

## Carew Castle Visitor Centre, Wales



Little now remains of the 12<sup>th</sup> Century earth and timber castle where Carew Castle stands today, although the castle and its grounds have remained in the hands of the Carew family who built this medieval castle in various stages. In 1480 Rhys ap Thomas acquired the castle and set to converting it into a home worthy of an influential Tudor Gentleman.

As well as the castle, the grounds also boast an early tidal mill and millpond, a stunning bridge, and Carew Cross, an 11<sup>th</sup> century Christian monument; this particular monument being one of only three in Wales. Carew Castle and Tidal Mill is now deemed a Site of Special Scientific Interest (SSSI) due to its bat population and several local and regionally rare plants.

The castle was falling further into disrepair so Pembrokeshire Coast National Park Authority, the managers of the site, put together an extensive and long term restoration project which they part-funded alongside Cadw's Heritage Tourism Project.

The restoration includes renovating the roof of the Lesser Hall and converting 'Dennis's shed' in the walled garden into a much-needed visitor's centre.

### The Problem:

The staff who were running Carew Castle for the Pembrokeshire Coast National Park Authority were using 'Portakabins' for their offices with electric wall heaters to keep them warm, so it was decided to create a visitor's centre from 'Dennis's shed'.

The Park Authority are always looking for ways to promote the use of sustainable solutions within their parks, and with the absence of mains gas on site they wished explore the use of renewable energy to heat their proposed new building.

### The Solution:

WDS Green Energy installed a **Mitsubishi Ecodan 5kW air source heat pump** at the rear of Carew Castle's new visitor's centre on a specially constructed concrete plinth.

To ensure that the system worked at optimum efficiency, WDS Green Energy laid an under-floor heating system which was then coupled to the heat pump via a manifold system.

### The Benefits:

The under-floor heating system ensures that the low grade heat from the heat pump gives a warm natural feel to the visitor's centre.

The **air source heat pump system** will be eligible for the Renewable Heat Incentive, thus making it a cost-effective option for Pembrokeshire Coast National Park Authority and Carew Castle Visitor's Centre.

