

PONT BRIWET

Background

Pont Briwet spans the Afon Dwyryd between Penrhyndeudraeth and Llandecwyn in the Meirionnydd area of Gwynedd.

In transportation terms the 1860's, grade II listed, timber bridge provided an inadequate link for modern transport. The rail crossing which carried the important Cambrian Coast line had a speed limit of 20mph on the bridge and approaches. The one lane toll road had a speed limit of 20mph and was controlled by traffic lights, which caused significant congestion at busy times. The 2 tonne imposed weight limit, as well as the narrow width of the road, restricted the level of road traffic permitted to use the bridge and there was no safe provision for pedestrians or cyclists.

The problems of the current arrangements and the need to improve matters had been recognised for many years. In 2001 Network Rail's predecessor, Railtrack, attended a public meeting to discuss the various options. Further feasibility studies were carried out by Network Rail and Gwynedd Council in 2002 and 2006.

By 2007 Network Rail had identified that over £5m remedial works were required in the short term with a continuing need for that level of maintenance on a regular basis in the future. This would obviously require a huge commitment from Network Rail in the future but also had implications on repetitive intrusive disturbance to the estuary bed. It was considered that the failure to redevelop Pont Briwet would lead to a real threat to the future of both the bridge and the entire Cambrian Coast railway.

Workshops in 2008 culminated in a commitment to replace the bridge and seek out funding. A formal business plan was submitted to WEFO and approved in July 2010. The £20.5m total budget for the project is funded by the European Regional Development Fund, administered by the Welsh Government, as well as TraCC (the Mid Wales Transport Consortium), Network Rail and Gwynedd Council.

Originally it had been intended that Network Rail would take the lead on this project, however in order to ensure that all the stringent funding criteria could be met, it was decided that Gwynedd Council would take the lead with Network Rail providing a technical, approving role. In order to ensure that no expertise was lost, a close and successful working relationship has been established between Gwynedd Council and Network Rail.

The new bridge

Many considerations had to be taken into account in the design of the new bridge, including the restriction of the existing railway line on its location, but in particular the sensitive nature of the surrounding Special Area of Conservation (European Designation) and Site of Special Scientific Interest. The Design Commission for Wales reviewed the preliminary designs and slight changes were made in the summer of 2011 to incorporate their views.

The new bridge will provide a modern, safe and sustainable structure including a railway, a two-lane public highway, a cycle/footpath, an improved railway halt at Llandecwyn as well as improvements to the narrow approach roads. Benefits of the new bridge will be:

- Free transport links as toll charges will be no longer apply
- Less road congestion with a two way carriageway

- Better transport links for heavier vehicles, i.e. ambulances, coaches or lorries, which now detour 8 miles through the village of Maentwrog
- More alternative transport options for the community and tourists with a new cycle path and footpath that link with the National Coastal Path and Welsh National Cycle Route 8
- A better performing railway as the renewed track will provide an increased linespeed of 40mph
- A more reliable and robust transport link on a new structure that will be less prone to flooding with a 120 year design life

Planning and Consents

The original plan had been to close the road bridge in order to carry out the project but following concerns expressed during the public consultations in 2010, designs were amended to incorporate a temporary road bridge and causeway adjacent to the existing bridge.

Planning for the new bridge and the demolition of the old listed bridge was submitted in June 2011. The planning decision was initially called in by Welsh Government but this decision was then reversed. This delayed the process and the planning approval and conditions were not received until July 2012.

As small areas of land needed to be purchased in order to carry out the scheme, including the private toll road across the bridge, the Compulsory Purchase Order processes were started in September 2011 (one in connection with the railway and one in connection with the highway). Although all objections were withdrawn to the Compulsory Purchase Orders by May 2012, confirmation of the orders were not received until February 2013.

The sensitive location of the new bridge has meant that the environmental agencies as well as Snowdonia National Park have been involved with the planning of the scheme since the beginning. The contractors are responsible for ensuring that all their construction methods are approved by these agencies and the appropriate consents obtained.

Procurement of main contractors

The procurement of the main contractors started in January 2012 with the intention they would be appointed by Autumn 2012. However, because Gwynedd Council were unable to take the risk of appointing the main contractors until the planning and land purchase confirmation was received it was not until February 2013 that the appointment of the main contractors could be made.

