

EnviroHomes Case Study – An Award Winning Cottage

How Cottage, situated just outside Keswick, was originally built in the mid-19th Century as a farming cottage with stone barn attached. Standing on slightly raised ground the house commands views towards Skiddaw, Bassenthwaite, Whinlatter and Catbells. Ospreys from Bassenthwaite regularly fly past the front of the house flying between Derwent Water and Bassenthwaite.



With this back drop in mind, the current owners wanted to refurbish and extend the property to catapult it well into the 21st Century. Access to the site is very restricted so 2030 Architects



steered their clients towards EnviroHomes to provide the solution. The brief was to create a luxury, modern, thermally efficient home that will last into the next century. The final Award Winning design, capitalises on the stunning views with a large vaulted living / dining / kitchen area on the first floor.

EnviroHomes built the 180m² extension in their factory and moved it to site in 10 large modules. These modules were designed to reduce disruption on site and included under floor heating, kitchens, bathrooms and services fitted prior to delivery to the site. The two storey extension was installed and made water tight in just one day. *The owners commented “we didn’t believe it could happen in one day. The crane seemed the same size as the cottage! But it was all so easy”.*

The Buildings Technical Brief

1. A fabric first approach.
2. U-values
 - a. Walls 0.12 W/m²K
 - b. Roof 0.12 W/m²K
 - c. Floor 0.17 W/m²K
3. Space heating and domestic hot water from an 8.5kW air source heat pump.
4. Air changes by mechanical ventilation and heat recovery.
5. Solar PV fitted to the southerly facing section of roof.
6. One of the first uses of VacuTherm vacuum insulation to internally insulate walls within the existing cottage.



Following the initial installation, internal and external completion work took place. Externally, as part of the planning consent, a traditional Lakeland stone wall was built. This was a façade



on the on the road elevation to the old barn / new extension. Also a traditional Westmorland slate roof covering was applied over the modules. Finally, on the elevations



facing away from the road, horizontal timber cladding was applied. This gives the property a sleek modern finish, especially when coupled with the stainless steel and glass balcony. The large 3.6m tall windows, which were installed prior to delivery, capture light and let it flood into the main living space.

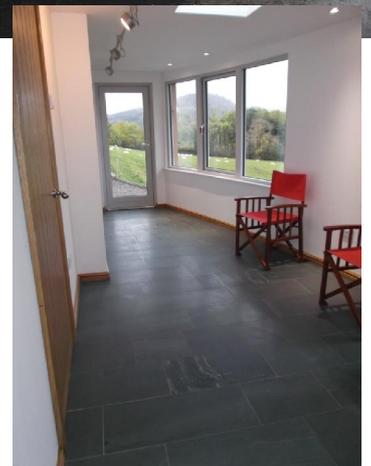
Inside the main living area oak flooring, vaulted ceilings, a modern kitchen, contemporary lighting and a multi-fuel stove give a luxurious, but cosy, feel to the space. Moving to the ground floor by the curved oak staircase, traditional Lakeland slate flooring gives a reference back to the history of the building.

"This extension has easily created a Code for Sustainable Homes "Level 4" residence. The design takes advantage of the fantastic views"
said Rod Hughes from 2030 Architects

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From left, Simon Atzil and Chris Hill, of Envirohomes, receive the Innovation and Technology award from Brian Hough, socio economic manager with the NDA