

# Addroddiad Adolygu Dylunio Design Review Report

**Confidential**

## **Design Review 30 November 2011 Summary for detailed consideration**

### **1.0 Overview**

- 1.1. The Design Review Panel of the Design Commission for Wales has provided client support to Amgueddfa Cymru throughout the early stages of scheme development, in a mutually beneficial process fully embraced by the Museum directorate and project teams.
- 1.2. Preliminary meetings between DCfW's Panel, client body, and design teams began in March 2011. The teams have met three times to discuss the background to the project, the brief, and the developing design approaches. Formal Design Review began in July 2011 with a Review in September (half way through RIBA Stage C, and subsequently in November, coinciding with the end of RIBA Stage C. (The **full report** of the 30 November review is appended here).
- 1.3. Pre-review material requested and received for the 30 November Review lacked appropriately sized, scaled drawings, making it difficult for the Panel to assess details of the scheme and therefore to comment appropriately. As a result, responses were made to material presented on the day which meant a less fruitful exchange. Scale drawings of the proposals, along with other materials, clearly set out and requested ahead of the review date, are essential to enable thorough analysis and comment.
- 1.4. Following the 30 November review, a follow up was provided on 7<sup>th</sup> December, which focussed on key issues with the main building design which could not be adequately analysed during the earlier review meeting.

### **2.0 Summary**

- 2.1 The structure of Design Review reports on this project have been formatted to allow focus on four key themes:

- Sustainability
- Landscape
- New Building
- Existing Building

In this report we also take each of these themes in turn.

### **3.0 Sustainability**

- 3.1 Throughout all the reviews, insufficient information has been provided regarding the site-wide sustainability strategy. Sustainability items have predominantly focused on the building requirements. The landscape strategy has touched upon sustainability but it does so inadequately.
- 3.2 In the July and September reviews, drawings relating to the ventilation strategy were presented, with BREEAM criteria still being developed.
- 3.3 In November although the BREEAM pre-assessment has been completed, we remained concerned at the lack of detail and the generic nature of the information presented. An understanding of what will be delivered needs clarification.

### **4.0 Landscape**

- 4.1 A concern, throughout all the Reviews, that the budget identified is inadequate to deliver the stated aspiration remains. The emerging masterplan(s) must also address future capacity of the site and the development of the landscape and the parking and arrival experience. To date this has not been thoroughly considered.
- 4.2 Following the 30 November review, greater clarity has emerged from the landscape proposals, however, the interpretation of the historic importance of the landscape and the strategic vision needs to be strengthened. Detailed drawings for all the external works associated with the buildings car park and arrival experience are now required.

### **5.0 New Building**

- 5.1 At the July review the substantial issues were the relationship of the building with the immediate landscape context and resolution of the level changes.
- 5.2 During design development and the September review, whilst this had begun to be addressed, concern remained regarding the relationship of the building to the 'node point' and the legibility of the entrance.
- 5.3 The most recent Review revealed again that the new building's entrance location and legibility needs to be reconsidered along with the treatment and function of the 'amphitheatre'. The construction method for the structure requires further research to exploit the opportunity to showcase appropriate, high quality materials.

### **6.0 Existing Building**

- 6.1 In the July and September reviews the external works/landscape and car parking remained an item of concern, and in relation to the building, the layout of the proposed covered courtyard and access to galleries. Consideration of adequacy of budgets availability to deliver the building and associated external works was also discussed.

- 6.2 Through the design development of the building a new form has emerged. This 'cranked' form to the new extension is not felt to be wholly appropriate or properly justified as a design approach emerging from the design ethos of the existing listed building. (NB this aspect was the particular focus of the follow up meeting of 7 December)

## **7.0 Delivery**

### **Planning**

- 7.1 The appointment of Nathaniel Litchfield and Partners (NLP) will assist clarity for the regulatory planning process and the co-ordination of the formal application.