Five contractors, who all had to have Network Rail's Principal Contractors' Licence, had been invited to tender. Three of those contractors included a temporary road bridge and causeway. Two others, including Hochtief, provided an alternative construction package. This included retaining the old bridge until the new railway bridge was completed and then putting a temporary road deck alongside this. This was considered to be an affordable, acceptable solution which would enable the local communities to continue to cross the river during the project. It should be noted that the bids containing the Bailey Bridge option were some £3m/£7m more expensive than the more innovative bids and were therefore considerably over the allocated budget.

Even with the provision that the road would be kept open as much as possible, it was inevitable and unavoidable that the road bridge would have to be closed at various times during the construction work, and this message was circulated to the general public. However, when the road was closed in order to divert the existing Scottish Power cable from the estuary before the construction work could start, it became clear that some members of the public considered any disruption to the roadbridge was unacceptable.

Work on site

The first major problem experienced by the project was in October 2013 when National Grid identified a problem with the adjacent electrical pylon. The road and rail bridge had to be closed for safety reasons. This meant that piling for the new rail bridge was delayed whilst National Grid carried out emergency works on erecting a new pylon. Once again, there were many complaints received from the general public, who were also under the misconception that the damage to the pylon had been caused by the project. This was not the case, as the need to carry out remedial work on the pylon had been known for many years.

In November 2013 it was necessary to close the existing railway line following settlement of the old bridge, due to construction of the new bridge. Replacement buses were provided and, with agreement from Network Rail, Gwynedd Council attempted to keep the road bridge open. By January 2014, deterioration in the surfacing and structure, together with the lack of bridge safety parapets, meant it was no longer safe for vehicles to cross over and the decision had to be made to close the bridge to road vehicles.

The condition of the bridge had of course always meant that there was a risk that it would deteriorate further and would no longer be fit for purpose, and the settlement accelerated the deterioration of the wooden structure.

With the closure of the road however all traffic was now being diverted onto the alternative A496 route through Maentwrog. Severe weather at the beginning of the year (which delayed progress on the scheme) had also badly damaged other parts of the Cambrian Coast railway and the sea defence walls. As well as the heavy vehicles which habitually used this road, there were now additional lorries travelling to carry out repair works further down the coast. Many concerns were raised by the local county and community councillors about safety on this narrow road and queues building up when lorries were unable to pass each other. Because of the nature of the road, physical solutions were limited. It was suggested by local community councillors that a traffic convoy system be installed along the narrowest 1.4 mile stretch of this road.

However as these traffic management costs were outside the original budget for the scheme, the only way to provide them without incurring additional costs was to look for savings elsewhere. There is no scope to omit aspects of the permanent works which meant the only saving which could be achieved was to take out the temporary road bridge. This meant that safer driving conditions on the A496 could be provided, cost neutral to the overall project budget. At that time the Contractors had also indicated that omitting the temporary road decking would enable the permanent road bridge to be completed earlier than planned in December 2014.

Since the convoy system was implemented on the Maentwrog road, comments have been received from the general public that they feel safer and there is more confidence in the time required for the journey. There have been some instances where the traffic management company had not kept to the times agreed, i.e. 6.30 a.m. until 6.30 p.m. and there have also been reports of vehicles driving through red lights. Hochtief have instructed the traffic management company to keep daily diaries, a barrier is placed across to try and ensure people do not jump the lights and any incidents are to be reported to the police. A process is also in place where the emergency services can phone the traffic management company to give advance warning that emergency vehicles are approaching to ensure that any delay is minimised.

The rail bridge re-opened on 1st of September 2014. Following that, services from the old bridge were scheduled to be transferred to the new rail bridge before the demolition of the old bridge could take place. Until the old bridge is demolished, piling work for the new bridge cannot be started.

