

AQUAM

TECHNOLOGIES



Technologies that
ensure critical pipeline
infrastructure is resilient
and reliable

UTILITIES • INDUSTRIAL • RESIDENTIAL • COMMERCIAL

www.aquamtechnologies.com



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If critical infrastructure failed what would be the financial impact? Aquam Technologies uses cutting edge technologies to successfully manage the risks of pipeline failure and provides cost effective solutions for rehabilitating infrastructure.

Technologies that help deliver a safe and reliable water supply

DIAGNOSTIC TECHNOLOGIES

Using SMART diagnostic technologies, we can quickly locate leaks and accurately predict the life expectancy of pipeline infrastructure by analysing thousands of data-points.

REHABILITATION TECHNOLOGIES

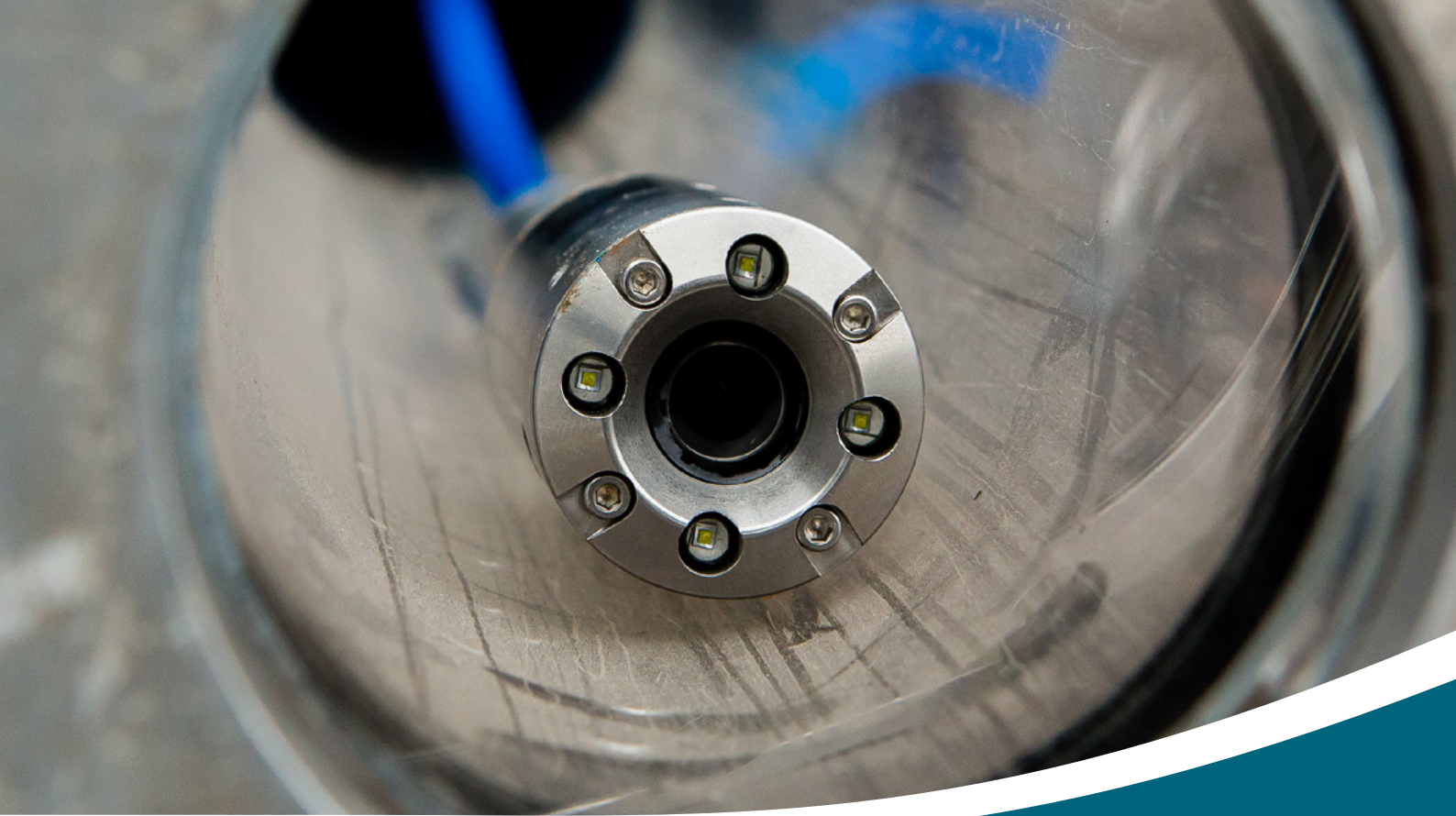
Aquam Technologies range of rehabilitation solutions can clean and restore ageing infrastructure using specialised pipeline epoxy coatings and CIPP structural liners. Providing an environmentally friendly and cost effective alternative to the traditional solution of ripping out and replacing pipes.

