

Kemp Hall



Kemp Hall, Yorkshire

Building type:

Retrofit for residential detached property

Technology used:

flexoTHERM 8kW ground source heat pump, flexoTHERM 11kW ground source heat pump, allSTOR 500 litre buffer cylinder and 300 litre uniSTOR cylinder

Installer:

GoEcoRenewables

SYSTEM SPECIFICATION

When the owners of a large four-bedroomed detached residential property in Yorkshire looked to replace an ageing oil-fired boiler, they were keen to investigate retrofitting renewable technologies.

Replacing the 20-year-old oil boiler and oil tank simultaneously, provided the perfect opportunity to move to a heating solution that no longer depended on fossil fuels being delivered and stored at the property.

The owners were also interested in installing underfloor heating throughout the ground floor of the property and wanted a new heating solution that would work efficiently with this technology.

The main objectives the new system needed to address were reducing the overall impact on the environment, providing a sustainable approach to reducing energy bills, as well as looking at alternatives to fossil fuels to avert regular fuel deliveries to the property.

After discussions with renewable technology installers GoEcoRenewables, the decision was taken to specify the Vaillant flexoTHERM heat pump to deliver a more sustainable and energy efficient future. Two flexoTHERM ground source heat pumps (8kW and 11kW) were installed in cascade within the garage of the property, alongside a 500 litre allSTOR buffer tank and 300 litre uniSTOR hot water cylinder.

PROJECT FEATURES

- Oil boiler replaced with a ground source heat pump solution
- Underfloor heating
- Eligible for Renewable Heating Incentive (RHI) payments of £5,000 per annum
- Household energy bills forecast to reduce by 50%

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INSTALLATION

The installation involved creating four, 100 metre boreholes in the garden of the property, which then connected to the subterranean manifold within the property.

The installation took place over a three week period without any disruption to the daily lives of the homeowners.

The challenge of installing the technology within an older property was handled seamlessly by skilled GoEcoRenewables technicians. The heat pump system immediately provided the energy required for Kemp Hall's general heating, underfloor heating and domestic hot water needs.



OUTCOME

The integration of underfloor heating also helped to achieve optimum system efficiency and further reduce the homeowner's energy bills. This is a result of lower flow temperatures being required to heat the home when compared to traditional radiators, which in turn, minimises the demand on the heat pumps.

In addition, the homeowners were advised that the installation was eligible for Renewable Heating Incentive (RHI) payments and as a result, RHI is scheduled to contribute

£5,000 per annum for the next seven years. The installed flexoTHERM heat pumps are forecast to substantially reduce the homeowner's energy bills, with expectations predicting at least 50% over its lifetime. The resulting savings, which equates to over £1,300 annually, delivers a healthy return on investment.



WHY VAILLANT?

Chris Delaney, Commercial Director, GoEcoRenewables, says:

"With over 80% of our renewable installations based upon Vaillant technology solutions, we are entirely confident about the performance and reliability of Vaillant's products.

"The flexoTHERM solution was ideal for this installation, offering the sustainable approach the owners were seeking, as well as drastically

reducing their energy costs. RHI eligibility was another benefit that will contribute tangible funds for the next seven years. The clients are extremely happy with the outcome of the retrofit installation and are even recommending it as a great heating solution to be considered by their friends."