### **Statutory Consultees**

- 7.2 Whilst discussions are ongoing, the Local Authority remains concerned over the management of car parking and expect a robust green transport plan. They wish to ensure that the archaeological value of the landscape is protected and they consider there to be some tension between the siting of the new building and the Pettigrew plan. This requires immediate consideration by the client and teams.
- 7.3 Cadw also has concerns regarding additional information required to supplement the Conservation Management Plan (CMP). The Grade II listing of the main building refers to what was actually built, rather than the original design concept. They will therefore require strong justification for works to the building, particularly the removal of the western concourse and changing the character of the courtyard. This item requires immediate detailed attention. (NB this item also formed part of the discussion at the meeting of 7 December)

### **Procurement & Budget**

- 7.4 Details of delivery procurement and associated budgets will have implications on the quality of the delivered scheme – in all areas of work. To ensure design and construction quality, the design teams should be retained throughout the design and construction phases as discussed.

End of summary of key items.

Please refer to the detailed Design Review Report which begins on Page 4.

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## Design Review Report

### **DECLARATIONS OF INTERESTS**

Panel members, observers and other relevant parties are required to declare *in advance* any interests they may have in relation to the Design Review Agenda items. Any such declarations are recorded here and in DCfW's central records.

#### **Review status**

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Meeting date	30th November 2011
Issue date	9th December 2011
Scheme location	Creu Hanes, St Fagans National History Museum
Scheme description	Leisure/culture
Planning status	Pre-application

#### **Declaration of interest**

Ashley Bateson declared that his employer Hoare Lea is currently working on a project with Feilden Clegg Bradley, but he personally is not involved in that scheme.

## **1. Landscape**

### **Part 1 Presentation**

1.1.1. The landscape proposals have been progressed and the team presented new material at the review with photomontage views from different points along the spine route. A Landscape Conservation Management Plan has been prepared to be submitted for the HLF bid. A Conservation Framework Plan identifies 'no build' zones within the existing woodland and primary and secondary routes across the site. The 25 year masterplan is subject to ongoing negotiations with Cadw.

1.1.2. Design development to date has been concentrated on developing the main spine footpath, opening up the rides in the southern woodland, and the new connection with the castle. The removal and pruning of hedges is proposed to open up views. Rerouting of the main spine footpath is planned to improve access to the historic buildings within the castle grounds.

1.1.3. Improvements to the existing play area outside the cafe remains unresolved. Two options for the car park layout were presented, both preserving the green lawn in front of the main building.

### **Part 2 Discussion and Panel response in full**

1.2.1. The Panel appreciated the additional information gained from the verbal presentation, which was more useful than the pre-review material which lacked clarity in its presentation. However, the strategic vision needs to be better supported and realised by the landscape design. The link between the historical /

archaeological and cultural vision and its physical manifestation within the landscape, was not clear and needs further work. We also believe that there are significant unexploited opportunities to interpret the historic landscape.

1.2.2. Detailed landscape design proposals illustrating the exit from the main building are still not clear. A definitive way finding strategy which is linked to the landscape proposals is still required, to direct the flow of visitors, disperse visitors around the site, and encourage the exploration of the full extent of the museum.

1.2.3. The client confirmed that they were content with the setting of the Celtic Village and Llys Rosser, the amount of reconstruction that could be achieved, and the minimal tree clearance involved.

1.2.4. Site drainage would be dealt with mainly by soakaways, as at present and there will be no increase in outflow from the site as a whole. A sustainable drainage strategy should be appraised through the design process.

1.2.5. The Panel was informed that the landscape works associated with each building would be dealt with as part of the individual building programme or as a separate landscape contract. This is still under discussion and depends to some extent on the phasing of works. Museum staff are aware of the maintenance implications of all new works.

## **2. Existing Building**

### **Part 1 Presentation**

2.1.1. The new extension to the main building has been cranked to align with the topography of the landscape and the 19th century rides. The cafe is relocated to face the museum rather than the car park. One benefit of this arrangement is to ease the space restriction internally, and offer enhanced access to the gallery and exhibition spaces at first floor level. Within the courtyard the lift is now clearly visible from the main entrance.

