-the-art 70mm Nautilus sphere moves with the water flow and collects acoustic and pressure data
- The sphere uses cutting edge sensors and AI-driven analysis to detect leaks, air pockets and structural anomalies with high accuracy.
- Timed acoustic devices, known as synchronisers, were placed along the pipeline to help pinpoint incidents to the nearest centimetre.



Four consecutive inspections took place over a four-day period, covering the full length of pipeline, and were carried out under controlled hydraulic conditions.



The inspections involved:

1. Preparation

We conducted an initial pre-inspection, gathering system information and transferring data to Aganova for detailed planning.

2. Inspection

We performed the inspection at a working flow rate of approximately 183 litres per second. Insertion and retrieval of Nautilus was carried out through DN150 gate valves, enabling full access without service disruption.



3. Extraction and disassembly

After each 4–5-hour inspection, Nautilus was recovered and disassembled to extract the recorded data for analysis.

4. Data analysis

All data collected was processed and analysed through Aganova's Nemo digital platform, generating detailed incident maps and hydraulic profiles.

Results

The inspections were successfully completed, with a total of 20 incidents recorded and categorised according to severity, including:

Ten leaks:

- Two major (urgent repair needed)
- Three medium (to be repaired or monitored)
- Five minor (to be monitored)

Eight air pockets:

- Three significant (recommend air valve assessment)
- Five minor (monitoring only)

Two unknown anomalies (non-critical, further investigation planned)



Conclusion

This project demonstrated the value of innovative, non-invasive technology for pipeline inspection.

Through the partnership between Hydrosave, Aganova and George Leslie, Scottish Water received detailed, accurate data to support maintenance planning, long-term asset management and risk reduction, all without disrupting service



Testimonial

"The collaboration between Scottish Water, Aganova, and Hydrosave on the recent inspection of our raw water main has been excellent. The professionalism and technical precision demonstrated throughout the project have delivered immediate value.

The identification of leaks and air-related anomalies, particularly the cluster of air pockets discovered during run four, has resulted in the installation of an air valve to mitigate these issues thus increasing the operational capacity of the main.

This is a great example of how collaborative working and smart diagnostics can drive real operational improvements."

Ian Dunsmore

Technical Team Manager, Strategic Water Infrastructure, Scottish Water



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pipeline inspections,
please contact us at
[Hydrosave.co.uk](https://www.hydrosave.co.uk)
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