HEREFORDSHIRE COUNCIL

Case Study

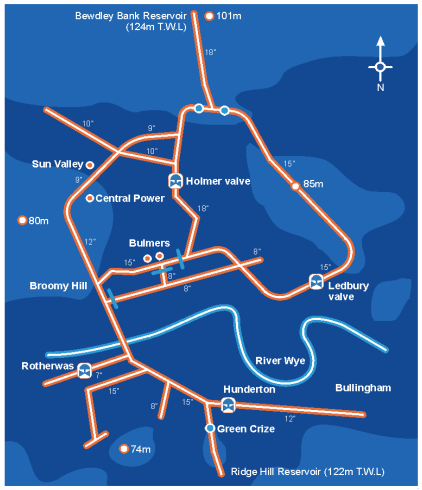
TECHNOLOG
AMETEK

Advanced Pressure Management



Hereford, United Kingdom

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



Hereford - New Distribution Network



Project Overview

Hereford services a population of 55,000 with a daily water demand of 17,500m3. The city has a number of large industrial users who make significant demands upon the water supply at intermittent times throughout the day. Hereford is gravity fed from two reservoirs and the city centre is serviced through two trunk mains, an 18" main which runs 4km to the north and a 15" main which runs 3km to the south. These two mains join within the city centre and feed mains to the east and west of the city.

Technolog identified a number of problems with the network: the two trunk mains feeding the city had significant head loss resulting in low pressure during peak demand, periods of industrial use could reduce pressure by up to 12m and large pressure surges were occurring as a result of fast operating valves drawing water for industrial processes Outside peak hours, pressures were comparatively high in excess of 40m during the day and over 50m at night. These issues created water quality problems and recurrent leakage.

Key Elements

- Reduce industrial demand at peak hours
- Minimise large pressure surges
- Reduce excessive pressure on the distribution network
- **Protect the supply**
- **Prolong life of distribution network** and reduce need for immediate capital expenditure
- Provide peak pressures of 25m and night time pressures of 19m at the critical points

Key Outcomes

- **Advanced pressure control though installation of a Technolog PRV Controller resulted in water savings in excess of 47m3/hr**
- **Night flows and daily consumption decreased by approx. 40% and 15% respectively**
- **Net daily input to Hereford was reduced by almost 18%**
- **Average zonal night pressure was lowered from 60m to 25m, reducing burst frequency**
- **Reduced rapid industrial flow demands resulted in decrease in sporadic pressure surges**

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CS91002 & DMR 7001