

Addroddiad Adolygu Dylunio Design Review Report

Review Status: **Confidential**

Meeting date:	17th November 2010
Issue Date:	1st December 2010
Scheme Location:	A465 Heads of Valleys
Scheme Description:	New road
Planning Status:	Pre-Draft Orders

Part1: Presentation

This scheme is part of the upgrading of the A465 Heads of the Valleys road, and specifically relates to section 3 between the Nant-y-Bwch roundabout at Tredegar through to Brynmawr. The road will remain on-line between Nant-y-Bwch and the Dukestown cemetery, then go off-line for 4.7km to reach the Garn Lydan valley and back on-line to Brynmawr, covering 7.2km altogether. Early Contractor Involvement has been used to address the problems of construction on the high, exposed site, and to minimize its impact on nearby residential areas. The aim is to publish Draft Orders by September 2011.

The proposed underpass at Nant y Bwch will have clean simple lines and integral stone-clad abutments. Two houses will need to be demolished, and community severance has been addressed by 'toucan' pedestrian crossings. At Dukestown cemetery, care will be taken to avoid disturbance to graves. The Rassau West split junction is complicated and increases the number of roundabouts from two to four. However, the proposed layout is one that best satisfies the design objectives.

The team justified the use of an embankment rather than a viaduct at the Carno reservoir, as being a better response to sustainability objectives, including use of excess fill on site and improved buildability and maintenance. The grade-separated junction at Garn Lydan allows access to Ebbw Vale from the east and its alignment avoids the need for pumped drainage.

The landscape design is underpinned by the HOV landscape strategy document prepared by White Young Green which came to Design Review in June 2007. Landscaping will reflect the differing landforms - open moorland, enclosed valleys and industrial workings. Specific attention will be given to the Brecon Beacons National Park to the North and the Valleys Regional Park to the south.

The Local Authority regeneration officer confirmed that all issues they have raised so far have been addressed by the project team. They highlighted the Carno valley area as important and would like to see long distance views of the scheme illustrated. They are content with the choice of materials, although they identified some colour discrepancies in the graphics produced.

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

The Panel understands that this is work in progress and we are pleased to have seen this scheme at an early stage. We have been reassured on many of the key points and we think that the scheme is moving in the right direction. However, this is some way from being the exemplar scheme which we advocated in 2007 and we think that major issues remain to be resolved. In summary:

- The relationship between the environmental masterplan and the design solutions and details is still unresolved. The emphasis on design quality and minimising environmental impact has not transferred through to the designs shown in the presentation material.
- Although we understand that alternative arrangements have been looked at, we remain concerned about the layout at the Rassau West junction, the deep cuttings, and the number of roundabouts in close proximity to one another.
- We accept the rationale for the embankment at Carno reservoir, especially given the proximity of the dam and the restricted views from the north. However, its detailed design remains monolithic and needs further landscaping, to mitigate the appearance of such a prominent new concrete-clad land form.
- At Garn Lydan there should be a sense of arrival at reaching the summit, which will encourage people to stop at the viewing point.
- Further refining of the bridge designs and disposition of the secondary elements should be undertaken to achieve a more elegant appearance, particularly at the high point of the route, and a well-mannered family of structures.
- We welcomed the early contractor involvement and their advice on minimising the impact of construction.

Part 2: Discussion and Panel Response in Full

The Panel welcomed the laudable aims and objectives of the environmental design, as described in the documentation, but we were not convinced that these had been sufficiently well translated into the proposed overall scheme design. We accepted that the design development was still ongoing, but thought that there should be a better integration of strategy and actual proposals from an early stage. The project team stated that the environmental masterplan was not yet complete, but in the next three months those assessments will be made and mitigation measures incorporated. The Panel thought that this might be too late, if strategic design decisions needed to be made in the near future, which might mean that the environmental design and mitigation would have a limited effect on the design quality. As recommended in the Design Review report of June 2007,

this should be an exemplar scheme and the design objectives should be reinforced by an appropriate procurement strategy and monitoring.

