

## Richmond Park Avenue, Great Places

Richmond Park Avenue, a development by Great Places Housing in Handsworth, Sheffield, has been operational since 2007. Comprising a total of 299 dwellings, this development is served by nine distinct heat networks located in close proximity. Recognising the challenges of high heat losses and inefficient network flow, Great Places Housing set out to enhance the performance of the heat networks.

### Challenges and Background

The system at Richmond Park Avenue has been grappling with high heat losses of 451 W/dwelling, primarily attributed to dwelling bypasses, low insulation thicknesses, and elevated network flow temperatures. Additionally, the presence of high return temperatures across all networks was leading to compromised boiler efficiency.

### FairHeat's Optimisation Study and HNES Demonstrator

Great Places Housing partnered with FairHeat to secure the HNES Demonstrator funding to conduct an Optimisation Study.

Following a successful funding application, FairHeat outlined a comprehensive work package aimed at resolving the identified challenges. The strategy encompassed the removal of network and dwelling bypasses, recommissioning of Heat Interface Units (HIUs), system-wide reinsulation, the implementation of a plant room control strategy, and the introduction of weather compensation. Additionally, the plan involved reducing the number of required pumps, replacing the current HIUs and cylinders with a high-performance alternative, and installing pressure-independent flow-limiting temperature radiator valves. These interventions would collectively reduce the average heat loss to 208 W/dwelling, an impressive 55% reduction.

### Outcomes

Great Places Housing proceeded with the work package, underscoring their commitment to enhancing efficiency and performance of the heat networks.

*“The Optimisation Study carried out by Fairheat at Richmond Park provided Great Places with valuable insight into the current operation of the district heating. This included opportunities to improve performance, so bringing costs down for our customers, improve comfort, and assist in reducing our carbon emissions. This focussed support is invaluable given the increase in energy costs our customers face and the many demands on housing associations’ time and financial resources. The outputs from this Study gave us clear direction on potential improvement options and allowed a case for successful capital funding of the chosen option to be made.” – Sarah Clenshaw, Energy and Carbon Manager, Great Places Housing Group.*