Building type:
Nine properties on a residential estate development

Technology used:
9 x flexoTHERM 8kW ☑

9 x VRC 700 ☑

Installer:
Be Green Systems

Project features

- Vaillant's flexoTHERM ground source heat pump delivers a sustainable and reliable heating and hot water solution
- Part of a vision to create high performing, energy efficient and sustainable homes
- Cheap to run and simple to control
- Annual energy bills predicted to be significantly below national average

System specification

Heating installer, Be Green Systems, has worked in tandem with developer, Housestyle Countrywide, to develop an estate of nine exclusive three, four and five bedroom properties in the Warwickshire countryside.

Oberry Fields is designed to be a prime example of how new residential properties can achieve outstanding levels of energy efficiency and support a more sustainable future. The homes have been specified with an array of renewable technologies to ensure heating, hot water and air conditioning requirements are delivered as economically and as environmentally friendly as possible.

Each property features a Vaillant flexoTHERM 8kW ground source heat pump, which generates heating and hot water and is designed to reduce running costs and environmental impact.

Installing a flexoTHERM heat pump offers a flexible option for developers and installers as it can be connected to three different sources – ground, water or air. Connected to a ground loop, it provides the highest energy efficiency label and heating performance in its class, whilst also boasting a 'Quiet Mark', issued by the Noise Abatement Society.

The integration of a ground source heat pump system is straight forward when a property's ground works are underway. System optimisation, courtesy of Vaillant's VRC 700 weather compensation controls, ensures that the heat pump will always perform at maximum efficiency to minimise energy consumption under the direct control of the homeowner.

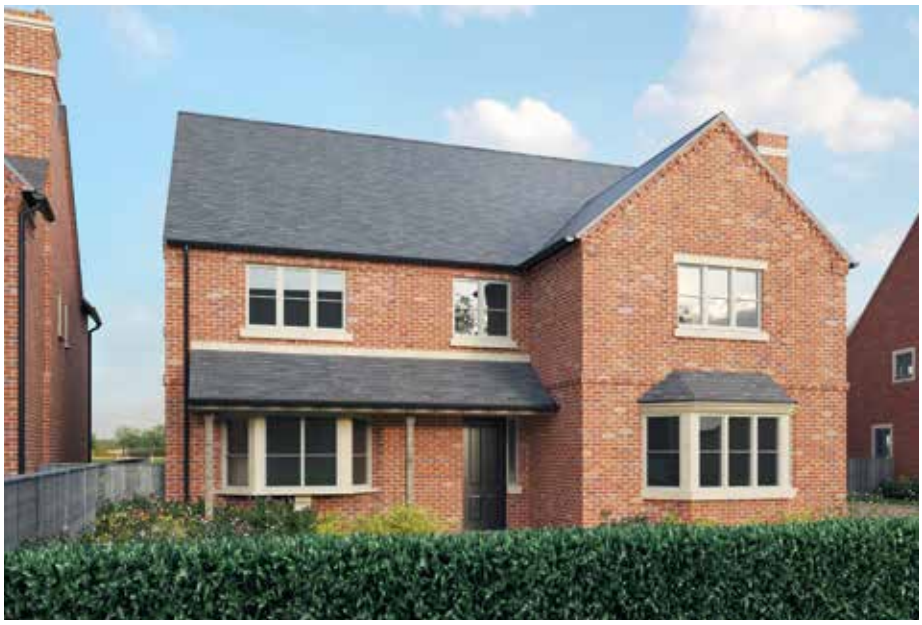
Outcome

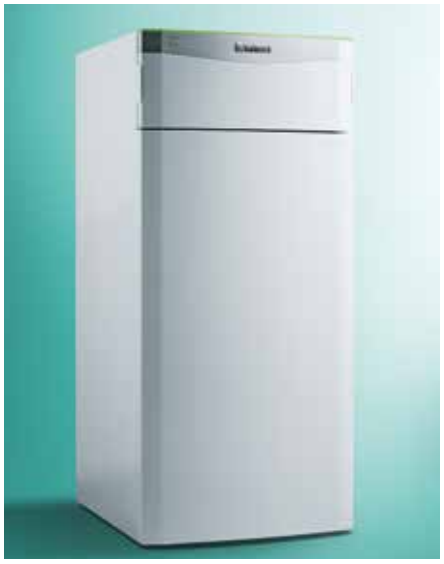
All properties at the new development have seen the successful installation of the flexoTHERM ground source heat pump solution. A geothermal ground collector has been installed under a nearby road consisting of seven, 120 metre deep sealed pipes in boreholes to extract the thermal energy stored in the ground and provide all the energy requirements for all nine properties.

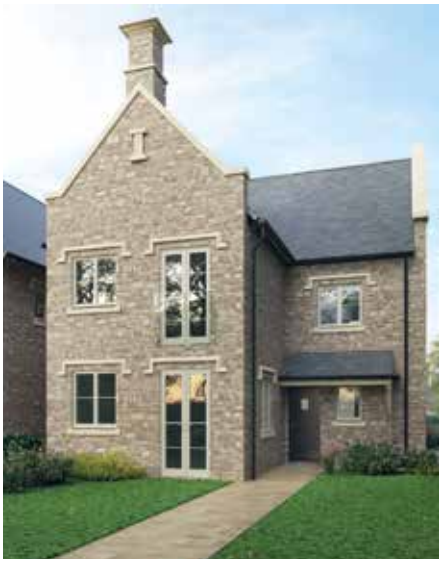
In addition, a number of other energy-saving and sustainable technologies have also been installed to complement the ground source heat pump solution. These include mechanical ventilation and heat recovery, wardrobe ventilation, background comfort cooling, air conditioning, solar PV panels, and solar batteries.

According to estimates from installers Be Green Systems, the technologies in place mean residents can look forward to annual energy bills of approximately £350 to £400 - a significant reduction compared to average residential UK energy bills.

In addition, property owners have the satisfaction that their complete heating, cooling and energy solution is being provided in a sustainable way, with a low carbon footprint and minimal impact on the environment.







Why Vaillant?

Garry Woods
Be Green Systems

"We wanted to create an estate of energy-efficient homes that could showcase how renewable technologies can reliably deliver lower energy consumption, reduced energy costs and minimal environmental impact. Using Vaillant's flexoTHERM ground source heat pump, we know we have utilised the latest technology alongside additional sustainable technologies incorporated into the new homes. The heat pump effectively provides the energy needed for heating and domestic hot water, but does so in an environmentally-friendly way.

"We believe such renewable solutions for homes are the way forward. Vaillant's extensive experience and expertise when it comes to such technologies, as well as their outstanding levels of service support, made them an ideal partner on this project.

"The homeowners at the development will enjoy comfortable, warm and highly energy efficient homes, whilst benefiting from reduced energy bills."