



Lovat Shinty Club

Community Pavilion

Kiltarlity

Building type:

Community Pavilion

Requirement:

Heating and hot water for pavilion and changing facilities

Technology used:2 x 15kW aroTHERM air source heat pumps in cascade 1 x Heat exchanger module 1 x 200 litre buffer tank for heating 2 x 500 litre hot water cylinders VRC 700 system control **Installer:** R&I Cruden Ltd.**Client:** Lovat Shinty Club

Founded in 1888, the Lovat Shinty were in need of low-cost heating and hot water demand for their new community pavilion and changing facilities. The community project was almost fully funded by charities and European funding groups including Sports Scotland, Leader, Highland Council, Robertson Group along with many private funders.

As a not-for-profit organisation, being able to fulfil the high demand of hot water for the showers at a low running cost for the club, was a crucial part of the specification. Renewable heating installers, R&I Cruden worked closely with Vaillant to design the heating system to select Vaillant's aroTHERM heat pumps as the most energy efficient and cost effective solution.

Air-to-water heat pumps are a highly energy efficient solution as they safeguard against fluctuations in oil and LPG prices that can leave owners vulnerable to the ever-rising energy bills. Available in four models from 5 - 15kW, aroTHERM is a compact unit which can be easily sited and offers quiet operation with sound power as low as 58dB(A).

After this upgrade, the Lovat Shinty Club now benefits from a highly efficient but low cost heating and hot water solution provided by two aroTHERM air source heat pumps in cascade with a 200 litre buffer tank for heating.



The use of the Vaillant heat exchanger module also contributed to cost savings in the form of saving on glycol required for the heating system. The system is complemented by the Vaillant VRC 700 weather compensating system control which intelligently communicates with all Vaillant appliances.


Building type:

Nine properties on a residential estate development

Technology used:

9 x flexoTHERM 8kW

9 x VRC 700


Installer:

Be Green Systems


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.

