STIEBEL ELTRON UK Ltd, Unit 12 Stadium Court, Stadium Road,
Wirral International Business Park, Bromborough, Wirral, CH62 3RP
Telephone: 0151 346 2300 | Fax: 0151 334 2913 | Email: info@stiebel-eltron.co.uk | www.stiebel-eltron.co.uk

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REFERENCE: SOULTON HALL

Heat pumps for historic country house

› PROJECT | COUNTRY HOUSE AND HOTEL
› INSTALLER | TOTAL NRG, STAFFORDSHIRE
› SYSTEM | WPF 27 HT AND WPF 35 GROUND SOURCE HEAT PUMPS

02 | 2014

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Eco-friendly technology in heritage-protected hotel

Country house and hotel

- Shropshire
- Built: 16th Century
- Refurbished: 2013
- Heating space: 620m^2

The Project | STIEBEL ELTRON UK and partner installer Total NRG have helped an Elizabethan country house in Shropshire to go green. Historic Soulton Hall near Shrewsbury in Shropshire, has replaced traditional fossil fuels with two STIEBEL ELTRON ground source heat pumps, generating green hot water and heating for the 30-room manor house and the coach house. Having previously used oil and electricity, the luxury hotel and wedding venue is now saving more than £10,000 each year in fuel costs, as well as achieving a substantial reduction in CO2 emissions.

The heat pump system was designed and installed by Staffordshire-based Total NRG – an approved STIEBEL ELTRON installer partner.

The System | Total NRG director Bryan Jones said: "This has been a fantastic project to work on – the hall itself is stunning and the site really lends itself well to green energy.

"As there was plenty of ground space available, we decided to go with a twin ground source heat pump system, with a STIEBEL ELTRON WPF 27 HT heat pump working alongside a STIEBEL ELTRON WPF 35 heat pump.

"The WPF 27 HT is providing heating and hot water, while the WPF 35 is being used for heating only – with a total output of 62kW, we designed the system so that in the summer months only 27kW is needed, reducing energy usage and costs.

"The WPF 27 HT unit also pasteurises the 1,000-litre DHW cylinder instead of using an emersion element, which increases the overall efficiency of the system.

"We laid 3,800m of ground loop with a pre-assembled manifold chamber which is 90m away. The system looks great and the client is very happy with the design."

Soulton Hall | Owned and managed by the Ashton family, Soulton Hall has invested heavily in green energy systems over the past two years and is firmly committed to sustainability. More than 200 solar panels produce around 70,000kWh of free electricity for the home site each year – which in turn powers the ground source heat pump.

Tim Ashton said: "We are delighted that the heat pump system has been commissioned and is now up and running. "We use our own green electricity to help power the heat pump, which is taking the constant 10°C temperature under one of our fields to meet all our hot water and heating demands.

"Ground source was always going to be a great option for us as we have plenty of space for collectors – the ground loops here are under an area of 3 acres. We were also able to easily convert the former log store into a plant room. Active consideration is now being given to two further schemes, aimed at balancing the electricity demand of our four holiday cottages."

Historic sites such as Soulton Hall are traditionally very hard to heat with poor insulation – however with this project STIEBEL ELTRON has demonstrated that with the right technology and design, it is possible to retro-fit a green energy system that can optimise both cost and energy savings.

The Company | STIEBEL ELTRON UK provides green technology to heat your property, conserve energy and reduce your bills.

For 90 years we have offered our customers products and services of exceptional quality with a focus on protecting the environment. With an unbeatable breadth of green technologies including Ground and Air Source Heat Pumps, Solar Thermal and Solar PV, we design systems specifically to suit your project. We also offer a wide range of innovative electric heating and instantaneous hot water heating systems for homes, businesses and the public sector.

At STIEBEL ELTRON UK we work with installers, architects, builders and end users to ensure all the components are appropriate to your individual requirements, maximising performance and return on investment.

STIEBEL ELTRON UK works across a wide range of sectors, from new-build and retrofit homes to hotels, restaurants, schools and commercial buildings.

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