The layout at the Rassau West junction is very complex, with four roundabouts in close proximity. While we appreciated that efforts have been made to retain the historic field patterns in this area, the effect of this will be negligible in comparison to the impact of the new road layout. The Panel questioned why the existing road could not be used as a west-bound slipway; we were informed that it would be too close to the Nant y Bwch junction, as minimum distances have to be maintained between junctions. The team stated that they had looked at 10 to 12 variations of the junction layout and, given the gradients involved, this was the best solution and had been driven by considerations of landscape impact and land take. The Panel advised the team to consider what additional compensatory measures around the existing highway network could be introduced to mitigate such a major intervention.

With regard to the proposed embankment at the Carno reservoir, the Panel understood the reasons put forward to justify this approach, although we think that an elegant bridge would be a better design solution. The team pointed out that the embankment solution would avoid diverting a 110kV electricity pylon and avoid the spillway from the dam, and that even if the bridge solution had been chosen, the existing dam and pipework would still be visible in the background. They agreed that the embankment will not be a landscape feature, and will have a barrier running along the top, but re-stated that the decision had been driven by sustainability considerations. Furthermore, the bulk of the embankment walls will be to the north, which would not normally be seen, and the south walls would be terraced and planted.

The Panel thought that the intervention at Garn Lydan could be dramatic, provided that a sensitive approach is taken to grading, planting/seeding, lighting and signage. We welcomed the provision of a stop off / orientation point, and the opportunity for increased leisure use of the Blaen y Cwm reservoir. The Panel suggested that the team ensure that sufficient land take is made to allow for appropriate grading which avoided an even, engineered slope. A better design of the Garn Lydan bridge would be achieved if the abutments were skewed so that they were parallel with the main roadline.

In terms of the bridge designs, the Panel thought that there was an important relationship between copings, vehicle restraint systems, lighting columns and other road furniture. The composition of these should be carefully considered to avoid clashes and ensure a seamless continuity between forms. The simplification of detailing at bridge abutments, such as the omission of handrails where access is not required for maintenance access to bearings, will benefit the overall clarity of the structures. The detailing of the weathering steel elements will be important, and on the overbridges we recommended that the outer beams should be J form, to achieve a uniform degree of exposure and weathering.

The choice between steel and concrete for the bridge structures has been dictated by the spans involved, maintenance costs and construction efficiency, rather than by design continuity and this will not be apparent to the passing motorist. The introduction of an unattractive concrete overbridge at Llangynidr breaks the rhythm of weathering steel structures and is an unfortunate departure from the emerging family of structures. Details of the lighting design need to be developed further and the position of lighting columns fixed. More middle distance views towards the scheme should be provided from important

vantage points, to allow a more holistic assessment of the driving experience and the visual impact of the scheme.

The finished appearance should minimise evidence of the construction process. Where rock cuttings are made the finished effect should be one of naturally occurring forms, expressing natural fissures where possible and avoiding rock pins and 'half barrels' caused by splitting. There is a need for a much more detailed presentation of materials and finishes along the length of the scheme to ensure continuity and harmony in material, detail and form between the various bridge structures, retaining walls and other man-made structures as well as the general edge condition.

The existing road will be de-trunked and will become the responsibility of the Local Authority. It will be important to improve pedestrian and cycling access to Ebbw Vale with easier gradients, and we understood that links will be made with the Sustrans route 46. We thought that there was scope for some small scale land forms in the 1:2.5 slopes.

A carbon footprint exercise has been carried out for the Carno embankment, and the team is about to widen the exercise to include other parts of the scheme. While not a 'whole life' assessment, it will be as broad as possible and the team will consider how to weight different environmental impacts. The Panel recommended that the team consider the feasibility of installing renewable district heating links between residential and commercial uses in the area.

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 [Andy Falley, Matthew Enoch, Andy Phillips]
Pensaer/Architect:	Arup [Ben Sibert, Dan Saville]
Consultants:	Carillion Construction [Mike Cummine] TACP [Jo Wall]
Awdurdod Cynllunio/ Planning Authority	Blaenau Gwent CBC [Chris Engel]
Y Panel Adlygu Dylunio: Design Review Panel: John Punter [Chair]	Michael Griffiths Martin Knight

Cindy Harris [Officer]
Andrew Linfoot

Ed Colgan
Simon Hartley

Lead Panellist:

Andrew Linfoot

Sylwedyddion/Observers:

n/a

Declaration of interest: Martin Knight of Knight Architects declared that he had been invited to submit details in connection with the bridge over the River Ebbw, at pre-qualification stage. He has had no further involvement with the project