



## Coed y Brenin Visitor Centre

Coed y Brenin, in the River Eden valley near Dolgellau in mid Wales, is a place of breathtaking natural beauty and a mecca for mountain bikers. It is rated as one of the top ten sites for mountain biking, and the first of its kind in the UK. Onsite facilities were limited and the old makeshift visitor centre, a 1930s military camp, was in desperate need of renovation. The Forestry Commission had ambitions to build a new visitor centre that would cater for families, school groups and people of all ages and abilities, while at the same time creating a focal point at the heart of the forest. However, building in a remote location, on a steep densely forested slope, with no drainage system or services proved a challenge! But in 2006 the £1.5 million EU-funded (Objective 1) visitor centre finally opened to the public. The site offers all-ability access, walking tracks, play furniture, family cycling and a picnic area. One of the main attractions is the building itself – innovative and inviting, the centre benefits from sustainable features and a secure heating supply, ensuring a minimal impact on the environment.



Coed y Brenin is a centre of excellence for mountain biking boasting a stunning spherical visitor centre with spectacular views and sustainable features



The Visitor Centre's most striking feature is its spherical structure. The natural curves, and absence of hard edges and angles, blend seamlessly with the surrounding environment. The centre is predominantly built of timber, all from certified sources, and where possible locally sourced. Spanning three floors, the entire structure is supported by 12 Glulam laminated timber columns with a supporting beam system connecting to a central core. (Glulam is a natural, flexible and robust alternative to steel or concrete.) The exterior cladding is larch, mainly from trees felled to clear the site. Timber for the oak flooring and ash skirting is also local. The balcony decking area has been made from western red cedar, with Douglas fir used for other construction elements. The interior of the building has a light, airy and spacious feel and expansive windows offer panoramic views. Half the building is southfacing, maximising all-day sunlight, and minimising the need for additional lighting. The cedar shingle roof has a generous overhang to provide shade on sunny days, and enables people to sit outside even when it is raining. There is a bike hire shop, toilets and showers on the lower ground floor, including a family changing room with disabled access. A meeting room/classroom on the first floor can accommodate up to 16 people.

### Insulation

The centre is well insulated using cellulose fibre made from recycled newspaper. All windows and doors are double-glazed, reducing heat loss by 50%. Good, natural ventilation provided by windows and skylights.

### Wood fuel heating

A 75 kilowatt wood fuel boiler, fuelled using locally sourced wood chips, provides a renewable source of under-floor heating and hot water to the visitor centre.

### Water Supply

A private borehole supplies water for the café, showers, toilets and bike wash. A local firm drilled the 120 m deep borehole using biodegradable drilling oils to avoid any contamination to the River Eden. A pump draws water from the well to a holding tank and regulates water flow. The pump is powered by south-facing solar photovoltaic panels with a back up mains electricity supply. Over the past three years 87.5% of the energy required to run the pump has been solar-generated.

### Waste management

A bio-filter waste management system treats sewage by removing bacteria and cleaning waste water. The system is highly efficient in processing variable waste loads, requires very little electricity, and does not impact on the River Eden's sensitive ecosystem. The toilets are equipped with air-flush urinals and low-flush toilet cisterns, reducing water consumption by almost 50%.

### Lighting

As much natural light as possible has been used, with low energy high efficiency fittings specified throughout the building where needed.

### External infrastructure

Care has been taken to extend the natural look to the surrounding infrastructure. A dry-stone wall flanks the visitor centre and a car park that offers small parking bays dotted with trees and separated by grassy banks.

### Sustainable transport

Visitors can catch the Bangor to Aberystwith bus into the heart of the forest, with a purpose built bus stop just yards from the visitor centre. Cyclists can also access the site via the Sustrans Cymru network of cycle routes.



### Our advice

Success is in the preparation and planning! Have a clear vision, carry out a feasibility study, engage in public consultation and make your brief as detailed and precise as possible to avoid costly errors or alterations later in the process. Select contractors with experience in sustainable construction. Weigh up capital and revenue costs of sustainable features against traditional energy-consuming features - don't compromise!



### Achievements

- Campaign for the Protection of Rural Wales (CPRW) Rural Wales Award for the building's design.
- Cymru 2009 (Local Authority Building Control) Award for Best Sustainable Building in Wales.
- The Royal Institution of Chartered Surveyors (RICS) Sustainability Award 2007.

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