2.1.2. The new roof form reflects existing building lines and angles, and allows daylight in from the north. The intention is for the roof to float over the existing walls with high level windows separating the two elements.

2.1.3. The design development has responded to the Conservation Management Plan, and has reinstated and protected the original view of the front facade when approaching from the south west. The shape and size of the original courtyard has been retained, including the original elevations, and a new plinth delineates the original level of the courtyard to the rear.

### **Part 2 Discussion and Panel response in full**

2.2.1. The Panel questioned the justification for introducing the cranked new block, as a fundamental change in the relationship of the new extension with the main building. This revision does not appear to have been informed by the design analysis of the existing building. The new extension is amorphous in form, without any

apparent logic and of a scale which is incompatible with the existing building. It does not achieve the architect's stated vision that the elevations of the temporary exhibition should be restored to their original primacy.

2.2.2. Given the necessary increase in scale resulting from the client's brief, there should be a greater contrast with the existing form. The effect should be of a sympathetic juxtaposition, rather than an extrusion of the main building.

2.2.3. The client stated that the crank expresses symbolically the change in direction for the museum as a whole. The Panel thought that a clearer articulation of this new direction could be better achieved by a more defined separation between old and new elements, which could also serve to strengthen the case in favour of the cranked form with other consultees.

2.2.4. The Panel noted that the columns landing within the courtyard should ideally coincide with nodal points indicated by a change in roof planes. The architect's intention was to emphasise the independence of the new roof structure from the existing walls. The large number of columns at the gable end to the west of the courtyard are meant to reinforce the original line of the concourse building and are not structurally necessary. It was agreed that this arrangement should be reconsidered.

2.2.5. The Panel suggested that detailed analysis of the existing and proposed landscape layout for the car park should be used to test the two options presented. Site sections of the car park should be produced, along with views from the approach road. We agreed that it was important to retain the lawn, as an important part of the original facade. Upgrading works should include the path to the west of the car park.

2.2.6. The importance of the transition when exiting the main building to the rear was emphasised, and the possibility of extending the building out into the landscape was discussed. The relationship of the playground with the main spine needs to be resolved.

### **3. Sustainability**

#### **Part 1 Presentation**

3.1.1. No site wide sustainability strategy was presented. The two buildings will be assessed using BREEAM (2008) bespoke assessment tools. Both buildings are showing indicative scores at pre-assessment which indicate that an Excellent rating would be achieved. For the existing building, this is largely due to a relative relaxation of the strict environmental requirements for gallery spaces.

3.1.2. The new building will also achieve an EPC 'A' rating. Sustainability measures include an air source heat pump, rainwater harvesting, and specification of A-rated materials. The main building will make use of heat recovery systems, maximise daylight and energy efficient lighting, and retain the existing PVs. The feasibility of a CHP system, as recommended in the LZC report, is under consideration.

## **Part 2 Discussion and Panel response in full**

3.2.1. The Panel was pleased to receive more detailed information on the strategy for achieving a sustainable development, than was made available pre-review. The Panel wished to confirm the status of the commitments and urged the team to guard against any diminution in environmental performance. It was unfortunate that we had not received the LZC report referred to above. At the next review we would expect to see a full sustainability statement, which will also need to be included in the Design and Access Statement as part of the planning applications.

3.2.2. The Green Transport Plan and Travel Action Plan both explore and seek to encourage the more sustainable modes of transport such as walking, cycling and public transport. However, the Panel was informed that the details of cycle parking were yet to be resolved, and we were concerned that this approach undermines the prioritisation of low carbon transport modes.

3.2.3. The Panel welcomed the avoidance of comfort cooling (apart from the server rooms). With regard to the LZC options we urged the team to consider the financial benefits that could be gained through the (reduced) feed-in tariffs (FITS) and renewable heat incentive (RHI), and to evaluate the adoption of solar water heating or a stand alone wood pellet boiler for the new building, in the light of these incentives.

