

Addroddiad Adolygu Dylunio Design Review Report

DATGANIADAU O DDIDDORDEB

Mae gofyn i aelodau o'r panel, arsyllwyr a phartion perthnasol eraill ddatgan unrhyw ddi-ddordebau sydd ganddynt **ymlaen llaw** mewn perthynas â'r eitemau Panel Adolygu Dylunio Bydd unrhyw ddatganiadau o'r fath yn cael eu cofnodi yma ac yng nghofnodion canolog Comisiwn Dylunio Cymru.

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.

Statws adolygu/Review status

Cyfrinachol/Confidential

Dyddiad cyfarfod/meeting date	21st September 2011
Dyddiad cyhoeddi/issue date	28th September 2011
Lleoliad y cynllun/scheme location	Loughor Viaduct
Disgrifiad y cynllun/scheme description	Transport
Statws cynllunio/planning status	Cyn gwneud cais/ pre-application
Datganiadau o ddi-ddordeb/declaration of interests	None

Adran 1/part 1

Cyflwyniad/Presentation

This project is part of the wider Gowerton redoubling scheme, which will upgrade the main railway line between Swansea and Carmarthen (and beyond) and deliver the environmental benefits of improved public transport. The proposal for a new bridge viaduct over the River Loughor involves the substantial demolition of the existing bridge, which is a Grade II listed structure, and its replacement with a new structure designed to be major maintenance-free for 50 years, with a design life of 120 years.

A major constraint on the project team is to minimise closure of the existing rail service and this will be limited to a 200 hour closure period in January 2013. Other constraints relate to the environmental sensitivity of the Burry Inlet which is a Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI), and RAMSAR site (Wetlands of International Importance).

The proposed structural cross section of the viaduct consists of twin piles, 1.5m in diameter, and a wide structural 'crosshead' beam, which is necessary to accommodate the construction method and sequence. The piles will be clad with sustainably sourced hardwood fenders. Where possible timber from the existing viaduct will be reused. Three of the existing timber piers are to be retained at the ends of the bridge where they will not impact on river flow. Another three trestles (2 spans) will be re-erected on Network Rail's own land on the Llanelli side of the estuary, to include an interpretation board for visitors reflecting the heritage of the structure.

The project team stated that they had found the Design Review for Pont Briwet very useful and this had influenced their decision to consult DCfW.

Crynodeb o'r prif bwyntiau a gododd o'r drafodaeth, i'w darllen ochr yn ochr ag Adran 2 yr adroddiad hwn.

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

The Panel welcomed the opportunity to comment on this interesting project, which has to be delivered on a constrained site. The quality of the presentation and pre-review material was appreciated. The wider scheme to enhance public transport provision is commendable. However, we think that major design issues remain to be resolved. In summary:

- The current proposal has been driven almost entirely by site and construction constraints.
- An experienced bridge architect, brought in at an early stage, could have worked with these constraints and enabled the development of a more subtle engineering solution.
- The architectural input which has been engaged should be retained as long as possible to help refine the design within the acknowledged constraints.
- The current proposal shows a lack of coherence between the upper and lower sections, and the substructure (crossheads) appear crude and oversized.
- The proposed demolition of a listed structure, with some remote links to Brunel, requires a more sensitive design response.
- The story of the heritage and environmental importance of the site needs to be told in the Design & Access Statement, along with a narrative explaining the design development as a response to the context.
- This should relate to the Landscape and Visual Impact Assessment which will form part of the planning application.
- We welcomed the proposals for the reuse of the timber and trestles, both on and off-site. However we thought that retaining some of the trestles in situ would compromise the contemporary design of the new bridge.
- If a section of the old bridge is to be re-erected, it is important that this is made publicly accessible and is well interpreted.

The Panel accepted the strong case for improving public transport provision between the main cities and west coast of Wales. This is a challenging site with a high level of environmental sensitivity and we understood the constraints imposed on the project team, in terms of environmental protection and maintaining a public mainline railway service with minimal interruption.

Nevertheless we thought that the design had been driven primarily by issues of buildability and cost effectiveness. While these are important considerations, the visual impact and design quality of the structure over its 120 year lifespan should carry significant weight, alongside more short-term issues of convenience and lack of disruption for the public.

While the proposal is well engineered and meets all the technical and environmental requirements, there is no evidence that the proposal has been driven by architectural or design input from an early stage. Instead it appears that an 'architectural enhancement' exercise was carried out once the structural form had been agreed. The result is an awkward relationship between the crudely proportioned concrete substructure 'crossheads', and the more elegant, well modelled superstructure of deck and rails. This needs resolving into a more integrated and balanced structure overall, which does justice to the listed bridge it will be replacing. The real issue is the form of the structure as a whole and getting that right, rather than chamfering the corners of the crossheads, or other minor modifications to a functionally determined plan.

The Panel stated the importance of telling the story of the design development, beginning with the constraints and then the exploration of different design options which should be detailed in the Design and Access Statement for the project. The Panel was told that other design options had been explored, such as a single central pile, but this was not feasible for a twin track railway carrying freight as well as passengers

The Panel requested clarification on the origin of the existing structure and the possible connection with Brunel. We were told that Brunel was responsible for a bridge in this location, but that it was completely rebuilt in 1908, and the only direct connection with him that remains are some old timber piles in the river bed.

We questioned whether the existing structure could be strengthened to meet current requirements, and suggested that there may be a better structural solution than a single horizontal beam for bracing the existing trestles, but we were told that this would not be viable in the long term. It was confirmed that the retained trestles would not be loadbearing.

The Panel was not convinced by the argument in favour of retaining some of the existing trestles, especially if it has been established that there is no connection with Brunel. We would prefer to see maximum reclamation and reuse of the timber – for example for the buffers on the piers as the team had suggested. The nearby Gwili railway has expressed an interest in taking part of the structure and Network Rail has offered them engineering and planning assistance as a goodwill gesture.

The Panel thought that the reconstructed bridge section on the river bank might appear incongruous and would need to be made visible and accessible to the public, and be well interpreted.

The Panel suggested that the piers could be aligned to match those of the existing road bridge, but we were informed that this would mean increasing the span, and therefore the depth of the girders.

Mae Panel Adolygu Dylunio Comisiwn Dylunio Cymru a'r staff yn croesawu rhagor o ymgynghoriad, a bydd yn hapus i ddarparu rhagor o adborth am yr adroddiad yma a/neu lle bo'n briodol, dderbyn cyflwyniadau pellach. Diolch am ymgynghori â'r Comisiwn a chadwch mewn cysylltiad â ni os gwelwch yn dda ynglŷn â hynt eich prosiect. A fyddech gystal â'n hysbysu o ddatblygiad eich prosiect. Diolch yn fawr am ymgynghori â'r Comisiwn.

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	Network Rail (Colin Field, Rosie Majer, Dan Tipper, Neil Margetson)
Pensaer/Dylunydd Trefol Architectural/Urban Designer	
Ymgynghorwyr/Consultants	Hyder Consulting (Tim Carter)
Trydydd Parti/Third Party	n/a
Awdurdod Cynllunio/Planning Authority	Carmarthenshire CC

Y Panel Adolygu Dylunio/
Design Review Panel
Cadeirydd/Chair
Swydog/Officer
Prif Banelydd/Lead Panellist

Wendy Richards
Cindy Harris
Ashley Bateson
Michael Griffiths
Chris Jones

Sylwedyddion/Observers

Richard Wood (Newport CC)
Laura Costa (Newport CC)