Scottish Water
Always serving Scotland

Case Study

TECHNOLOG
AMETEK

Advanced Pressure Management



Ayr, Scotland, United Kingdom

- ✓ Leakage and burst reduction
- ✓ Rapid return in product investment
- ✓ Improved network efficiency
- ✓ Reduction in operating costs
- ✓ Easy to implement





Project Overview

A pressure management and maintenance programme was implemented by Scottish Water. As a result, Whitletts Road district metered area (DMA) in Ayrshire was targeted. Whitletts Road DMA feeds 1965 properties and cascades to Woodfield DMA which feeds a further 3508 properties, a total of 39km of main. Due to the high hydraulic losses at peak demand, the pressure in the system could not be reduced by decreasing the fixed outlet of the pressure reducing valve. However, pressures within Woodfield DMA were falling to as low as 20m between the hours of 7-10am and rising to 50m through the night when the flow was at its lowest. Therefore, there was an opportunity to flow modulate the PRV to reduce the pressure at times of lower flows and compensate for frictional losses.

Key Elements

- Introduction of a pressure management and maintenance programme
- Investigation of pressure managed areas (PMAs) to identify potential for optimisation
- DMAs prioritised by total leakage, properties fed and burst frequency
- Pressure logging study carried out on Whitletts Road DMA
- Installation of Technolog's pressure controller to modulate pressure in line with flow

Key Outcomes

- **Reduced leakage**
- **Reduced burst frequency in the Whitletts Road and Woodfield DMAs**
- **Improved knowledge of the Scottish Water network**
- **Sufficient pressure delivered into the network to satisfy the morning high demand**
- **Reduced network pressure at times of low demand**
- **A leakage saving of 0.25 Ml/day**

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