



Department of Energy & Climate Change

Non-Domestic RHI Case study – Fast facts

Technology type: Ground source
heat pump
Equipment manufacturer: Valliant
Equipment model: geoTHERM
Capacity: 46kW each
Installer: Ground Heat



Warming up the elderly in Salford

**Communal ground source heat pumps
keep sheltered accommodation
comfortable and affordable.**

Scenario

The installation of a new heating system is usually more of an inconvenience to tenants than a reason to rejoice. But for the elderly residents of Shepway Court, the new renewable heating system fitted in September 2013 was indeed cause for celebration. The 40 units in Salford, Greater Manchester were built in the 1970s and fitted with gas boilers. With the price of heating continually going up, some residents regularly cut back on the amount of heat they used. When the gas boilers started to fail in 2011, owners and management company City West Housing Trust realised it needed to take a bold step.

Although the property is hooked up to the gas grid, the Trust decided that it wanted to make the building more energy efficient and environmentally friendly. It completed a detailed analysis of the many heating options on the market, including communal boilers, high efficiency gas boilers, ground source heat pumps (GSHP), solar thermal panels and biomass boilers. The efficiency and reliability

that GSHPs offer attracted the Trust, and it then looked for installers to complete the project.

GSHPs take the heat from the ground outside, increase the temperature and then transfer it to radiators or under-floor heating systems. Installers lay a network of pipes underground which then lead back to a heat pump.

“We feel strongly about eliminating fuel poverty for our customers, and the price of gas is only going up,” says Garry Vaughan, Head of Supply Chain and Sustainability. “We want to do our bit to help the environment and installing a ground source heat pump in this housing complex seemed to tick all the boxes.”

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Easy installation

Before getting started on the heat pump installation, City West upgraded the building's insulation, windows and doors. It then tasked installation experts Ground Heat with carrying out the installation of two 46kW GSHPs. The size of the heat pumps is larger than those used in private family homes as they are working to heat so many individual units.

Ground Heat drilled 12 boreholes that were 150 metres deep to accommodate the many pipes needed to draw heat from the ground. After connecting the pipes to heat pumps located in a plant room, the installers then hooked up the system to each unit's radiators. Individual thermostats allow tenants to control their own room temperature. In addition to efficient heating, the GSHPs also provide the building with hot water. Finally, City West installed a 42kW solar PV panel to contribute part of the electricity needed to operate the heat pump. The entire installation effort took two months to complete.

“Our customers were able to keep their old radiators which meant that although the heating system has changed drastically, their controls aren't all that different,” says Garry. “Even so, we put a lot of effort into educating the residents on how it works, how they should use it and how they can get the most out of it. As a result, they are thrilled with the new system, its reliability and the warmth that it provides.”

Saving tenant's money

On their old gas boilers, tenants were paying an average of £345 a year for heat and hot water, with electricity billed separately. Residents are now forecast to pay £260 a year for heat and hot water, billed through their electricity provider.

Thanks to the Government's non domestic Renewable Heat Incentive (RHI) scheme, City West is receiving index-linked payments of £15,694 per year. The money will go to offset the cost of installation. Launched in 2011, RHI is part of the Government's commitment to increasing the UK's renewable energy use. It provides long-term financial support for installing renewable heating instead of a fossil fuel system, with payments being made over 20 years to reflect the amount of energy used. The Trust is on track to receive more money by 2033 than it paid to install the new system.

“We make decisions based on a long-term view and we understand that renewable heating is most often the best solution for our properties,” says Garry. “Any money we generate, we then use to invest in other renewable technologies on our properties. Over the past several years, we have learned that there is no one system that is a silver bullet, so it's worth taking the time to assess each property on its own and make educated decisions.”

For more details on the non-domestic scheme and free information on how to apply visit: **www.ofgem.gov.uk**

· Or call **0845 200 2122** (RHI enquiry line open Monday to Thursday 9am-5pm and to 4.30pm on Fridays).

If you are interested in receiving RHI updates or providing DECC with RHI feedback, please email: **rhi@decc.gsi.gov.uk**

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April 2014
URN 2014/14D/164