LEAKAGE MANAGEMENT
MEETING THE CHALLENGE

ENIGMA
AN OVARRO TECHNOLOGY

THE CHALLENGE

Anglian Water have reduced leakage by 20% since 2010 and have committed to a further 23% reduction by 2025. Overwhelmingly, customers have told Anglian Water that leakage is a high priority and that they want to see it reduced to well below the Economic Level of Leakage (ELL).

The aim was to develop, own and utilise a system that enables cost effective, smart, real time leakage monitoring at an individual asset level for Anglian Water's entire network. The team were faced with a multitude of challenging conditions; the sites consisted of a large range of materials, including but not limited to Cast Iron, Ductile Iron, Asbestos Cement, MDPE and PVC.

THE SOLUTION

Trials were undertaken in Lincolnshire, England in order to compare different technology over a total mains length of 40km, comprising of mixed material pipes.

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800 traditional noise loggers were deployed every 50m at a cost of £250 per logger, totalling an investment of £200,000. By comparison, 58 Enigma3hyQ units were deployed every 750m, at a comparative total cost of £69,600 (including installation of permanent sensor point) to cover the same area. This represented a 65% cost saving (when compared with traditional noise logging).

The results given by the Enigma3hyQ's were demonstrably much better, with all units communicating, less 'false positives', zero theft and lower leakage levels.

WATER

MONITORING
& CONTROL

LEAK NOISE LOGGERS
& CORRELATORS

OVARRO
CONNECTING
TECHNOLOGIES

ADVANCED PERFORMANCE

- Optimised location over longer distances, plastic and trunk mains
- Multi-point correlation via 3G/GPRS communications

- Accurate time synchronisation
- No above ground radio required
- Remote leak listening for confirmation of leak noise

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"One of the biggest challenges across the water industry is the ability to detect leaks effectively on plastic pipes as they don't transmit noise when they leak. Critically, unlike more widely used methods, this new technology can be used on plastic pipes, which make up 60% of our waters mains. It will revolutionise what we do in terms of leakage."

Andy Smith, Regional Optimisation Manager, Anglian Water

KEY DELIVERABLES

Anglian Water have installed 2,350 variants of Ovarro fixed network technologies. They have ordered a further 3,500 units of Enigma3hyQ for installation during the first quarter of 2019; the next phase of their overall leak reduction programme.

Despite the challenging conditions, the Enigma3hyQ's provided repeated, accurate leak locations over distances of up to 4.6 kilometres.

Overall, 2,023 loggers have been installed and 1,325 leaks found and Anglian Water have seen leakage reductions of 1.4 million litres of water per day in targeted areas, helping the water company to meet regulatory targets and support them in their aims to reduce leakage.

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