

Wales' green revolution continues with launch of new Lime House

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Passivhaus future home opened by Welsh Housing Minister.

Welsh Housing Minister Huw Lewis AM has opened the Lime House on the Welsh Future Homes (WFH) site at The Works in Ebbw Vale. The two-bedroom house designed to the Passivhaus standard and Code for Sustainable Homes Level 5 showcases Welsh-made sustainable materials and products.

Constructed using a close panel timber frame system made from Welsh timber, the Lime House boasts estimated energy bills of around £100 per year. The panels are filled with insulation clad with a thick layer of natural loose-fill wood fibre on the inside and the same depth of rigid wood fibre board on the outside, rendered with a thin coat of lime render which is where the house gets its name. It also features the first Passivhaus certified window to be made in the UK by Welsh joiners using Welsh timbers.

Bere:architects in conjunction with the United Welsh Housing Association and Pendragon Design and Build were responsible for the design and construction of the house. It heralds a new approach to sustainable housing in Wales that works for local people, the environment and the Welsh economy.

"The houses [in the development] are one-offs and inspire a generation of housing that sets new standards in energy efficiency while being affordable and very cheap to run," explained Huw Lewis at the launch.

"They are a fantastic showcase of how far we have come in reaching the dual goal of reducing our energy footprint whilst cutting fuel bills for hard-pressed households. This development really sets the bar for future construction projects and I am delighted that Welsh Government funds have been used to ensure its completion."

The Minister acknowledged a RICS award presented to the WFH Larch House, the first UK Code Level 6 Passivhaus (zero carbon) to be built in the UK which was launched on the site last year. The Works also received an Insider Property Award for Sustainable Development of the Year.

"We wanted to develop a range of Welsh-made construction materials and products that could meet the high sustainability criteria now essential in developing a low carbon built environment," added Nick Tune, Director of BRE Wales.

"Most of the homes meeting high levels of sustainability in the UK use a primarily international supply chain. If we can use our own products and materials, we are creating local growth through the construction supply chain and this is key to the future economy of Wales."

The Lime and Larch Houses will be subjected to a vigorous test programme funded by the Technology Strategy Board and led by the Welsh School of Architecture. Energy consumption, occupant behaviour (in relation to energy and CO₂ reduction), air quality achieved by the heat recovery ventilation system, thermal comfort of the buildings and efficiency of the renewable energy systems are some of the areas that will be assessed.

The WFH project is a partnership between BRE Wales, the Welsh Assembly Government, Blaenau Gwent Council, United Welsh Housing Association, Constructing Excellence Wales, Wood Knowledge Wales, Dragonboard and The Works.

Following the success of phase one, the second phase of the project involves the development of another three low energy homes that will not only demonstrate sustainability but also innovation in:

- Renewable/low carbon energy generation
- Energy management controls
- Smart technologies for community engagement and Assisted Living Technologies.

The team are looking for developers to showcase their sustainable housing systems and are running a competition to find new innovations in the Welsh construction industry that can be showcased within the properties. For further information, contact Nick Tune: tunen@bre.co.uk

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