

# Addroddiad Adolygu Dylunio Design Review Report

## Review status

**Confidential**

Meeting date	19th January 2012
Issue date	25th January 2012
Scheme location	St Fagans Museum
Scheme description	Civic / leisure
Planning status	Pre-application

## Declaration of interests:

**Carole-Anne Davies, Chief Executive of DCfW attended this review as an observer, and asked her status as voluntary Trustee of Amgueddfa Cymru to be recorded.**

## 1.0. Summary for detailed consideration

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. This is the fourth formal design review.

The structure of the Design Review reports have been formatted to allow a focus on four key areas, which all have interlinked design issues. The review process will always scrutinise design proposals from a strategic level through to the detail of how the proposals will be realised. This is to ensure that the vision and brief for the project informs the detailed resolution of design issues, providing a sustainable design solution for each element of the project as a whole.

This summary focusses on the key points which the Commission feels remain to be resolved, as discussed at January 19th review meeting. All of these are vital to the successful progress of this project and require urgent consideration.

### 1.1. Landscape

1.1.1. The landscape and curatorial strategies need to be well integrated to deliver a holistic interpretation of the strategic vision for the site. The 2012 landscape design/management development of the site needs to be reflected in this interpretation.

1.1.2. Following the review meeting of 19th January, concern remains regarding the adequacy of the budget for delivery (and maintenance) of the proposed works. The landscape budget is now set at circa £1 million, excluding works to the car park.

1.1.3. Whilst we understand the statutory influences behind the decision to relocate the Celtic Village and Llys Rhosyr, it seems at odds with the original design intent of Pettigrew plan. If this pragmatic solution is to be pursued, it should be recorded within the interpretation strategy.

1.1.4. A review of the arrival experience by bus and bicycle is required. The bus drop off, waiting area, shelter and vehicle tracking need to be revisited. The quantum, location and design of the cycle facilities needs further detailed consideration to support the sustainable transport aspirations of the museum and to properly respond to the audience/visitor profile which includes significant numbers of family groups.

1.1.5. There is a lack of detailed drawings at an appropriate scale to illustrate particular points in the journey, for example the 50:50 option when exiting the main building.

1.1.6. More information is needed on tree protection zones, where they appear to be threatened by building or landscape works. If there is to be tree planting in the car park, sufficient space and appropriate conditions should be allowed for the trees to flourish over time.

1.1.7. Proposals for the play area are welcomed and we were assured that they are affordable within the budget. However, maintenance demands will be significant and budgets will need to be adjusted accordingly.

1.1.8. Further capacity on the site was not discussed.

## **1.2. Sustainability**

1.2.1. We appreciate that Arup's commission is limited to the two buildings, which to date has prevented a thorough site-wide approach. This is a missed opportunity. Failure to develop a site-wide sustainability strategy will diminish opportunities to deliver cost savings, operational efficiencies and carbon reductions, now and into the future. The requirement for and benefits of such a strategy have been repeatedly stated at all previous Design Reviews.

1.2.2. We are pleased to note that BREEAM Excellent remains an achievable target for both buildings. However, more detailed evaluations of CHP, biomass and air source heat pumps (ASHPs) will be necessary for planning applications.

### **1.3. Main Building**

1.3.1. There has been some improvement in the design development (in response to review meetings of 30 November and 7 December 2011). Further work is required to demonstrate and clearly articulate how the new element has evolved from the existing listed building. This could usefully be illustrated graphically and informed by the Conservation Management Plan. As previously noted, this aspect is a vital consideration in discussion with the statutory bodies.

1.3.2. We expressed concern about ground floor circulation and flow of visitors up to the first floor, but were reassured about the visibility and capacity of the lift. The internal layout should clearly direct visitors to the upper level without any apparent option for exiting directly to the west.

1.3.3. We welcomed the revealing of the existing colonnade and highlighted the potential for this to be extended further to the west, to help reduce the massing of the new extension and potentially provide an additional temporary/changing exhibition space.

1.3.4. The high-level walkway in the courtyard needs to demonstrate a lighter touch similar to a floating plane, set apart from the perimeter of the building.

