



Rawlyn Court Refurbishment Renewable Energy & Efficiency Measures

Project description:

This case study summarises the monitoring of the recently refurbished Rawlyn Court sheltered housing scheme which included the installation of six solar thermal systems and energy efficiency measures.

Start date: March, 2005

End date: June, 2006

Sustainability features:

This project contributes towards the following sustainability features:

- climate change
- energy conservation
- renewable energy
- community awareness & action
- economic, social & environmental integration.



Project Activities:

Rawlyn Court is a sheltered housing scheme for retired people in the Abbey area of Cambridge. During 2004/5 a major refurbishment project was carried out. Rawlyn Court now consists of twenty-three modern flats and three newly built bungalows. Cavity wall insulation was installed and double-glazing was utilised throughout. Energy efficient lighting and 'A' rated condensing boilers were also specified.

The new building design also incorporated features that reduced pollution, reduced waste and made use of materials that have a low impact on the environment. The project team used the 'Ecohomes' environmental rating system for homes (developed by the Building Research Establishment) as a tool to improve the Council's standard specification. Energy saving solar panels were installed on four flats and two bungalows in order to contribute towards water heating. This scheme is the largest solar energy project carried out by Cambridge City Council to date.

Project Funding:

The total cost of the refurbishment project (including building works and all fees) was around £2 million. The solar thermal systems cost in the region of £2,500 each, giving a total additional cost of adding renewable energy to six homes of approximately £18,000. Cambridge City Council's Sustainable City grant scheme provided £5,000 of this total, and this was used to attract approximately £8,300 funding from the government's Clear Skies programme.



Project outputs & outcomes:

- All monitored homes consume less electricity than the 'typical' national average, and all but one consume less than the 'good practice' national average.
- All monitored homes consume less gas than the 'good practice' national average.
- The homes with solar thermal systems saved approximately £100 per year on their gas bill.
- Financial payback on the systems could be as low as 12 years (depending on future fuel prices).
- Each solar thermal system resulted in an average saving of approximately 3000kWh of gas per year.
- Each solar thermal system reduced carbon dioxide emissions by approximately 570kg per year – this results in a site saving of almost three and a half tonnes of CO₂ per year from the solar thermal systems alone.

Sustainability lessons learned:

Assuming high insulation standards were first achieved the future use of solar thermal systems would have similar benefits for local refurbishment and new-build projects. Any technology that reduces fossil fuel consumption (and therefore reduces carbon dioxide emissions) should be seriously considered for all future projects regardless of economic considerations.

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