
Case Study

Shropshire Rural Housing Association - Kinlet Development

Shropshire Rural Housing Association has seized Kensa's micro ground source heat network opportunities with both hands, rolling out ground source heat pump installations into both their retrofit and their new build housing stock.



Their latest ground source heat pump project in the village of Kinlet in Shropshire, features eight new build semi-detached houses and detached bungalows, which are adjacent to a cluster of 8 existing properties which just 15 months ago were also the recipients of a Kensa ground source heat pump.

The area suffers from a lack of affordable housing and Shropshire Rural Housing Association was therefore keen to provide inexpensive, sustainable and fuel efficient homes for the local community. Due to the rural nature of the local area, the development had no access to mains gas, making many traditional heating options too expensive.

Based on the success of previous ground source heat pump installations with Kensa Heat Pumps, Shropshire Rural Housing Association decided that the technology represented the best way to give tenants control over their heating and reduce their energy usage costs. The fact that the new-build homes are well insulated and designed to minimise heat loss ensures that the heat pumps operate efficiently.

Key Facts

- 8 new build properties
 - Communal borehole ground array
 - Kensa 6kW Shoebox Twin
 - Micro district heat network
 - Non Domestic Renewable Heat Incentive (RHI)
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Ian Richardson, Shropshire Rural Housing Association Chief Executive, says:



“ The delivery of affordable warmth is important to Shropshire Rural. Given that the majority of our housing stock doesn't have access to mains gas, Kensa's ground source heat pump solution is proving to be very helpful. We now have more than a third of our homes now getting their heating and domestic hot water in this way; whether through retro-fitting or by incorporating the ground source heat pump into new homes. ”

Each of the most recent new build homes in Kinlet contains an individual 6kW Kensa Shoebox Twin heat pump fed via a communal borehole array; this system architecture means the installations are eligible for generous subsidies through the Non Domestic Renewable Heat Incentive (RHI).

The communal borehole array, also known as a micro ground source heat network, is an innovative system design that offers flexibility and reduced building costs. The installation was staggered to fit with the progress of the build, and by employing a diversity factor across the array, means a lesser number of deeper boreholes is required compared to using individual heat pumps.

A series of three communal borehole ground arrays feed the properties individual ground source heat pumps; one borehole feeds two properties, with the two remaining communal arrays featuring two boreholes each, feeding two clusters of three properties. The tenants of the new properties will enjoy individual heating controls and individual billing due to the heat pump's location inside each home.

Chris Davis, Commercial Director of Kensa Heat Pumps explains:



“ Shropshire Rural Housing Association have invested in an infrastructure that will provide these rural homes with free energy for the next 100 years. The borehole will provide three quarters of the energy required to heat the homes and provide domestic hot water, for free, sustainably for the lifetime of the property. The remaining energy is provided by the electricity used to run the heat pump and extract the energy from the ground. This equates to a running cost to the tenant that is lower than mains gas, with equivalent comfort and control in off gas grid areas. ”

A film of the project has been commissioned by Shropshire Rural Housing Association.

Watch it www.kensaheatpumps.com/video/case-study-shropshire-rural-housing-association/



Contact

0845 680 4328
info@kensaheatpumps.com

