



## Roof refurbishment

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## Nanteos Mansion, Aberystwyth

**Client** Saxoncourt Group

**Architects** Catalina Architecture Ltd.

**Roofing contractor** Gables UK Ltd.

**Construction** 2011

**FOAMGLAS® application** Roof insulation, loadbearing, FOAMGLAS® READY BOARD T4+, 50 mm + 110 mm thick

Conservation works and remodelling at the Grade 1 listed Nanteos Mansion near Aberystwyth has more than 500 m<sup>2</sup> of FOAMGLAS® READY BOARD cellular glass insulation used to 'future-proof' the existing lead flat roof. The Palladian-style mansion, built by the Powell family in the mid-18<sup>th</sup> century, has undergone four years of major renovations and refurbishment and some £5 million of investment in preparation for a reopening as a hotel and conference centre in April 2012.

One of the challenges of the project has been to overcome the various issues associated with the existing flat lead roof with its standing seam-type construction: as well as leaking, its lack of insulation and poor ventilation had led to condensation problems. The building owner also wanted to leave open the possibility of allowing public access to the roof area.

In conjunction with the design team, the solution was the installation of two layers of FOAMGLAS® READY BOARD T4+, one layer at 50mm thick between the

standing seams and a second, 110 mm thick, bonded to the top to create a flat surface. After applying a carrier membrane to the cellular glass insulation, waterproofing was provided in the form of a Sika Liquid Plastics' cold applied Decothane membrane system, chosen to avoid hot works on site and to simplify detailing.

Technical director Larry Jeffreys of Catalina Architecture Ltd explains the decision to specify FOAMGLAS®: "As well as overcoming the damp and condensation problems, this solution also effectively future-proofs the roof."

"Being made of glass it has a high compressive strength which provides a firm, safe surface to give the flexibility to change the use of the roof in the future. It may be paved to enable public access, or it might be turned into a green roof. These and other options remain open, but the roof is now sound, dry and fully insulated."

Nanteos Mansion in its various incarnations has stood here for at least 700 years.

**FOAMGLAS® meets conservation requirements and gives flexibility to change the use of the roof in the future**  
[www.foamglas.co.uk](http://www.foamglas.co.uk)

### Build-up

- 1 Existing flat lead roof (standing seam)
- 2 FOAMGLAS® READY BOARD, one layer of 50 mm adhered with Decostik between the standing seams
- 3 FOAMGLAS® READY BOARD, second layer of 110 mm, adhered to the top for a flat surface
- 4 Carrier membrane, adhered with Decostik adhesive
- 5 Decothane two layer liquid coating waterproof layer