1.3.5. The roof plan and its manifestation in different ceiling heights within one exhibition space requires further refinement.

### **1.4. New Building**

1.4.1. In our view the original concept was always in danger of being compromised by the multiplicity of uses and demands for flexibility. The original design concept appears to have been progressively modified to respond to the emerging brief, and now requires a fundamental re-evaluation.

1.4.2. The elevational treatment, transparent to opaque ratio, and materials selection, all require further detailed consideration

1.4.3. The legibility of the entrance has been improved, and we accept that the client requirement for an outdoor classroom makes direct entry from the events space difficult.

1.4.4. We have doubts about how well the north east facing outdoor seating area will function.

1.4.5. The landscape treatment of the events space is appropriate for smaller gatherings, but the fixed seating and retaining walls would preclude larger events.

### **1.5 Planning and Delivery**

1.5.1. We welcome the appointment of a planning consultant to coordinate all aspects of the application process.

1.5.2. Important aspects of the proposal will need to be fixed by mid February, to comply with requirements for the HLF bid.

1.5.2. The planning applications will be submitted by mid March and this timing has been agreed with Cardiff Council. One application will cover the existing building and include Conservation Area and Listed Building consents. The second application will include the new building and relocation of the Celtic Village, including Conservation Area consent.

1.5.3. The public consultation process has begun with an exhibition at St Fagans.

1.5.4. A procurement strategy document is currently being finalised with the client. The approach outlined is a traditional contract, and it is intended that works to the two buildings and the landscape will run concurrently. Details of budget allocations are also being finalised. The procurement strategy is vital to the proper realisation of client requirements and the success of the project delivery.

## **1.6. Statutory Consultations**

1.6.1. The local authority representatives stated that they were mainly concerned with design and conservation aspects of the main Grade II listed building, however they have yet to engage in pre-application discussion regarding the new build. We understand this is in hand and the relevant workshops/meetings will take place very shortly.

1.6.2. The restoration of the original facade of the Grade II listed main building, especially when viewed from the south west approach, was welcomed by the LPA.

1.6.3. It will be important to retain the sense of an outdoor space in the new courtyard. The loss of the glass wall and the effect of the walkway on the ground floor space is currently problematic.

1.6.4. The extent of the proposed demolition will need to be very well justified.

1.6.5. Although the Cadw representative was unable to attend, a written briefing note was provided prior to the review.

1.6.6. Given the agreement to relocate the Celtic Village and Llys Rhosyr within the nodes, Cadw had no further concerns with regard to the landscape proposals.

1.6.7. Serious concerns remain for Cadw over whether sufficient weight has been given to the architectural and historic aspects of the Grade II listed existing building, in the design process. In particular the treatment of the courtyard, the loss of the western enclosure and existing concourse wing, require further discussion and resolution.

1.6.8. In our view these concerns require an urgent response from the project team, which should be resolved and made clear in the Design & Access Statement. We understand that a meeting with Cadw and Cardiff Council is scheduled for 31st January and it is vital that comprehensive pre-application discussions are held on all aspects of the proposal.

## **End of Summary**

# **2.0 Presentations and Discussion**

## **2.1 Landscape**

2.1.1. The landscape team explained the decision to relocate the Celtic Village and Llys Rhosyr within the nodes rather than in the woodland glades, in terms of minimising loss of tree cover. However, the designers are not constrained to the original dimensions of the nodes, so will be able to accommodate Llys Rhosyr within a slightly expanded space, although they are not free to change the orientation of the buildings relative to the axes. The Panel thought that this change was in danger of compromising the original Pettigrew plan and the function of the nodes. Llys Rhosyr would now form a powerful termination to a dead straight axis, giving it a formal importance which may be greater than intended, and the lack of alignment with the axis is awkward. If this solution is to be followed through it will be important to include the reasons behind this '*2012 layer*' in the interpretation of the landscape.

2.1.2. The Panel questioned how well the landscape strategy was integrated with the interpretation strategy and was assured that the TEP team was working closely with Hayley Sharpe.

