

# Addroddiad Adolygu Dylunio Design Review Report

**Review Status: Public**

**NB This report supercedes all previous reports and advice from DCFW**

Meeting date:	22 July 2009
Issue Date:	31 July 2009
Scheme Location:	Dan yr Ogof showcaves, Glyntawe
Scheme Description:	Education / Leisure
Planning Status:	Application submitted June 2009

## Part1: Presentation

This project was previously reviewed by DCFW in August 2005 and received outline planning consent in 2006. The site is just off the main entrance road into Dan yr Ogof showcaves and lies within the Fforest Fawr Geopark, the first designated geopark area in Wales and within the Brecon Beacons National Park. The brief is for a two storey building to accommodate exhibition space and staff facilities. It aspires to be a zero carbon development which will also enhance biodiversity.

This proposal has sought to respond to the previous recommendations made by DCFW. These were to seek a design solution which minimised excavation, to ensure that the ground floor entrance was transparent and welcoming, and to research successful precedents. Examples of the latter, to which the team refer, include the Snowdon Visitor Centre [Hafod Eryri], Glencoe Visitor Centre, Coed y Brenin and the Eden project.

The Local Authority recognises that the principle of use is already established, and specifically welcomes the rock-like formation of the front stone wall, provided it is made from local stone. They support the use of a green roof and photovoltaic [PV] panels, but have some concerns about uPVC windows. Concern has also been raised about damage to the local bat population from the proposed wind turbine, as it is located within their foraging area, and the Countryside Council for Wales [CCW] is undertaking a visual impact assessment of the impact on the tree cover of the wooded hillside.

## **Summary of key points arising from discussion, to be read in conjunction with Part 2 of this report.**

The Panel was pleased to review the progress of this scheme following on from the previous review. We support the proposed use and think that the site and brief offer the opportunity for an exciting and innovative building. However, we are unable to support this proposal for the following reasons:

- The viability and deliverability of the scheme are prejudiced by the lack of geotechnical investigations. If the scheme is to proceed as shown, this needs to be carried out as quickly as possible.
- We believe that the advantages of a building which stands clear of the ground and steps down the site, should be properly evaluated and compared with the perceived advantages of an earth sheltered building.
- The project team appears to lack the knowledge and experience to deliver this type of construction successfully.
- A BREEAM standard of Excellent should be the minimum commitment contained in the brief. We doubt that this design will meet the aspiration for a zero carbon building.
- Care must be taken to ensure sufficient daylight levels to the rear of the ground floor.
- Composite timber/aluminium windows should be used rather than uPVC.
- A landscape strategy needs to be developed to deal with minimising the disturbance to the existing habitats and landform, and to ensure trees are retained wherever possible. It is doubtful that the proposed tree planting on the roofscape can be successfully delivered .
- The lack of internal access between floors is not acceptable. Toilet provision for school groups is inadequate.
- The use and nature of the exhibition layout and content should be clarified so that the developing design will complement the internal functions.
- Consideration should be given to how this scheme integrates with the showcaves site as a whole. An external gathering space should be provided and the safety of the walk from the car park should be ensured.

## **Part 2: Discussion and Panel Response in Full**

If the client is committed to an earth sheltered building, it is vital that a geological survey is done urgently, to determine likely ground conditions and the extent and costs of excavation. It is a false economy to delay this work, given that the results might affect the viability of the project as a whole.

The Panel is still not convinced that an earth sheltered approach is the right strategy and we would prefer to see a more prominent, visible building, advertising its role and responding to the site topography. A lighter touch on this sensitive greenfield site would be more appropriate than burying the building and generating huge quantities of spoil. It would be important for the design and construction team to have a thorough understanding of the

principles of earth sheltered construction and green roofs, along with how thermal mass and heat transfer work in this situation. We do not think that this level of understanding has been demonstrated, which raises serious questions about buildability and ultimate environmental performance.

One characteristic of earth sheltered buildings is the difficulty of getting reasonable daylight levels into the rear of the ground floor. It is doubtful that the 4 sunpipes proposed here will be sufficient, especially given their location next to columns.

The use of uPVC windows would compromise the appearance of the elevations, and contradict any claim for high quality design. We did not agree with the client's assessment of timber performance in general, assuming that durable timber species were selected and manufactured to high standards of workmanship. However, a composite timber/aluminium window would offer some weather protection along with the use of a sustainable material.

The impact on the local landscape and habitats of digging into the hill would be enormous. The extent of tree felling would be significant and although it was claimed that some trees are diseased we could see no evidence of this in the photographic images provided, nor is this referred to in the Landscaping Statement. Plans to replant trees on the green roof would require a very substantial engineered structure not appropriate for this scale of building or budget.

The lack of internal stairs or lift to give access between the two floors is unacceptable, and unlikely to satisfy Building Regulations. The proposed ramp, while DDA compliant, is 96 metres long and as such likely to deter all but the most determined visitors. The client requirement for two separately accessed floors can be satisfied, but an internal means of access should be provided.

There are no indicative layouts for internal spaces or exhibition design although the designer would need to know the broad outlines of what is intended, to inform the detailed design development. We referred the team to the geological display in the National Museum of Wales as an example of best practice, and emphasised the need for simple flexible spaces.

Given the sustainability aspirations we would have expected the brief to specify a high BREEAM standard which had to be met. The range of renewable technologies proposed would perhaps be useful for educational purposes, but may not be the best choice or combination for achieving real carbon savings. Care should be taken not to shade solar panels and this may require additional tree felling. The vertical positioning of the PV panels is not optimal and will make them less efficient.

The toilet provisions as proposed are not adequate for school groups. The 200 m walk from the main car park will need to be planned to ensure the safety of school groups accessing this building. The lack of any outside gathering space should be remedied and the opportunity could be used to introduce some external interpretation boards.

**The Design Commission for Wales Design Review Panel and staff welcome further consultation and will be happy to provide further feedback on this report and/or**

**where appropriate, to receive further presentations. Thank you for consulting the Commission and please keep in touch with us about the progress of your project.**

***A Welsh language copy of this report is available upon request.***

## **Appendix 1: Attendees**

Asiant/Client/Datblygwr: Agent/Client/Developer	Mr Ashford Price
Pensaer/Architect:	Barry Tomlinson Architectural Services [Barry Tomlinson, Sylvia Evans]
Consultants:	n/a
Awdurdod Cynllunio/ Planning Authority	Brecon Beacons NPA [Lloyd Jones]
Y Panel Adlygu Dylunio: Design review panel: Wendy Richards [Chair] Cindy Harris [Officer] David Harvey Kedrick Davies	Steve Smith Jonathan Adams Phil Roberts
Lead Panellist:	David Harvey
Sylwedyddion/Observers:	