WATER SERVICES

Aquam Technologies can support water utilities in the management of third-party users of potable water networks.

Managing the supply of standpipes and providing training courses to ensure standpipes are used correctly and safely.

Aquam Technologies Overland Supply Vehicles are specially equipped to provide an alternative water supply to the network during leaks, bursts and planned works.



Pipe Diagnostics Technologies

Aquam Technologies world leading asset condition assessment and leak detection equipment can accurately assess pipe condition and life expectancy and precisely locate leaks and bursts. By capturing thousands of individual data-points Aquam Technologies can provide clients with detailed information that supports defensible asset investment decisions. This helps our clients plan and prioritise works, optimise budgets, prevent future infrastructure failure and mitigate potential fines.

Aquam Technologies innovative range of diagnostic equipment is developed in-house by our highly skilled team of engineers and technicians.

Leak detection

Asset management

Condition assessment

Pipe material validation

Pre and post rehabilitation assessments

GPS tracking and plotting

What are the benefits of analysing your infrastructure?

- Accurate pipeline assessment enables data-driven defensible investment decisions
- Precisely locate leaks and identify areas at greatest risk of failure
- Reduce costly water leakages and avoid any potential fines
- Improve water supply by quickly identifying any blockages
- Assess the true value of the network
- Avoid unnecessary and expensive pipe replacement
- Improve environmental performance and network efficiency

Diagnostic Technologies

Aquam Technologies pipe inspection systems can be inserted into live pipeline infrastructure. This includes water mains, fire suppression networks, heating systems, drainage and sewerage networks.

Combined sensor heads carry live-feed CCTV, real-time hydrophones and high-powered sondes that capture much broader understanding of pipe condition and over longer ranges than laboratory tests.

Products

Aquam Technologies pipe inspection tools access the network through fire hydrants and valves and can be applied on some of the smallest diameter pipes – down to 50mm. The multi-sensor devices can measure pipe wall and liner thickness, assess corrosion and pinpoint leaks.

Within the range are technologies that can travel up to 1,000m within the pipe and are suitable for use on live networks. For greater distances we also offer untether solutions. These robust assessment systems can operate in pressures up to 16 bar and are suitable for use on a wide range of pipeline materials.





Pipe Rehabilitation Technologies

Aquam Technologies manufactures and installs specialised technology solutions that can clean and restore ageing pipelines, using epoxy coatings and CIPP structural liners. Providing an environmentally friendly and cost effective alternative to the traditional solution of ripping out and replacing pipes.

What are the benefits of repairing and restoring pipework?