3.2.4. All main entrances into buildings should have a draught lobby (internal or external) to avoid unnecessary heat loss. Revolving doors may prove to be an energy inefficient solution if people are still able to use side doors. It will be important that large areas of glazing, for example in the new building, are made as efficient as possible by using triple glazing throughout.

## **4. New Building**

### **Part 1 Presentation**

4.1.1. The design team noted that the function of this building has moved towards a 'hands-on' learning and activity space rather than purely an exhibition and gallery space. The 'amphitheatre' is now the point of arrival, and is connected to the entrance by a boardwalk running along the north eastern edge. An outdoor classroom is located under the 'prow' of an overhanging roof to the south east, and a new basement area and small mezzanine will be used for plant and WCs.

4.1.2. The roof form has been simplified to a flat roof finished with a waterproof membrane. The internal ceiling structure uses a semi-gridshell made up of short span timber cassettes and incorporating rooflights. The proportions of opaque/coloured/transparent walling systems are still under discussion. One suggestion is to use printed glass, to create a striated effect mirroring the trees in the immediate landscape.

### **Part 2 Discussion and Panel response in full**

4.2.1. The Panel thought that the developing design had been rationalised to good effect, although it was acknowledged that the original concept of a floating roof was

still potentially compromised by the need to carry walls right up to the underside of the roof. The detailing of the envelope, and curtain wall system in particular, will be critical for the success of the building, especially given the requirement for permeability with the outside.

4.2.2. Given the previous discussions on the use of local renewable materials and the opportunity to showcase innovative construction techniques, the Panel was disappointed to see the proposal for a steel frame as the primary structure included as a default option. We urged the design team to seek advice on the possibilities for structural use of local timber (for example from the Design Research Unit at the Welsh School of Architecture); and we urged the client to prioritise this aspect of the scheme as an opportunity to promote sustainable construction methods and support local supply chains.

4.2.3. The Panel welcomed the proposed site circulation diagram, which helpfully clarified the client's thoughts in this regard. However, in the context of this strategy, the Panel thought that 'amphitheatre' was probably a misnomer for what was in fact clearly now a node point of the historic landscape plan, which would function primarily as an activity space and meeting area, as well as an orientation point. Any landscape treatment should reflect the crispness and simplicity of the building. We also considered that the relationship between the building and the ride needed to be considered in detail.

4.2.4. Ideally the main entrance should acknowledge the importance of the node, and should connect directly with it. In this case the oblique approach to the main entrance compromises its legibility. The external entrance to the WCs should be reconsidered as it runs close to the plant room, could appear narrow and dark, and is not located conveniently for children staying in Llys Rosser.

4.2.5. The circular 'bite' taken out of the wet activity space is intended to respond to the circular line of the amphitheatre and has been previously agreed with Cadw. The Panel thought that this was an unsatisfactory resolution of this interface and suggested aligning the external envelope with the structural grid instead. A curved line in the floor finish internally could represent the original idea of a connection with the shape of the node.

4.2.6. The Panel observed that the outdoor seating area facing north east was not the optimum microclimate for an outdoor extension to the cafe. We warned that the noise pollution from the ASHP may need to be mitigated.

## **5. Delivery**

5.1 The Panel was advised that Nathaniel Litchfield and Partners (NLP) had recently been appointed to advise and coordinate the planning application process. Their appointment will include coordination with statutory consultees and the preparation of the Environmental Impact Assessment and associated documentation to lodge a number of coordinated planning applications.

5.2 NLP are likely to recommend the submission of two separate planning applications - one for the main building, and one for the new building, works



associated with the Open Air Archaeology and the Celtic Village. Consideration was currently being given as to how an application for the landscape proposals would be addressed.

