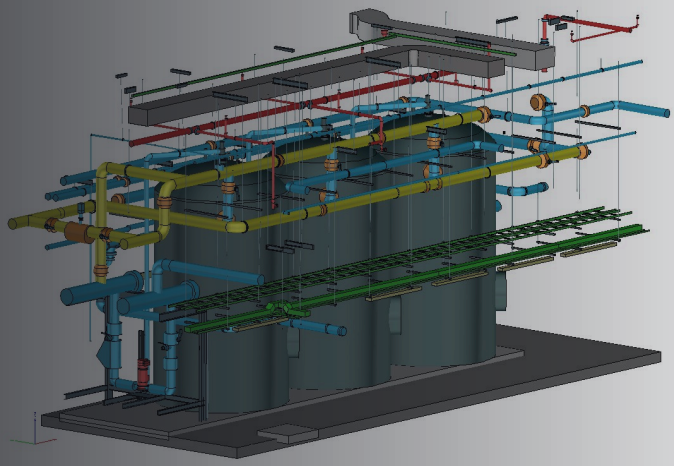
HEATWEB



CASE STUDY · HEAT NETWORKS & COMMERCIAL

Brunel Street, Canning Town

Turning round a failing energy centre

AT A GLANCE

CLIENT
Vistry Homes

NETWORK
Brunel Street, Canning Town: five blocks, around 1,000 homes and a hotel

ENERGY CENTRE
Four 2.2 MW gas boilers, CHP and three buffer stores

OUR ROLE
Analysis of design and operation, then staged works packages from December 2023

RESULT
Over 20% energy saving

For Vistry Homes we diagnosed and fixed a heat network of five blocks, around 1,000 homes and a hotel. Staged works on controls, metering, bypasses, buffer stores, boilers and HIUs brought stable temperatures, far lower returns and an energy saving of over 20%.

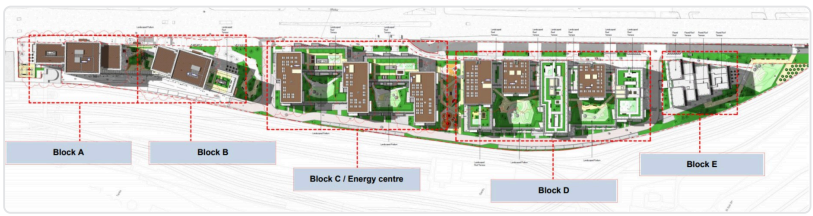
The challenge

Boilers two to three times oversized with no loading valves, buffer stores that charged and discharged unevenly, and a frost function that fired three boilers into full stores.

A BMS with crossed data points, gaps in metering, continuously open bypasses, and returns only 6 to 10 °C below the flow.

What we did

- Live visibility and alarms through our BEMS controller, and a corrected BMS strategy with one boiler as standard.
- Every meter checked and fixed, bypasses closed, and the buffer stores given a reverse return in one overnight changeover.
- Boiler loading control, lower substation setpoints, and per-home meter data to find the HIUs letting water through.



Five blocks along the railway, with the energy centre in Block C.

What we found

- 24% of the primary flow was bypassing the homes; closing one end-of-line bypass cut network flow by 10 to 20% at once.
- Five per cent of the homes accounted for 45% of the primary water used, pointing to faulty HIUs.
- Network flow now holds at 72 °C ±1.5 °C, and the temperature drop across the network rose from 6 °C to 16 °C.



Network flow (red) and return (blue), June to October 2024: the flow steadies and the return falls as the works go in.

20%+
energy saving from data and user feedback

16 °C
temperature drop across the network, from 6 °C

800 MWh
estimated gas saved a year

The outcome

- An estimated 2.2 MWh of gas saved a day, more than £40,000 a year, and the meter data and user feedback confirm a saving of over 20%.
- Hot water complaints traced to jammed mixing valves in the HIUs, and 50 °C setpoints shown to work.
- Dashboards and KPIs that let the maintenance team keep the network efficient and prepare for HNTAS.

About Heatweb. Heatweb Solutions is a UK provider of engineering support for heat networks and commercial HVAC: monitoring, fault diagnostics, technical compliance, optimisation, commissioning and maintenance.

Talk to an engineer

The full case study: www.heatweb.co.uk/blog/case-study/brunel-street-canning-town/

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