

## GREEN ENERGY FOR ECO HOLIDAY HOMES



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### PROJECT DATA

Installation of two WWK300 Air Source Heat Pumps  
Hoe Grange Holidays Chalet Accommodation  
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### CONTRACTOR

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# CHALETS RECOVER WASTE HEAT FOR DHW



Eco friendly property owners have already won raft of green tourism awards

AN eco-friendly holiday complex in Derbyshire is going green with the help of Stiebel Eltron and The Renewable Shop.

Hoe Grange Holidays, which provides self catering holiday accommodation in the Peak District, is using two Stiebel Eltron WWK300 Air Source Heat Pumps to provide hot water for two purpose built log cabins.

The cabins used to run on an expensive LPG gas boiler system, but the environmentally friendly owners David and Felicity Brown wanted an alternative green solution to minimise the carbon impact, as well reduce the high running costs.

They contacted leading green energy installers The Renewable Shop, based in Matlock, who specialise in the supply, installation and maintenance of renewable and energy efficient solutions.

The Renewable Shop conducted a full evaluation of the site to gauge which green energy systems would complement the site and its energy needs.



Duct sucking warm air from the loft space

Jacob Johnson from The Renewable Shop said: "Mr and Mrs Brown initially contacted The Renewable Shop to determine the suitability for solar thermal hot water panels on their site.

"Following our site investigation we concluded that solar thermal could provide their domestic hot water requirements in the summer months, but additional back up would be required in spring, autumn and winter seasons.



"We considered backing up the solar thermal with immersion heaters, due to the surplus day time electricity from the solar PV and future addition of the 10kW wind turbine.

"We wanted to utilise this renewable electricity in the most efficient form, and therefore looked at the feasibility of air source heat pumps, due to their efficient performance.

"We wanted to keep cost at a minimum, so therefore needed a compact, plug and play solution. The most suitable air source heat pump for this situation was the Stiebel Eltron WWK300 AH Hot Water Heat Pump, with immersion back up.

"We had already installed the WWK300 within our showroom and were very impressed with the overall concept and actual performance of the heat pump.

"The WWK300 utilises warm ambient air, from internal environments and converts the energy from the air into hot water, through the heat pump process."

The electrical input to the WWK unit is 500 watts, with a heat output to water of 1700 watts, providing an efficiency of 340%.

Mr Johnson added: "Our heating engineer Wayne Bradshaw had the idea to extract waste warm air from the loft of each cabin. The cabin roofs are constructed bitumen roof felt and therefore absorb high amounts of heat from the sun which is now being used."

Hoe Grange Holidays have already received several high profile awards for their commitment to renewable energy.

Most notably they received a Gold Award from the Green Tourism Business Scheme, are within the top 20 green businesses in the UK and won the national Visit England Silver Award for Sustainable Tourism 2012.

Hoe Grange Holidays has invested in renewable energies including a ground source heat pump and solar PV, and a wind turbine is currently being installed.

David says "It is extremely efficient, with minimal maintenance and we were pleasantly surprised by the quiet running of the system, an important factor to consider for our holiday guests looking for peace and tranquillity.

"We are passionate about the environment and can now demonstrate to guests how easy and efficient renewable energies are to install and maintain."

Chris Johnson, Stiebel Eltron's Midlands Specification Manager, said: "This is a fantastic installation which fully capitalises on waste energy and complements all the benefits of the WWK300 air source heat pump.

"The Renewable Shop identified our product as the best solution to save energy and money and came up with an innovative system.

"Stiebel Eltron is delighted to be working alongside our partners at The Renewable Shop and we know that the owners at Hoe Grange Holidays are very pleased with the immediate results shown since the system was commissioned.

"More holiday home property owners are coming to Stiebel Eltron to go green as the payback period can be very good and our technology – particularly the WWK300 – is simple to fit and provides instant benefits."



Warm air duct and WWK300 air source unit



Weather protected WWK300 unit



Boxed in ductwork through kitchen to loft space