2.1.3. We welcomed the proposals for the play area adjacent to the main building and sought reassurance that it was affordable within the budget. The play area has been costed at £175,000 and is within the projected budget. The Panel advised that early consultation with the estates management team was necessary, to ensure sufficient resources were allowed for ongoing management and maintenance. The Panel was assured that the surface of the play area and paths will be set above current ground level and will have no impact on existing significant trees, although it was noted that some play equipment foundations are within the root zone and therefore have an increased potential to affect tree roots.

2.1.4. The arrival experience from the perspective of the user requires further consideration, in order to maximise the appeal of sustainable transport options. Cycle and related equipment storage should be conveniently located, and routes for cyclist clearly sign posted. Consideration should be given to improving bus stop facilities again to improve people's experience of arriving/leaving the museum. All structures and finishes should be robust and of high quality. Proper tracking of the whole car park for larger vehicles would be a useful exercise. If mature trees are

part of the landscape plan, sufficient room should be allowed for their growth - otherwise they should be omitted from the design. The areas of grasscrete would be controlled to avoid over-use, as they are at present and the detail will need particular care in front of the listed building.

## **2.2. Sustainability**

2.2.1. Arup confirmed that their commission relates only to the two buildings. The Panel regretted the missed opportunity to develop a wider brief to examine options to lower the carbon footprint of the site as a whole and reduce operational costs into the future. This would have been particularly useful, for example, in maximising the efficiency of a CHP unit in the main building.

2.2.2. It was accepted that the Stage C low/zero carbon studies were quite generic. The M&E team are in the process of responding to detailed design information from the architects to develop a detailed strategy for meeting the sustainability targets which will be outlined in the Stage D report. The BREEAM pre-assessment studies show that an Excellent rating will be achieved for both buildings. In addition it is intended that the new building will achieve an EPC 'A' rating.

2.2.3. With regard to the new building, the Panel noted that the option of a biomass boiler was recommended in the Stage C report. However, this has now been replaced by an ASHP which has a higher carbon footprint. While we understood the difficulties of establishing a reliable biomass fuel supply, we thought that if a woodchip boiler were to be used, this would appear to be an obvious opportunity for using thinnings from woodland management within the site. Space for the plant and fuel store should have informed the space planning from an early stage.

The Panel doubted whether the north east facing outdoor seating area would be well used. It was noted that daylight modelling has been used to reduce glare in the new building.

2.2.4. The proposed CHP for the main building has sufficient base load, according to available data. Rainwater harvesting from new (and recovered) roof areas will be used to feed water features and for WCs.

2.2.5. We urged the project team to maximise opportunities for synergy between the two building contracts, and between new and old elements of the main building. This would be a cost-effective way of installing low carbon measures, which could give a good return on investment over a relatively short term. We were informed that there was an existing plan to improve lighting efficiency across the whole estate and we thought this should be reviewed in the light of possible synergies.

2.2.6. The Environmental Impact Assessment has not indicated any '*show stoppers*' and the team are confident that they have sufficient time for any necessary mitigation.

## **2.3 Main Building**

2.3.1. The design team feel that they have achieved a clearer separation between old and new elements, with a review of the cranked form and a move away from an extruded profile towards a more elemental approach. The massing of the new elements has been shifted towards the north and dug into the ground more.

2.3.2. The Panel appreciated the changes that have been made in response to our comments, and we thought that the Conservation Management Plan should be used to better inform and justify the developing design. The articulation of how the new elements respond to and evolve from the existing building needs to be present in narrative and graphic form. The new elements should be as rigorously and beautifully detailed as the strong, elemental architecture of the original building.

2.3.3. If the walkway is to be included in the courtyard it should be given a lighter touch and the graphical representation should convey that impression.

2.3.4. The internal circulation strategy was discussed including the visibility and capacity of the lift, and how to restrict access to the ground floor exit to the west. The orientation space at the top of stairs/lift was acknowledged as critically important and was receiving due consideration.

2.3.5. The juxtaposition of three different ceiling levels within the one gallery space is awkward and uncomfortable, and a better resolution of the relationship between structure and internal space is required.

2.3.6. We welcomed the revealing of the colonnade on the south facade and would like to see it extended further to the west.

