

## Birch Court, Sheltered Elderly Housing - Solar thermal installation

**Existing or Proposed Project:**

EXISTING –  
COMMISSIONED  
SUMMER 2003



**Location:**

HEADINGTON,  
OXFORD,  
OXFORDSHIRE  
OXFORD CITY COUNCIL

**Project Leader:**

**Description:**

Solar thermal system retrofitted onto sheltered elderly housing block as part of a wider eco-refurbishment project, with the aim of reducing water heating costs



### Background

As part of the Oxford Solar Initiative (<http://oxfordsolar.energyprojects.net/>), Oxford City Council were keen to install a solar thermal installation onto one of their buildings to gain a practical understanding of the issues surrounding this technology, to reduce fuel bills associated with their buildings and to show leadership in turning Oxford into the UK's first solar city.

Birch Court proved to be the logical location for this project as the roof had a suitable southerly orientation, angle of pitch and lack of obstructions that could cause shading. Also, and equally as important, the heating system was being refurbished, offering the opportunity to link it with the solar thermal installation. Despite being able to see the panels on the roof, residents should notice no difference in their hot water provision.

## The Technology / Scope of Project

The solar thermal system was designed, supplied and installed by Imagination Solar of Bristol.

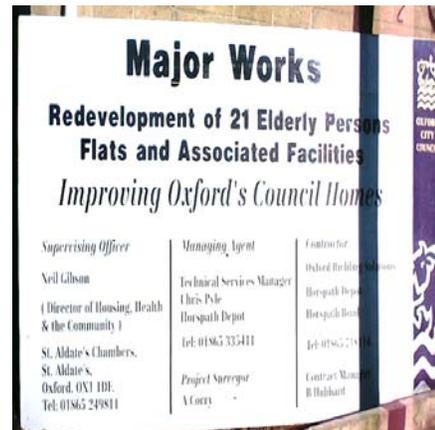
The system comprises of 21.6m<sup>2</sup> of solar water heating panels retro-fitted onto the south-facing roof. It should make a significant contribution to the communal heating system, designed for 23 elderly people living in individual flats.

The eight panels were split into two separate four-panel systems, which run in parallel. Each system feeds one of two solar coils, fitted to a specially designed 1000 litre triple coil storage calorifier (cylinder). A third coil is fitted for the boiler, which is used to supplement the solar-heated water in winter.

On the specific request of Oxford City Council, Imagination Solar designed in a couple of bespoke safety features. These are -

- Pump failure LED indicator: to show failure of the system
- A float switch installed in the drain-back vessel: should the system start to lose water (via a leak or over time, evaporation), it would shut down to prevent the pump running dry.

The cost of the system was £9,973 and although not applied for, the government's Clearskies grant programme can provide up to 50% grant funding for similar installations.



## Importance to the Thames Valley

Of all the renewable energy technologies, solar thermal is probably the easiest to install and should be the number one consideration for any organisation holding housing stock. In this instance, Oxford City Council has moved from just talking to real positive action. It is essential that those organisations with a public role in promoting renewables can actually be seen to be acting as well and this installation has led to further installations on council owned stock.

Additional systems have been installed along Donnington Bridge Road and in Cutteslow and more are planned. The more systems the public see, the more aware they become of the potential of this technology and the more installations will occur. Members of the public in Oxford (and other Thames Valley authorities) can already benefit from discounted prices from reputable installers through the Solarsavers scheme ([www.solarsavers.co.uk](http://www.solarsavers.co.uk))