



solarcentury

Case study

Owenvale Court



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Alan Rea, Director of Housing at BIH

BIH Housing Association Powering Ahead With Renewable Energy

Owenvale Court, a residential home in West Belfast, has embraced the drive towards zero carbon output, by incorporating sustainable energy technology. Jointly managed by BIH Housing Association and Saint John of God Association, the home is the first in Northern Ireland to be powered by the latest innovation in integrated renewable energy - C21e solar electric roof tiles - supplied by Solarcentury, the UK's leading solar energy company, specialising in building integrated photovoltaics.

Replacing traditional roof tiles, the 19Wp system will provide over 15,400kWh and save approximately nine tonnes of CO₂ each year. The installation of 360 solar roof tiles to the existing 2002 build two storey building of Owenvale Court was completed in just five days and the C21e photovoltaic tiles are now a vital part of the main roof, covering an area of 130m². Within the first eight weeks of operation, the system had generated 3,217 kWh of free, clean electricity, saving almost two tonnes of CO₂.

BIH HA wanted Owenvale Court to be both economically and environmentally friendly, particularly with regard to energy efficiency. Many housing associations and commercial companies are increasingly turning to photovoltaics (PV) as an onsite renewable energy technology, which also enhances the Eco-homes rating their buildings can achieve. It is widely accepted that common electricity production is the one of the primary emitters of CO₂, therefore solar PV cells which create electricity from daylight, provide a clean, locally produced alternative, with a lifespan of beyond 40 years.

Virtually unrecognisable when installed, the C21e tiles provide silent, solar powered electricity to the building, reducing energy running costs as well as minimising the building's overall carbon emissions. The C21e solar roof tiles are simple to install and require no extra planning in regards to altering roof line, colour or pitch of an existing roof. Meanwhile the architectural form and aesthetics of the building are not compromised, as the tiles are designed to sit flush with conventional roof tiles without the need to adjust battens, blending seamlessly

into the roof area. The tiles simply hook onto normal roofing battens and are secured with simple screw fixings, with one solar tile replacing four standard tiles.

An important part of the project at Owenvale Court was to make the residents and staff aware and educate them on the need for reducing energy usage. A large electronic display panel in the reception area of the building shows the amount of electricity being generated by the solar roof tiles and the amount of national grid electricity saved as a result.

Alan Rea, Director of Housing at BIH says: *"We're delighted with our new roof; the solar tiles are a fantastic way to cut our carbon emissions and contribute to ongoing electricity production. We see it as a very sound investment for the home, as we know we can rely on them to work. As part of our Corporate Social Responsibility strategy, BIH intends to undertake further renewable energy projects where we can."*

"As a result of this project we are not only cutting our CO₂ emissions and reducing waste, we are also saving significant sums of money each month from the clean energy that is being created from the daylight source," comments Patrick Doak, General Manager at Owenvale Court.

Andy Baird, Solarcentury Northern Ireland, says: *"Northern Ireland is really setting the standard for renewable energy. We are delighted there is increasing support for a future with clean energy, as together we can achieve deep cuts in carbon emissions at source. Photovoltaic technology is a simple, proven clean energy solution that really is effective and requires little ongoing attention."*



The Owenvale Court project was funded by the DSD under the Environment & Renewable Energy Fund and the work was carried out by Solarcentury, using their C21e solar PV tile. Grants are now being awarded to help housing associations, schools, local housing authorities, and other public sector and charitable bodies throughout the UK to go solar by covering 50% of the cost of a PV installation.

For further information on grants please visit <http://www.solarcentury.com/grants>

For more information on C21e solar roof tiles please visit www.solarcentury.com/c21

Date commissioned	2006.08.02
Technology	C21e solar roof tile
Installation Type	Pitched roof
System size (kWp)	18.732
Forecast electricity generation / year (kWh)	15,400
Building integrated	Yes
CO ₂ saving / year (kg)	8,747
Energy produced to date (kWh)	5,831



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