

Case Study

Bromford Housing - Phase Two

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Bromford Housing Association and their tenants were so impressed with a pilot project run by Kensa Heat Pumps that they commissioned a second phase of retrofit installations to replace old and inefficient night storage heaters with ground source heat pumps for some of their most vulnerable tenants.



Mr Fowler, Director of Financial Reporting at Bromford, visited tenants.



In 2015, Bromford Group commissioned Kensa Heat Pumps to install ground source heat pumps into 16 formerly electrically heated bungalows in rural Shropshire. Intended as a pilot scheme to determine the viability of the technology, the ground source heat pumps proved so successful at reducing resident's fuel bills and providing a reliable heat source that in 2016 Bromford decided to commission a second project with Kensa Heat Pumps.

The second phase is proving to be just as successful, with residents at one site already experiencing a £15/week saving on their fuel bills with ground source heat pumps compared to their old heating system, which is a significant saving to those living in fuel poverty.

The project comprised 20 properties spread across two locations in Didmarton and Bibury in Gloucestershire. The properties were a mixture of semi-detached and terraced two bed bungalows housing elderly and disabled residents. The properties were previously heated by old electric night storage heaters, but dissatisfied residents said that they were expensive to run, inefficient and difficult to control. Bromford decided that the residents would benefit from the lower running costs and increased comfort delivered by a ground source heating system.

Key Facts

- 6kW Shoebox Twin heat pump in each property
- Replacing night storage heaters
- Funded by Non Domestic RHI & ECO
- Micro district heat network system
- 20 properties across two different sites
- Each pair of dwellings served by a single borehole
- Elderly and disabled residents
- New wet system installed (radiators & cylinders)
- Heat meter readings indicating average running cost savings of 50%
- Annual RHI projection £1000 per property to Bromford

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The positioning of the clusters of properties made the project perfect for utilising Kensa's innovative micro district heat network system featuring a communal borehole network with an individual ground source heat pump installed in every home. A single borehole drilled to a depth of 110m deep, provides each per pair of dwellings with a sustainable heat source. An experienced drilling company carried out the work and took care to keep any noise and disruption to a minimum.

This innovative ground array infrastructure meant that the project was eligible for the Non Domestic RHI scheme. Payments are based on the metered output of the heat pumps, which for this site equated to an average of £354 per property for the first quarter of operation from February-April 2016. Non Domestic RHI payments are made quarterly over a twenty year period to offset the cost of the investment and provide a lucrative income stream. Kensa also negotiated an upfront ECO grant to support the investment work through a unique partnership with EDF Energy.



Kensa installed 6kW Shoebox Twin ground source heat pumps into the properties. Small and compact, these heat pump models fit neatly and easily inside the resident's airing cupboards to provide 100% of their heating and hot water needs. In addition to this, new radiator systems and hot water cylinders were installed to replace the night storage heaters, along with thermostatic heating controls enabling residents to have better control over their heating.

The installation wasn't without its challenges; weather during January and February was very wet, which meant that the drillers had to carry out extra ground protection. Also, surveys revealed the presence of asbestos at the Didmarton site, which required specially trained operatives to advise on the relevant health and safety procedures to be followed during the installation of the radiators and heat pump units. Nonetheless, the installation works were completed on time to a tight schedule, with work beginning in January and completed in March.

Residents have also been very pleased with the installation of their new ground source heat pump systems:

“Overall we're very happy. It's fantastic, so simple to use! It comes on at 7, and when I get up at 8 I turn it off as it's toasty warm. On the old system I was on just two heaters at nights – the rest of the house was cold and I was paying £90 per month! All the workers were great, they moved all the furniture for me and did a great job, no trouble at all really.”

Mr Fowler, Director of Financial Reporting at Bromford, visited tenants on site. He commented:

“For most households, energy bills are a major cost burden. When combined with recent changes to the welfare system, additional pressure has been placed on many customers of social housing. At Bromford, we're keen to engage with businesses that deliver innovative products and services that provide efficient and eco-friendly affordable warmth solutions for our customers. Ground source heat pump technology ticks that box in areas where there is no mains gas provision.”