

Hawthorn Mill and Nowell Court



Hawthorn Mill is a supported housing development for those aged 55+, comprised of 24 dwellings connected to a communal heat network. Nowell Court provides general needs social housing across its 22 flats, with the site also connected to a communal heating system.

Connect Housing received a total of £84,000 capital grant funding to make improvements to their respective networks located across the two sites, informed by Chirpy Heat's optimisation studies.

Summary	
Network name	Hawthorn Mill and Nowell Court
Network owner / operator	Connect Housing
Location	Leeds
Number of residential / commercial customers	Hawthorn Mill: 34 dwellings Nowell Court: 22 dwellings
Total funding awarded	Total of £84,000 capital grant funding
Total project capex (total value of works)	£171,666.37
Heat source	Gas boilers
Performance/efficiency improvement measures deployed	Upgrading insulation New thermostatic radiator valves (TRVs), hot water flow restrictors,

	and primary heating commissioning stations Replacement BMS Enhanced digital monitoring
Average annual efficiency improvement (%)	17% (average, based on heat meter consumption)

Overview of heat networks

The Hawthorn Mill heat network serves a supported housing complex in Leeds, feeding 34 dwellings with heat from a single plant room using three gas fired boilers. The building was purpose built, with large communal areas to provide a strong community focus.

Nowell Court, located close-by in Leeds, provides more general needs social housing. The buildings 22 flats are served by a gas boiler powered heat network built in 1970.

Both heat networks received revenue grant funding in Round 3 to identify how Connect Housing could improve the respective networks' performance levels. This was in part kickstarted by the housing association's concerns regarding geopolitical conflicts, and the impact these could have on fuel prices, with a desire to mitigate any impacts for their residents.

Additionally, the housing association have vowed in their corporate strategy to be "fairer, greener, smarter", and creating a more efficient heating system for their residents aligned with their goals, while simultaneously helping them to comply with new heat network regulations.

HNES helped to accelerate Connect Housing's desire to invest in their building stock, while improving their environmental, social, and economical sustainability.

Details of why the project was needed

After Chirpy Heat conducted optimisation studies on each of the two networks, Hawthorn Mill's heat network was uncovered to be running at around 38.8% efficiency, while Nowell Court's heat network was running at around 37.3% efficiency.

At Hawthorn Mill, the HNES supported optimisation study also identified appropriate work packages that could save around £4,015 in total annual gas usage costs across the network, reduce energy consumption by 17% and 201 tonnes of carbon emissions over a 20-year life cycle.

Meanwhile, at Nowell Court, the optimisation study identified a package of 9 improvement measures which could save the network around £1,898 in total annual gas usage costs across the network, reduce energy consumption by 16% and reduce carbon emissions by 94.7 tonnes over a 20-year life cycle.

Efficiency measures implemented

Sayes Ltd was hired to implement efficiency measures to the Hawthorn Mill and Nowell Court heat networks, which included installing TRVs, and measures that ensured every corner of the building got access to the heat they need.

In both buildings, Sayes upgraded and reinstated thermal insulation across the network, particularly in areas with exposed pipework to prevent large heat losses. In each dwelling, alongside the new TRVs, new domestic hot water flow restrictors will help to reduce water and energy consumption.

Across the wider heat networks, the distribution pumps and hydraulic performance were optimised. Meanwhile, Sayes also replaced the BMS panels and controllers, helping to enhance digital monitoring, reporting, and future expandability.

Outcomes of changes

So far, since Sayes completed their works across the network, Connect Housing has seen a more efficient network, enhanced resident experience, and seen smarter and more intuitive monitoring and reporting capabilities. The network is also retrofitted with equipment fit for the future.

Connect Housing completed the works, alongside Sayes, in March 2026. While the housing association is still gathering quantifiable data on energy savings and efficiency improvements, it is clear that residents and the housing association themselves now have better control over the building's temperature, visibly leading to more comfortable environments and consistent system performance.

This has been aided in part by the new BMS, TRVs, and enhanced digital monitoring equipment installed.

Next steps

The network has also been future proofed for further improvements, compatible with additional metering and temperature monitoring, while supporting ongoing asset optimisation strategies.

Quote from Connect Housing

“HNES has supported us from initial optimisation study right through to work completion, and the scheme has proven vital to help us reduce our energy usage while creating more comfortable homes for our residents.

“We were delighted to receive support from HNES for these improvement works, and we’re looking forward to seeing the benefits from these works filter down to residents.”

- **Kevin McAllister**, Head of Asset Investment, Connect Housing