

Friends of Castle Green: River source heat pump



Key facts

Location: The Pavilion, Castle Green, Hereford HR1 2NW

Grant recipient: Friends of Castle Green Community Interest Company (CIC)

Supply, installation and commissioning of 60 kWp River Source renewable energy system to provide hot water and heating to the building utilising the Pavilion's location on the banks of the River Wye in Hereford.

The installation of a renewable energy river source heating system has massively increased the efficiency of the heating in the Pavilion, making it a more comfortable and useable space for community use. It will allow the CIC to increase the capacity of the Pavilion for community use and provide the obvious benefits of renewable energy in reducing its carbon emissions whilst encouraging sustainability amongst users of the building and the wider community.

It is hoped that this ground breaking use of the river as a source of energy will encourage other businesses and homes along the river to utilise this sustainable source of energy in the future and utilise the unusual position of Hereford City spanning the River Wye.

www.friendsofcastlegreen.org.uk



Renewable energy installation: Water source heat pump

Building: The Pavilion, Castle Green

Water Source Heat Pump: A water source heat pump operates much like a traditional air source heat pump except that it extracts and dissipates heat by way of water instead of air. They do this by cycling water through a system of pipes that is laid out at the bottom of a body of water.

Additional capacity: 60 kWp

kWp is the peak power of the system.

The power is calculated under a standardised test to ensure that the values listed are capable of comparison

Predicted energy generation: 44,394 kWh

A kilowatt hour (kWh) is the energy consumed by a 1,000-watt or 1-kilowatt electrical appliance operating for 1 hour.

CO₂ saving per year: 7.13 tonnes

Based on an emission conversion factor of 0.2773 of a kilogram of carbon dioxide per kilowatt hour.

Financials

System Cost: £79,556.63 inclusive of VAT

Funding: 50% Marches Renewable Energy grant;
50% from the Towns Fund and also
£7000 from Hereford City Council

For further information

Marches Renewable Energy (MarRE) is an ERDF funded grant scheme towards renewable energy projects in Herefordshire, Shropshire and Telford and Wrekin

www.herefordshire.gov.uk/MarRE