2.3.7. Any roof mounted plant should be minimised and well screened. We were told that 90% of the plant will be located at lower ground level.

2.3.8. We had concerns that the covered outdoor seating area facing north west would not be an attractive or comfortable place to sit. Although we understood the client requirement for a covered outdoor space, it needs to function and be well used, and this will depend to a large extent on the microclimate created. The possibility of a south facing seating area was discussed but the drawbacks of such an arrangement would be a less attractive aspect and a poorer visual relationship with the play area. In addition it was considered necessary for servicing access to be as close to the car park as possible.

2.3.9. We were informed that the '50/50' wayfinding options would be introduced to the visitors on internal walls, prior to exiting the building to the north.

## **2.4. New Building**

2.4.1. The client requirements for environmental controls have fundamentally affected elevational treatment and materials, with the effect of reducing transparency. The design team accept that the original 'floating roof' concept is no

longer relevant, but think that this has led to a more successful resolution of wall-to-roof junctions and a better relationship between structure and internal spaces.

2.4.2. The team have investigated possibilities for alternative construction methods and the use of local renewable materials. Apart from the issue of additional costs, the spans involved necessitate the use of glulam timber which is not available locally.

2.4.3. The option of direct access into the building from the events space has been considered, but the client has prioritised the outdoor classroom and its link with the wet activity space.

2.4.4. The relocation of the main entrance has improved its legibility and the simplified structure has enabled step-free access from the north.

2.4.5. The Panel questioned whether the final uses and environmental constraints are compatible with the form and concept as originally devised. The tension between an open/closed building needs to be more fully explored. If the justification for the current proposal is reflectivity rather than transparency, this should be followed through in the detailing and materials selection and justified in the Design & Access Statement. There is also a tension between the building plans, which show a clear separation of "servant" and "served" functions, and the elevations which present a single, pure geometric form. The design concept needs to be sufficiently robust to resolve issues such as this.

2.4.6. We questioned the attractiveness and usability of the outdoor seating area which would be in shade for most of the time. It is hoped to include large fold-away doors between café and seating area, if these can be made compatible with security requirements.

2.4.7. The visuals presented give the impression of a crisp, pure building with painted steelwork. The chosen materials and building aesthetic need to be sufficiently robust to withstand deterioration over time in damp, dark woodland conditions.

2.4.8. The extent of any tree removal should be made clear. Although the landscape team stated that there were no root protection issues, this should be evidenced by a full site section.

2.4.9. The desired flexibility of uses for the events space may be compromised by changes in level, retaining walls and lines of fixed seating. Although the landscape team is satisfied that sufficient flexibility is achieved, the limitations on uses for large events should be acknowledged and accepted by the client team. In addition some consideration of the amount of use needs to be made to ensure the grass areas will be sufficiently robust.



**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.**

***Mae copi iath Gymraeg o'r adroddiad hwn ar gael ar ofyn.  
A Welsh language copy of this report is available upon request.***

### **Atodiad 1/appendix 1 Mynychwyr/attendees**

Asiant/Client/Datblygwr Agent/Client/Developer	Amgweggfa Cymru (David Anderson, John Williams-Davies, Steve Howe)
Pensaer/Dylunydd Trefol Architectural/Urban Designer	Feilden Clegg Bradley Studios (Richard Collis, Jonathan Bassindale) Purcell Miller Tritton (Jamie Coath, Luke Brennan) TEP (Graeme Atherton)
Ymgynghorwyr/Consultants	Arup (Elaine Veaudour, Peter Thomas) Focus (Richard Aston) Nathaniel Litchfield Partnership (Kem Cosaner)
Trydydd Parti/Third Party	n/a
Awdurdod Cynllunio/Planning Authority	Cardiff Council (Gareth Harcombe, Sandy Williams)
Y Panel Adolygu Dylunio/ Design Review Panel Cadeirydd/Chair Swyddog/Officer Prif Banelydd/Lead Panellists	Wendy Richards Cindy Harris Andrew Linfoot Ashley Bateson Kieren Morgan Toby Adam
Observers	Carole-Anne Davies (DCfW)
Apologies	Judith Alfrey (Cadw)