5.3 NLP confirmed that the Draft Stage D proposals will be completed by mid December, and that the planning applications were currently programmed for submission in February 2012.

5.4 Procurement was briefly discussed and the museum team confirmed that all the design teams will be retained throughout the design and construction phases, up to RIBA Stage L. The preferred option for contractor delivery was a traditional contract, with a degree of early contractor involvement. Each element of work is likely to be delivered within its own contract.

5.5 The local authority representative stated that they have concerns over the management of car parking and expect to see a robust green transport plan. They wish to ensure that the archaeological value of the landscape will be protected, and think that there is currently some tension between the siting of the new building and the Pettigrew plan. No detailed landscape proposals have yet been tabled at their consultation meetings, but they expect to see a joined-up approach to the external landscape around both buildings, and a greater level of visual material placing the landscape proposals in context.

5.6 The representative from Cadw stated that additional information to supplement the Conservation Management Plan (CMP) had been requested at the meeting of the 16th November, but not yet received. In general, the necessary information had not been communicated in a timely way to enable a considered response. Cadw stated that it was regrettable that the CMP was not structured round the conservation principles published by Cadw, and so did not follow national guidelines.

5.7 Cadw commented that the listing of the main building refers to what was actually built rather than the original design concept, and therefore any proposal to remove the western concourse would require a stronger justification than has been presented. While accepting that the relocation of the cafe restores the historical spatial organisation, Cadw has concerns about the angle of the new extension. Concerns remain about the proposed treatment of the courtyard and whether the original character of an outdoor space would be retained.

## **6. Summary**

6.1. The Panel was pleased to continue our engagement with this important project, and we would like to see further developments of the proposal before it is submitted for planning consent. However, it is imperative for the next review that we receive all relevant material two weeks in advance of the review date, and at a size and scale which can be easily read and interpreted.

- We welcome the appointment of NLP to help with the complicated application process, and to coordinate discussions with all parties.
- There is a greater clarity emerging from the landscape proposals, and this is helped by the photomontage views taken along the spine route. However the

interpretation of the historic importance of the landscape and the strategic vision needs to be strengthened.

- Every effort should be made to engage with statutory consultees and respond to their concerns.
- The crank in the relationship with the main building and new extension is problematic and needs rethinking.
- More detailed information on the strategy for achieving the sustainability targets is required for the next review, together with a renewed commitment to delivery.
- The new building's entrance location and legibility needs to be reconsidered along with the treatment and function of the 'amphitheatre'. The construction method requires further research to exploit the opportunity to showcase local, renewable materials.
- The Panel welcomed the likely adoption of a traditional procurement method with early contractor involvement and the retention of the design teams throughout the construction and commissioning phases.
- Although we were informed that the client was reasonably comfortable with the budget apportionment as outlined in the Stage C documentation, the Panel sought a greater level of reassurance that budgets had been well matched to delivery of the brief and to particular work streams. We understood that there would in fact be a greater investment in the landscape works than is suggested by the figures.

**The Design Commission for Wales Design Review Panel welcomes further consultation and we will be happy to provide further feedback on this report and/or where appropriate, to receive further presentations. Please keep us informed of the progress of your project. Thank you for consulting the Commission.**

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

### **Attendees**

Agent/Client/Developer	Amgueddfa Cymru (David Anderson DG, Steve Howe, Elfyn Hughes)
Architectural/Urban Designer	Feilden Clegg Bradley Studios (Richard Collis) Purcell Miller Tritton (Jamie Coath) TEP (Graeme Atherton) Arup (Elaine Veaudour)
Consultants	Nathaniel Litchfield Partnership (John Cottrell) Focus (Richard Aston)
Third Party	Cadw, Statutory consultee (Judith Alfrey)
Planning Authority	Cardiff Council (Martin Morris)

### **Design Review Panel**

Chair  
Officer

Wendy Richards  
Cindy Harris  
Kieren Morgan, Andrew Linfoot  
Ashley Bateson, Toby Adam