- Far less disruptive to buildings internally and externally
- Can be more cost effective than pipe replacement
- More environmentally friendly solution using less resources and reducing pollution risks
- Helps prevent future leaks, blockages and corrosion
- Ensures compliance with water quality regulations
- Can make legacy lead pipework safe

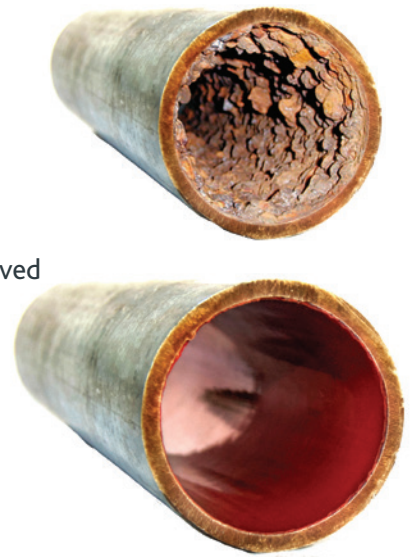
Pipelines suitable for Aquam Technologies solutions:

- Water and gas service pipes
- Water and gas mains
- Firewater systems
- Greywater pipes
- Heating and ventilation systems
- Air conditioning systems

Nu Line is an epoxy pipelining solution

This versatile blown-in epoxy coating system can restore infrastructure across multiple systems, in multi-storey buildings or on a single problematic pipe.

- Suitable for potable water - Water Regulations Advisory Scheme (WRAS) approved
- Can be used on pipe diameters from 15 - 150mm (1/2 – 6")
- Used on hot water pipes up to temperatures of 80°C
- Suitable for cold water galvanized steel and copper pipes



Nu Drain is a structural liner suitable for drains and sewers

This cured-in-place pipe (CIPP) liner can be installed into existing infrastructure to provide a permanent solution to deteriorating pipes.

- Typical relining range 50 - 300mm (2 – 12") diameter
- Can be used on complex pipework with multiple bends



Serline is used to coat lead pipes making potable water safe

Existing pipes can be quickly and safely relined to improve potable water quality and ensure regulatory compliance.

- Multiple service pipes can be lined in a day
- Technology can be used up to property entry point
- Approved for potable use by UK Drinking Water Inspectorate (DWI)

Why is cleaning pipes essential maintenance?

Metal pipes can naturally corrode and rust over time causing water discolouration, flow restrictions and even blockages. Aquam's cleaning technologies can reinstate pipes to their original diameters and significantly improve water flow and water quality. Cleaning is also essential preparation for pipelining and rehabilitation.





Water Services

Providing standpipes for utilities

Aquam Technologies support water utilities, in the management of third-party users of potable water on their networks. Responsibility for providing standpipes can be completely outsourced to Aquam Technologies, who will ensure that compliant and safe equipment is always used. The standpipes are also designed to measure water usage, which gives utilities the option of billing users.

As part of the service, Aquam Technologies provide training to third-party users to ensure standpipes are used correctly and safely. Calm Network Training can be delivered onsite or online to customers and will help prevent dangerous network surges happening.

Overland Supply Vehicles provide alternative water supply

Specially equipped vehicles can keep customers on a stable water supply during emergency leaks and bursts, as well as planned works. This regulatory compliant equipment helps prevent any interruptions in water supply.

Benefits of Overland Supply Vehicle

- Repairs and maintenance can take place with little or no interruption to normal service
- Can help utilities move to zero interruption of supply
- Better management of leakage and burst events can improve customer SIM scores and avoid compensation payments

Benefits of managed standpipe service

- Reduces illegal extraction
- Reduces water quality incidents
- Reduces leakage and costs
- Detailed reports of usage and billing
- Administration simplified
- Derives small income stream



Calm Network Training

Surge is a major cause of leaks and bursts in pipe infrastructure. Harm can be avoided by modifying the way the network is operated. This can be achieved by ensuring operators of hydrants and valves in the network are properly trained, which utilities must do under their duty of care.

