Supporting ScotRail to effectively track its water use and reduce costs

"Having the AMRs in place at key sites, alongside the help from Business Stream's expert team to monitor them, helps us determine if a spike is a leak or a change of practice at the site. This helps in managing our resources better.

Poul Wend Hansen | Head of Sustainability ScotRail

ScotRail
SCOTLAND'S RAILWAY

ScotRail Trains Limited is owned by the Scottish Government and operates rail services across Scotland.

The company provides nearly 100 million passenger journeys each year, with 359 stations, and 2,150 intercity, regional and suburban rail services a day.

The challenge

A number of sites across the ScotRail estate were reporting higher-than-average water usage, which was impacting corporate budgets and the company's environmental and carbon reduction targets.

The solution

In order to help address this issue, Business Stream's dedicated in-house Water Solutions team deployed Automated Meter Readers (AMR) at problem sites across the managed estate to help map usage.

AMRs are small devices that send meter readings in 15-minute intervals to a centralised point via either a wired or wireless connection to provide almost real-time data. Notably, they do not require physical intervention from onsite personnel and the data can be accessed 24/7, 365 days of the year. The devices remotely monitor water use and can identify any issues as soon as they arise, including burst pipes, leaks or equipment failure.

The results

As a result of installing AMRs at specific sites, Business Stream was able to alert ScotRail to 26 issues at nine sites across a 12-month period.

Alerts included a spike in water consumption totalling 95m³ (95 tonnes) of water per hour, with other high usage spikes including 10m³ per hour, 5.7m³ per hour, and 3.3m³ per hour respectively.

As soon as the AMRs detected an issue, Business Stream's leak detection team quickly reported the problem to the on-site team so that it could be resolved. Had these issues gone unreported until the next visual meter read – the loss per day from leaks could have totalled more than 554m³ per week and 2217m³ per month.

Helpful *by nature*.