

INNOVATION SHORTS

SOLCER HOUSE

WALES' VERY FIRST 'ENERGY POSITIVE' HOUSE WITH A SOCIAL CONSCIENCE



The Low Carbon Research Institute and Welsh School of Architecture have designed Wales' very first 'energy positive' house, located near Bridgend, South Wales. The project is a celebration of low carbon energy research from all over Wales, bringing together universities, industries and the government. The house is capable of exporting energy generated on site to the grid, eradicating energy bills and supplying Wales with clean, renewable energy.

SOLCER House combines advances in sustainable technologies in order to design a house that fits within the social housing framework, meaning Registered Social Landlords are capable of building homes similar to SOLCER House at the same price but sharing net benefits amongst residents, their value chain and the environment. SOLCER House cost around £1,000 per m², which is within the social housing pricing benchmark.

The construction materials and low carbon technologies were procured from within Wales, as much as possible, showcasing the ability of Wales to deliver low carbon innovation to the world. The energy positive SOLCER House was built with high levels of thermal insulation and reduced air leakage in order to minimise energy demand. The energy efficient design includes:

- Cenin low carbon cement
- Structurally Insulated Panels (SIPs). They have higher thermal insulation than timber, supplied by SIPS Wales in Llandovery
- Transpired solar air collectors. This is part of the cladding, which is made up of small perforations in the surface to allow heat to be captured and circulated by a ventilation system, manufactured and installed Central Roofing South Wales

SOLCER House is the first energy positive house built in the UK and will deliver on critical targets set by the EU to build 'nearly zero' energy buildings by 2020. The project is a systematic model design of how these targets can be achieved.

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- Low emissivity double glazed aluminium clad timber window frame and doors that can save up to 8 pence per kWh per window, manufactured by Vellacine in Cardiff
- 4.3kWp photovoltaic solar panel system on the south facing roof
- Lithium ion storage battery, supplied by Victron Energy

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CYNNAL CONSULT

Cynnal Consult provides bespoke consultancy and mentoring for businesses, social enterprises, charities and individuals. We help organisations to plan, do, study and reflect as part of our integrated thinking approach. To create a sustainable nation we provide services to help organisations reduce their impact on the environment and conduct business in a responsible way. We do this by providing:

- Professional development training
- Integrated Sustainability Reporting for businesses and social enterprises

Professional Development Training

Cynnal Consult offer professional development training through accredited courses, workshops and training. We are concerned with helping businesses become adept at making their core aims and mission coherent with the principles of Sustainable Development. Our training can help you develop your strategies and your capacity to deliver integrated reports that quantify the value of financial, environmental and social benefits and the way these support each other. We provide

Training on the Well-being of Future Generations Act
Responsible business management workshops
Business Leadership for Sustainable Development

Integrated Sustainability Reporting

If your organisation is passionate about having a positive effect on the community and the environment then an Integrated Sustainability Report will enable you to demonstrate your commitment with stakeholders. Cynnal Cymru support businesses with Integrated Sustainability Reporting.

There is a growing demand for organisations to demonstrate their added value and present an integrated report covering all areas of the business, demonstrating operations in a simple, comprehensible structure which can be easily understood by customers and stakeholders; responsible and innovative activity also improves the bottom line.

Get in touch with us to find out how we can work with you