



Watersreach & Reservoir Heat Network Upgrades – Rationale Summary

1. Background

This summary outlines the issues identified on the Reservoir and Watersreach heat networks in December 2023 following a study carried out by our heat consultants Fairheat, and the rationale for the upgrade works undertaken in 2025–2026, with expected outcomes for 2026–2027.

2. Issues Identified (2023)

- Excessive heat loss caused by poorly performing HIUs, inadequate pipe insulation, and lateral bypasses.
- Insufficient insulation within the plant room, substations, and secondary network, further increasing heat loss.
- Inefficient hydraulic design and equipment control in the plant room and substations, resulting in higher gas and electricity consumption.

3. Work Package Undertaken (2025–2026)

- Replacement of HIUs and upgrades to radiator controls.
- Removal of lateral bypasses.
- Plant room improvements, including new network pumps and modifications to thermal store pipework.
- Installation of performance-monitoring equipment.
- Radiator replacements.
- Removal of substations.
- Reduction of network flow temperatures.

4. Expected Outcomes (2026–2027)

- Measurable heat-efficiency improvements reducing heat-network energy consumption.
- Enhanced system monitoring and remote diagnostics to support proactive maintenance.
- Reduced carbon emissions in support of Net Zero targets.
- Lower heat losses across the network, improving residents' comfort.
- Compliance with upcoming Heat Network Technical Assurance Standards (HNTAS) due to be enforced from 2027.

Conclusion

These upgrades strengthen the performance, efficiency, and long-term compliance of the Reservoir and Watersreach heat networks, ensuring reliable heating services for residents.