- Online course designed to help reduce impact of surge in water networks caused by human error
- Accredited by the Institute of Water



Benefits of Overland Supply Vehicle

- Keep customers supplied with a safe and stable temporary water supply
- Fully equipped for immediate deployment and compliant with relevant street works and water quality regulations
- Creates resilient water supply for multiple properties
- Manifold, connectors, pressure valves, adaptors, water meters and traffic signage carried onboard
- WRAS-approved collapsible hose for drinking water use fitted as standard





Utilities and Municipalities

Ageing infrastructure, growing populations, climate change and congestion are some of the challenges facing cities and utilities globally and Aquam Technologies can help. We recognise our clients' needs to strengthen infrastructure resilience within budgetary constraints and this is reflected in our portfolio of services and technologies.

Aquam Technologies offers smarter ways to assess and remedy deteriorating water and gas pipe infrastructure beneath streets and within buildings. Our solutions help prevent and reduce leaks and bursts, improve water quality, reduce waste and minimise disruption to communities and customers.

Capabilities

Aquam Technologies services help our utility clients worldwide plan and prioritise works, optimise budgets, prevent future infrastructure failure and mitigate potential fines. We can accurately assess pipe condition, precisely locate leaks and deliver infrastructure restoration with minimal impact on communities.

During water leaks, bursts and planned works Aquam Technologies can keep multiple households connected to stable water supply. We also manage third-party users of the water network on behalf of utilities, supplying standpipes and delivering certified operator training, helping reduce surge effects and water quality incidents.



CASE STUDY

In-flow inspection saves sewer from likely failure

A severely corroded rising sewer main, which had lost two-thirds of its wall thickness in places, was diagnosed using Aquam's Pipescan+ technology without disrupting the sewage flow. Yorkshire Water was able to intervene in a timely way saving the pipe from probable failure.

CASE STUDY

Stable supply enables rapid reline of lead pipes

Aquam Technologies Overland Supply Vehicle was deployed to support a programme of lead pipe lining works the company was undertaking for Yorkshire Water in Rotherham. Serline was installed right up to the entry point of 1,000 homes and customers were switched seamlessly to stable temporary supply during works.





Industrial

Aquam Technologies works around the world with clients in a wide range of industrial sectors including energy, food & beverage, pharmaceutical and manufacturing. Many facilities are faced with ageing infrastructure, constrained sites and lean production practices.

Aquam Technologies offers smarter ways to assess and remedy the deteriorating water and drainage infrastructure within industrial facilities. Our solutions help prevent and reduce leaks and bursts that can lead to downtime, while resolving issues with minimal disruption to production, operations and buildings.

Capabilities

Aquam Technologies services help our industrial clients plan and prioritise works to mitigate infrastructure failures and manage upgrades that could impact on production. We can accurately assess pipe condition, precisely locate leaks and deliver infrastructure restoration with minimal impact on daily routines and facilities.

Pipes for water, wastewater, gas, air and fire suppression can all be assessed and restored rapidly. Aquam Technologies services are particularly useful in hard-to-reach locations on compact sites where dig-out-replace techniques can be highly disruptive.



CASE STUDY

Beverage plant drainage system rehabilitated

Multiple failings on drainage at a major beverage production plant in Dublin were addressed by deployment of Nu Drain CIPP liner by Aquam Technologies skilled technicians. The only alternative would have been costly and disruptive replacement of the entire system.

CASE STUDY

Corroded power station pipes restored without disruption

Chiller pipes at an Eskom coal-fired power station were experiencing scale build-up, corrosion and the risk of leaks. Aquam's Nu Line was used to rehabilitate the pipes in just three days with no structural damage to the facility.





Commercial and Residential

Aquam Technologies commercial clients include multi-storey office blocks, hotels, condominiums, heritage buildings, leisure parks, transport facilities, schools and universities. Keeping disruption to a minimum for the people using these facilities is a key concern for those who own and manage them.

Aquam Technologies offers smarter ways to assess and remedy the deteriorating water and drainage within and beneath commercial and residential properties. Our solutions help prevent and reduce leaks and bursts that can lead to disruption, while resolving issues without impacting on the users of facilities.