Whilst discussions with the Statutory Services have been taking place since the beginning of the contract, problems have been encountered with both Welsh Water and BT about the programming of the transfer and the amount of time they are taking. At the beginning of October, the contractors provided an updated programme which showed that the critical date for the demolition of the old bridge had been affected by this work and that it was now envisaged that the road bridge would not be complete until June 2015, four months later than the original contract period of February 2015. Gwynedd Council, both at political and officer level, have been assisting the contractors in putting pressure on the Statutory Services to realise the effect of delays on their part.

Following the transfer of the water main and BT cables, demolition of the old bridge was completed at the end of November.

Work is on-going on the installation of the coffer dams in the channel. These temporary structures provide an enclosure which allows the necessary excavation below the river bed level for the installation of the roadbridge columns and piers. It is anticipated that the coffer dams will be completed by the middle of February.

Public response

The information that the completion of the bridge had been delayed was circulated to the general public, who were clearly extremely disappointed that the date had been put back. Many opinions have been expressed, including requests for the temporary road decking to be reinstated or a temporary bridge to be provided.

The temporary road decking would have been located on a section of both the rail and road deck, with part of the permanent construction being installed at a later date. When the decision was made to omit this, the contractors changed their design and the programming of the permanent works, which means that it is not now physically practicable to install a temporary deck. The contractors' response to the installation of a temporary bailey bridge at this stage notes amongst other problematic aspects that the period for obtaining the required consents would be extensive, there would be an impact on the completion date of the permanent bridge whilst the necessary temporary works would be carried out, and that it would be an extremely expensive operation which would require significant additional funding.

Every effort therefore is being utilised to work with the contractors to ensure completion as soon as possible.

Liquidated Damages

Questions have also been received from the public about possible penalties that the contractors might incur from the delay. As with most Civil Engineering Contracts, the Pont Briwet contract includes a provision for 'Liquidated Damages' (LDs). All Civil Engineering Contracts have a defined 'Contract Period', the time during which the Contractor should complete the work on the Employers behalf. Should the Contract over-run the 'Contract Period' then the Employer may impose LDs for the time period between the end of the Contract Period and the actual completion of the project.

LDs however are not a penalty for not completing the project on time; they are instead a means by which the Employer, i.e. Gwynedd Council, can recover any costs directly incurred during the over-running of the project. On a project such as Pont Briwet, which will not generate revenue on

completion, these costs (which need to be quantified) usually relate to the increased supervision and administration of the contract.

Improvements to Roads and Junctions

Enquiries have also been received about how the junctions in Penrhyndeudraeth and Llandecwyn are being improved.

Before the start of the project, suggestions were made to representatives from the Welsh Government and the Trunk Roads Agency about alterations to the A487 main road layout in Penrhyndeudraeth. Their decision was that no changes would be made here until the impact of the new bridge could be fully assessed. The carriage way on the road leading up to the junction, Cambrian View, has been widened and a lay-by and footway provided. The northern approach road to the bridge has also been widened and a footway provided.

The access road from the south has been widened and a footway provided, which now provides safe pedestrian access to the improved Llandecwyn Railway Halt. Minor improvements have been made to the T junction near Llandecwyn on the A496. The local communities have requested that a roundabout be constructed here as a further improvement. Feasibility studies and designs have been produced but as this proposal is an addition to the original scheme, the land-take required was not included under the Compulsory Purchase process. Initial negotiations with the landowner were not successful, but we are pleased to confirm that agreement has now been reached and the land to build the roundabout is being released. Invitations to tender will shortly be sent out and it is intended that construction will start in the spring.

Communication

Comments have also been received about lack of communication from the project team. Since the start of the project two public exhibitions have been held; updates have been circulated to a database of emails as well as press releases to the local media; open evenings have been hosted by the contractors; there is a web page on the council website; a facebook page has been set up which includes comments on progress, photos and a link to a timelapse camera footage <https://m.facebook.com/datblygiadpontbriwetdevelopment> ;and a Liaison Group has been established with members from the local Gwynedd and Community Councillors.

Requests have been made for more use to be made of social media. We do not agree that this is necessarily the correct forum for many discussions - project officers have already been the subject of some very aggressive, personal comments on a facebook page, which is of course both upsetting and unnecessary. However it is felt that lessons could be learnt about the public's expectations, the most effective and efficient forms to communicate and how communication generally can be managed during major projects such as Pont Briwet.