



DESIGN  
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CYMRU

# Design Review Report

DCFW Reference: 27

A483/A489 Newtown Bypass,

Powys

23<sup>rd</sup> October 2014



## Declarations of Interest

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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

### CONFIDENTIAL

Meeting date	23 <sup>rd</sup> October 2014
Issue date	14 <sup>th</sup> November 2014
Scheme location	Newtown
Scheme description	New bypass road
Scheme reference number	27
Planning status	N/A

## Declarations of Interest

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Ben Sibert declared the following interests in advance:

The Welsh Government is Arup's client on several current schemes and future bids, including one scheme that Peris Jones is leading.

Arup also bid for the Newtown Bypass with another team and were not appointed. Ben Sibert had no meaningful involvement in the bid.

TACP is sub-consultant to Arup on the A465 dualling and regularly works with Arup.

Alun Griffiths is currently Arup's client on the Circuit of Wales with their JV partner FCC. Arup and Alun Griffiths are aligned together to bid for future Welsh Government Schemes.

Peris Jones confirmed that he was content with the declarations and attendees at the meeting confirmed that they were content to proceed.

Ewan Jones is working with Atkins on a different scheme.

## Consultations to Date

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A public exhibition for the proposed scheme was held in July 2013. Further public exhibitions are planned. The scheme was presented to DCFW in January 2014 and March 2014 and this report should be read alongside the reports from these reviews.

## The Proposals

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The scheme is for a 5.6km long bypass road around Newtown through predominantly agricultural land, with a build budget of approximately £50m. The new road will include eleven structures, including bridges, and culverts. Among the aims of the project is the

desire to relieve significant traffic congestion in the town, making it a safer place to walk and cycle. The team plans to publish Draft Orders in November 2014, a Public Local Inquiry is likely to follow in winter 2015, and construction begin in summer 2016 subject to successful completion of the Statutory Orders process. De-trunking of the old route through Newtown will follow and the Welsh Government clarified that the principal works to the de-trunked road would be undertaken by the local authority in a separate scheme.

## Main Points

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The following points summarise key issues from the review which should be considered as design work progresses and before Draft Orders are submitted.

### **Progress**

The team has made good progress since the previous review in March 2014. The Design Commission was pleased to see the team's responses to comments made in the March review which have improved the scheme. In particular, the vertical lowering of road where it passes close to two farms is an improvement.

### **Dolfor Valley Bridge**

The design of the bridge structure over the Dolfor valley is much improved since the March review, and is likely to have a better relationship to the landscape.

The relationship of this bridge to the abutments of the adjacent over-bridge would benefit from further consideration. It is understood that assessment of risk is an important factor in relation to potential for climbing on the underside of the over bridge structure. Part of that assessment will also involve likelihood. Taking this into account, sloping flanges on the outside edges of the beams could be explored as one solution which may help address the risk and avoid compromising the overall form of the bridge.

Based on the illustration shown in the review meeting, it appears that the width of the span could be greater, affording a better relationship between the abutments and the steeply sloping sides of the valley.

At the detail design stage, the composition of angles and curves in the structure of the bridge will need careful consideration to provide a consistent design 'language' through all components. It will be useful for the team to model and test different solutions.

### **Detail Design of Structures**

The quality of the scheme delivered will depend greatly on the quality of detail design, and it is important that the team's aspirations for quality are carried through the detail design stages.

The visual impact of the noise barriers at Mochdre is an important consideration. How these relate in height to parapets and safety barriers should be carefully designed in detail. Different materials might also be modelled and tested to find the best solution in relation to the context and the rest of the bridge structure. The durability and visual impact of materials will be important considerations. The proposed use of Perspex on the parapets at the Mochdre bridge should be reconsidered given the likely deterioration of the material over time.

The detail design of the wing walls and parapets of the bridge structures will be crucial. It will be important to consider the treatment of materials at junctions, corners and edges, as well as the application of stone cladding.

The Design Commission recognises that these are issues which might not be usual for bridge engineers to consider. They are key elements in the quality of the structures, however, and as per our previous report, the team should consider appointing a structures architect to help coordinate and secure the detailed design quality.

### **Landscape Design**

The Commission supports the design approach to the landscape at the entrance to the town, where formalised tree-planting is proposed rather than a contrived 'gateway' feature. The team should focus on achieving excellent quality in the bridge structure which crosses the approach to the town.

The team is exploring the grading of banks into the surrounding fields. This is particularly important where the road passes through farmland. The aim to maximise the amount of usable farmland is supported. We would like to be assured that the Highways standards have been fully explored and tested to ensure best value and minimum negative impact on the landscape.

The design approach to attenuation ponds needs to be considered in more detail. The nature of cuttings and embankments at the edge of the ponds and their relationship to surrounding topography are important. The Commission would like to hear more about how the attenuation ponds will be treated in terms of environmental mitigation and biodiversity improvement.

The team explained that there was an obligation to have a five-year maintenance programme in place for the new trees, but we would urge them to consider the longer-term maintenance of the landscape, given the scale of the project.

### **Brimmon Valley**

Following comments at the previous review, the design team had modified the embankment crossing this delightful natural landscape by lowering the embankment by 2m, adding false cuttings and noise attenuation bunds. The Commission was presented with visualisations at the opening year and at the 'design' year.

The Commission explored with the design team the modifications and whether there was scope to further reduce the impact. Having understood all of the constraints, the Commission accepted that the design team had mitigated the impact as far as possible and the presented design was probably appropriate given the constraints.

### **De-Trunking**

It is understood that the Newtown Town Council and Powys Council are now in discussion regarding the de-trunking, and that there is funding built into this scheme for the works.

Whilst acknowledging that this is outside the scope of the presenting team, the Design Commission considers the works to the existing road as important as building the new

road, and would like to see what de-trunking works the Welsh Government will be proposing.

### **Future Engagement**

The Commission credited the commitment of the team to consultation with DCFW throughout the evolution of this scheme. It has been beneficial to successively review this scheme as designs have progressed. The Design Commission recognises that the detail design and specification stage will be particularly important, and recommends reviewing the scheme again at this stage, perhaps in the latter part of Key Stage 4.

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

## Attendees

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Agent/Client/Developer:	Peris Jones, Welsh Government
Designers/Contractors:	Alex Thomas, Atkins Peter McComiskey, TACP Richard Bruten, Alun Griffiths Contractors David Rowlands, Alun Griffiths Contractors
Planning Authority:	
Design Review Panel:	
Chair	Ewan Jones
Lead Panellist	Ben Sibert Andrew Linfoot Alan Francis Simon Power Amanda Spence, Design Advisor, DCFW Carole-Anne Davies, Chief Executive, DCFW