Capabilities

Aquam Technologies help our commercial clients plan works to mitigate infrastructure failures and manage upgrades effectively. We can accurately assess pipe conditions, precisely locate leaks and restore infrastructure without heavily impacting on daily routines.

Pipes for water, wastewater, gas and heating can all be assessed and restored rapidly. Aquam Technologies services are particularly useful in hard-to-reach locations, where dig-out-replace techniques can be highly disruptive.



CASE STUDY

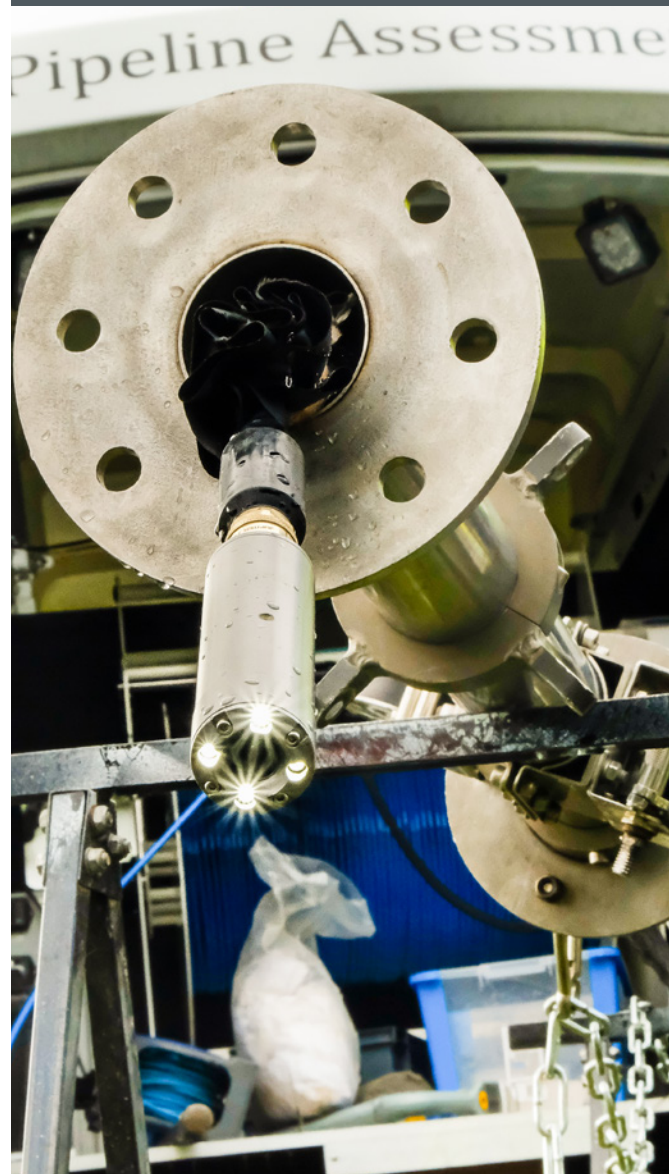
Academy school water systems rehabilitated

Failing hot and cold water pipes in an Essex secondary school were suffering from low pressure, low flow and discoloured water. Pipe diameters ranged from 12mm (1/2") to 75mm (3"). The systems were inspected and cleaned before Nu Line epoxy resin was blown-in to coat the internal walls of the pipes. The pressure, flow and overall performance of the systems were restored and the water colour returned to normal, without the need to damage the building to gain access.

CASE STUDY

Diagnostics team quickly locate water leak

A large leak on a 300mm main at a Lancashire business park was incurring hourly fines for the property services company maintaining the site. Attempts to dig down and find the leak had been unsuccessful. Aquam Technologies pipe diagnostic team accessed the main through a valve and quickly pinpointed the leak, allowing the issue to be resolved within minimal cost and disruption.



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