



Blaenau Gwent has successfully hosted the Low Carbon Built Environment Event (LCBE) organised by Cardiff University.

The Low Carbon Built Environment project is part of the wider Low Carbon Research Institute (LCRI). The LCRI's Convergence Energy Programme is supported by the European Regional Development Fund through the Welsh Government, works with enterprises to develop industry-relevant new technologies that will provide business opportunities and help Wales deliver on its low carbon agenda.

The event hosted at the General Offices, show cased a number of projects that have been developed as a result of the Low Carbon Built Environment project.



It incorporated an all-day exhibition at The Works, and presentations from each of the seven work packages, and LCRI's WEST project. It will be a hands-on way for delegates to learn about the accomplishments and achievements of the LCBE project over the last 3 years.

Several projects at The Works were also identified as best practice examples of developing the Welsh timber industry and sustainability across Wales.

The event focused on demonstrating the low carbon agenda through a number of workshops

and examples of projects, including:

- Energy generating building envelopes
- Energy efficient lighting for the built environment
- Welsh timber for construction
- Low carbon building design solutions
- Urban scale demand and supply
- Monitoring low carbon buildings
- Innovation and technology

The Welsh Future Homes and the Environmental Resource Centre are the first examples of innovative design solutions at The Works. Developed through a partnership between Coed Cymru and Cardiff University's Design Research Unit and funded by the Technology Strategy Board (TSB), the Ty Unnos system has been designed as an integrated whole house system for low carbon affordable housing, aiming for commercial realisation. The Sitka spruce construction system was developed as a means to use a home grown, low-tech and low-value method of stabilising Welsh Spruce, which is abundant in Wales but unsuitable for structural use due to its tendency to twist when drying, which once treated is a sustainable construction material. The Environmental Resource Centre (ERC) and Ty Unnos House (Welsh Future Homes) at 'The Works' were the first commercial and residential completed project to use the award winning Ty Unnos construction system.



Also at the Works; the first Passivhaus and Code for Sustainable Homes (CFSH) level 6 home in the UK was designed and constructed (The Larch House). Utilising the Passivhaus experience gained from developing The Larch House; triple-glazed, insulated windows were developed by bere:architects with a passivhaus window designer funded by Wood Knowledge Wales, and a consortium of six local joinery companies, before being manufactured in Flintshire by Custom Precision Joinery. The window frames are made from Welsh wood and are the only UK-produced windows so far to gain official Passivhaus certification.

The Energy Centre at The Works is an example of developing sustainable energy solutions. The centre provides hot water and electricity to the main buildings at The Works through four gas boilers and a combined heat and power unit (CHP). This is distributed through the district heating network infrastructure and received by the buildings that are connected to the centre. This also means that the buildings do not feature individual boilers.

The REGAIN building, a business incubator facility at The Works, is an example of a project that features Welsh sweet chestnut cladding as well as featuring advanced environmental design principles with heating and hot water produced from renewable technology.

Councillor Hedley McCarthy, Leader of Blaenau Gwent Council said

“Blaenau Gwent was pleased to host and be part of this Low Carbon Built Environment event. We are extremely proud of what we have achieved in Blaenau Gwent with our partners and we welcome sharing this knowledge across the UK and Europe to continue to develop research on the low carbon agenda.”

Debbie Taylor, Project Manager of the LCBE said:

“We were delighted to use The Works in Blaenau Gwent for our showcase event. It was a fantastic venue, and a wonderful opportunity to show not only the work of the LCBE project, but also to demonstrate examples of some of the excellent sustainable building and design work being done in Wales. “