

HEATWEB

CASE STUDY · HEAT NETWORKS & COMMERCIAL

Tower and Ashbourne House, Slough

Sealed Heat Banks for two tower blocks

AT A GLANCE

LOCATION
Slough

BUILDINGS
Two tower blocks of multiple dwellings

SYSTEM
Stowaway Heat Bank thermal stores on a central boiler house

METERING
Integral class C heat meters, data sent to council offices

HEATWEB SERVICES
System design, factory-fitted and tested units

Tower and Ashbourne House was one of our earliest district heating contracts using Heat Banks. Pressurised storage was not allowed in the two tower blocks, so our patented Stowaway Heat Bank thermal store gave each dwelling sealed, plug-and-play hot water and central heating from a central boiler house.

The challenge

The customer wanted hot water and central heating for multiple dwellings from a central boiler house. The two tower blocks were of the same construction as Ronan Point, so pressurised storage was not allowed and only thermal storage would be possible.

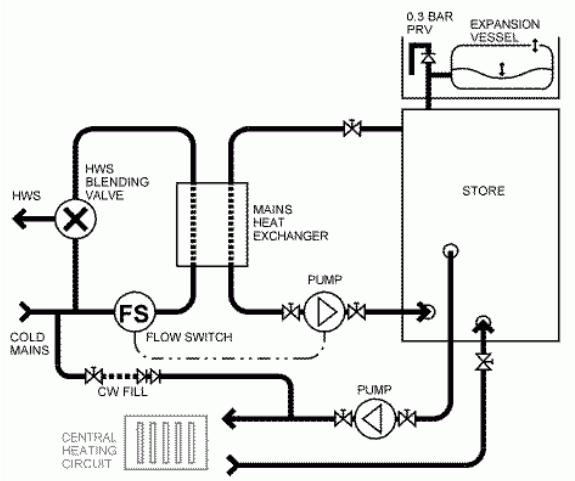
No external overflow or warning pipes were wanted. Each system had to be plug-and-play, with controls pre-balanced and locked, and cupboard entrances only 500 mm wide meant using 480 mm diameter units.

What we did

- Used our patented Stowaway Heat Bank thermal store, manually filled and sealed from atmosphere, with an integral overfill chamber and a low-level indicator light.
- Fitted our patented GX recovery system with a plate heat exchanger and zone valve to get heat into the store while keeping return temperatures low.
- Isolated the boiler primaries with a plate heat exchanger, so each heating system could be sealed with corrosion inhibitor.
- Added the heat meter, flow meter, differential pressure control, temperature sensors and pressure sensors.

What we found

- Isolating the primaries with a plate heat exchanger ensures no cross-contamination of either system.
- Keeping return temperatures as low as possible improves boiler efficiency, which required some system modulation.
- A plate heat exchanger gives mains pressure hot water at very generous flow rates and removes the need for any cold storage.



Schematic of the secondary side.

6
push-fit connections for the entire system

480 mm
unit diameter to pass 500 mm cupboard entrances

The outcome

- A sealed, plug-and-play unit with no overflow or warning pipes, suited to blocks where pressurised storage was not allowed.
- Each heat meter sends heat input from the primaries to a central data store and on to council offices by modem, so residents are billed appropriately.
- The whole system needs only six push-fit connections: primary in and out at 15 mm, and mains in, hot water out and radiator flow and return at 22 mm.

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/case-study-tower-and-ashbourne-house/

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