

# Case study Lakeside Visitors Centre,

## Solar thermal system



## Costs and benefits

- The solar thermal equipment cost approximately £3,000. This does not include installation costs and pipework, fittings and insulation.
- Estimated carbon saving of 1 tonne per annum
- 20 year warranty with an expected lifetime of 35 years.
- A properly designed system can be expected to provide between 60% and 70% of a projects annual hot water requirement, and over 90% of the hot water requirement through the summer months.

## Introduction

With over 730 acres of water, Roadford Lake is a spectacular lake set on the edge of Dartmoor between Okehampton and Launceston. On the southern bank you will find the Lakeside cafe and Function Suite which includes a Visitor Centre, giving information on the history of the valley, with interactive exhibits.

## Project development

- The solar thermal system at the Lakeside visitors centre, restaurant and gift shop supplies hot water for use in the restaurants kitchens and for hand-washing facilities in the WCs on site.
- The Genersys 1000-4 panel consists of a one-piece forged metal casing to which safety solar glass is fixed by means of a frame made from non corrosive aluminium profile. This flat plate collector is vertically mounted and without collection pipes.
- The solar thermal system at the Lakeside visitors centre is a roof integrated panel system. It supplies a mains pressure, twin coil, 250 litre hot water cylinder .
- The Solar thermal system was installed in 2004

## How the system works

The illustration overleaf shows the principle of the solar thermal installations in conjunction with an auxiliary boiler providing supplementary heating for hotwater and heating. However on this project a conventional gas boiler is used for heating. A flat plate collector as used in this installation is slightly less efficient but is cheaper than an evacuated tube system.

# Technical details

Solar collectors

2 x 2m<sup>2</sup> Genersys 1000-4 panels

Output

2000 kWh per annum (approx)

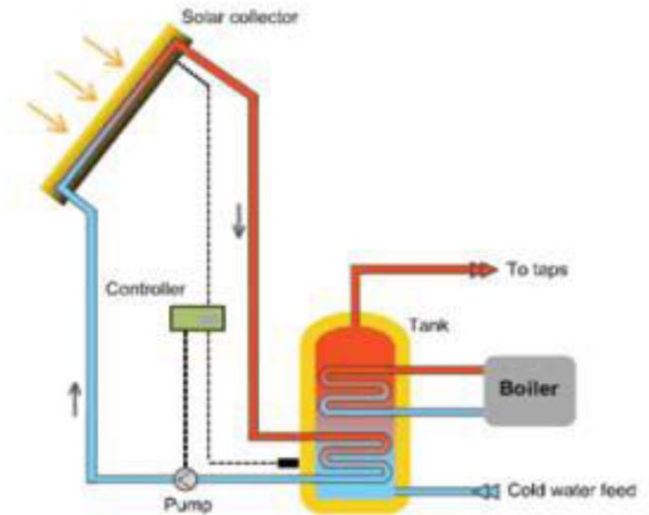
Installer Company

Celtic Solar

## Wider benefits

Genersys have calculated that if half of our domestic housing were equipped with solar panels the United Kingdom would achieve all its international obligations in cutting greenhouse gases, carbon dioxide emissions and energy from renewable sources.

The flat plate collector produces heat without polluting the environment and with only minimal energy consumption. It saves the energy required for its manufacture in approximately 2 years.



## Contact DARE

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## Image Gallery

Integrated Roof System

Genersys 1000-4  
Flat Plate Collector

