

Addroddiad Adolygu Dylunio Design Review Report

Review Status: **Confidential**

Meeting date:	24th March 2010
Issue Date:	6th April 2010
Scheme Location:	A477. St Clears to Red Roses
Scheme Description:	Highways
Planning Status:	Pre Draft Orders

Part1: Presentation

This proposal for an 8.7km long new road is contained in the National Transport Plan. There is a single carriageway in each direction with overtaking sections included, and the road is 7.3m wide overall with a 2.5m verge width. The design has been driven by a number of factors, including landscape, flooding and drainage, biodiversity, severance, and climate change. Landscaping has been used to minimise visual impacts and integrate earth works. This is an Early Contractor Involvement [ECI] project, working with the contractor and consultants to develop the design from an early stage.

The team requested DCFW's view on four main areas in particular:

- The impact of the deep cut into the steep escarpment south of the Afon Taf flood plain.
- The high embankment in the same area.
- The proposed structure of the new Afon Hydfron bridge
- The realigned Tavernspite road north of Llanddowror.

The Local Planning Authority's Conservation Section had submitted notes on the outcome of their own review of this scheme. At this stage they wish to establish the design principles, pending more detailed discussions as the scheme develops. They will be particularly concerned with the visual impacts of the new structures, and the implications of de-trunking the existing road.

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

The Panel welcomed the opportunity to review this proposal and complimented the team on the appropriate timing of the review. We understand that there is still a lot of work to be done on landscape and other aspects, but we think this is a good design approach, with the potential to be very good. We do, however, have major concerns about the proposed bridge designs within the deep, steep sided cutting. In summary:

- The 'family of structures' approach is not appropriate for bridges in very different types of terrain. However, a family of high quality recognisable details would be appropriate and would serve to tie the scheme together.
- The Tavernspite Road and Vaynor Farm bridges require a different approach from those in the river valleys, while still retaining a simple and elegant form.
- We understand the reasons for moving to a single span form for the Afon Hydfron bridge, but we think the concrete structure should be cleanly and simply expressed, and the landform swept back to expose the abutments.
- The junction between the escarpment and the flood plain is a critical part of the scheme in terms of integration with the landscape. We would like to see the high embankment softened at this point with shallower gradients, returning the land to agriculture wherever possible. This will require visual testing from locations agreed with the Local Planning Authority.
- We welcomed the proposals for enhancing the existing road and protecting it for non motorised uses.
- We endorsed the team's approach to sustainable drainage and materials, along with the use of the CEEQUAL assessment procedure.

Part 2: Discussion and Panel Response in Full

The Panel accepted the need for road improvement and upgrade in this location, and understood that the choice of route was based on landowner consultation and extensive exploration of the alternatives.

We have a major concern with the proposed 'family of structures' for the new bridges, which implies a similar design approach for all four overbridges. We have no objection to the typical 3 span overbridge shown for the B4314 bridge and think that this design approach is appropriate where the road is in a shallow, open cut.

However, the bridges in a deep road cut, such as the Tavernspite and Vaynor Farm bridges, require a different form and structure to avoid obtrusive tall pillars. Currently they do not sit comfortably within their setting and these bridges are a major concern. The team stated that they had considered an asymmetric structure and an arched structure, but were trying to use a simple form which echoed the straight lines of the landform and rock strata. The Panel agreed that the structural form should be simple and elegant, but also balanced and integrated with the geometric form of the cut. We were not advocating a landmark structure and we noted that a different structural solution need not incur more capital expenditure overall. The nearby bridge at Kilgetty was cited as a good example of sympathetic design in the landscape. The Tavernspite Road and Vaynor Farm bridges are critical visual features and the Panel would like to see alternative, more appropriate forms for these two bridges.

The Panel suggested that the Tavernspite road should be realigned closer to the crest of the hill so that the bridge would appear nearer the top of the cut, but we were informed that this option would require a second cutting. The team are trying to minimise the 'notch effect' of the deep cut by tree planting on the top of the crest. The horizontal curvature of the road in the deep cut serves to minimise the visual impact of the new landform. The views of the embankment to the east of the bridge will be critical. We noted the proposals for planting here, but wondered whether the slopes could be returned to pastureland by using shallow gradients.

We had no objection to the three span structure initially proposed for the Afon Hydfron bridge and thought the design approach was appropriate, with the horizontal form reflecting the topography of the valley. However, the Panel was informed that the three span design has now been replaced with a single span structure, due to flooding concerns. Although the three span bridge presented would give a more open aspect to the riparian environment and would be preferred, we accepted the justification for the single span option, provided that the simplicity and elegance of the original form and its sympathetic relationship with the landscape can be retained. The single span would cover 40 metres in the form of a concrete portal structure with earth retaining masonry on the abutments. We thought that the concrete structure should be expressed simply, without the need for extra masonry cladding [and this might generate some capital savings]. We would prefer to see softer graded slopes on either side of the bridge, exposing the abutments. The quality of detailing and deck edges should be consistent and refined throughout the project and this provides an opportunity for a "family" link at a smaller scale.

It was confirmed that the existing road will be de-trunked and enhanced as part of this scheme, to provide a safe route for pedestrians, equestrians and cyclists. Pinch points will be used to deter 'rat runs' and safety barriers installed where necessary. The listed Pont Newydd bridge will benefit from strengthening work within the existing schedule of maintenance.

The wider network of footpaths will be assessed as part of the Environmental Impact Assessment, and the environmental masterplan will include photo-realistic montages to illustrate significant views from viewpoints and local landmarks such as Castell Motte. Although this is not a prominent feature in the landscape, it does offer wide views and the team confirmed that Cadw had been consulted about its proximity to the new road. The Panel was very pleased to learn that there are no plans to install additional street lighting along the new or existing roads.

The Panel was informed that the integration of the scheme into the landscape would include reversion to agricultural use wherever possible and the use of traditional boundaries such as relocated hedges and local stone walls. It will be important that these principles are realised in the detailed scheme.

Attenuation ponds will be used as part of a sustainable drainage strategy and integrated with the landscape design. Habitat protection and enhancement will be an important feature of the ongoing management of these areas. It was confirmed that the cut and fill operations would be roughly balanced although there may be a need to import small quantities of stone. The site waste management plan provides for recycling waste on site wherever possible and prioritises the use of reused and recycled materials. This approach has been facilitated through the ECI process and the CEEQUAL assessment.

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	Welsh Assembly Government [Martin Bates]
Pensaer/Architect:	Gifford [Mike Jones, Roy Emberton, Rob Griffiths]
Consultants:	SRB [John Duggan] Axis [Phil Roden]
Awdurdod Cynllunio/ Planning Authority	Carmarthenshire CC [Steve Welchman, Rosie Carmichael, Brian Jenkins]
Y Panel Adlygu Dylunio: Design review panel: Ewan Jones [Chair] Cindy Harris [Officer] Steve Smith	Ben Sibert Howard Wainwright Simon Carne
Lead Panellist:	Ben Sibert