

Neath Port Talbot County Borough Council
Cyngor Bwrdeistref Sirol Castell-nedd

Democratic Services
Gwasanaethau Democrataidd

Decision Notice

STREETSCENE AND ENGINEERING - URGENCY ACTION , TUESDAY, 2ND JUNE, 2020

Please see below approval of decision as follows:

1. **Blaengwrach River Bridge Replacement - 29TD - Urgency Action (Pages 3 - 18)**

Blaengwrach River Bridge Replacement

That in consultation with the Leader and relevant Cabinet Member, the existing footbridge be fully demolished and replaced with a new single span structure (Option 3 as detailed in the circulated report and appendices), with the partial demolition of the existing structure to be carried out immediately.

For Immediate Implementation

Yours sincerely

Tammie Davies

p.p Chief Executive

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NEATH PORT-TALBOT COUNTY BOROUGH COUNCIL
URGENCY ACTION
STREETSCENE AND ENGINEERING
21 MAY 2020

Report of Head of Engineering & Transport – D.W.Griffiths

Matter for Decision

Wards affected: Blaengwrach & Glynneath

Blaengwrach River Bridge Replacement.

Purpose of Report

To seek approval to implement the above scheme as indicated in Appendix A, Appendix B and Appendix C.

Executive Summary

A large scour pool formed under the upstream end of the central pier during Storm Dennis but as the water levels have been so high, it was not visible. The foundation has failed and dropped into the scour pool causing the masonry pier to partially collapse.

The proposal is to replace the existing two span structure with a new single span footbridge before the remainder of the existing one collapses. The Bridge is the only pedestrian access from the villages of Blaengwrach & Cwmgwrach to Glynneath where the school and medical centres are located.

The report outlines the recommendations for the scheme.

Background

The foundation has failed and dropped into the scour pool causing the masonry pier to partially collapse diagonally upwards from midpoint along the footing.

The central pier has a reinforced concrete capping beam onto which the prestressed beams sit. This has a hairline vertical crack in it directly above the hinge point in the footing. The capping beam is acting as a cantilever at the moment, which it wasn't designed to do. There is a high risk that the capping beam will fail in the near future, causing the bridge deck to sag resulting in the total collapse of the bridge.

The structure is closed to pedestrians for the safety of the general public, as there is potential for the pier to further deteriorate which could lead to the partial collapse of the deck slab. The Bridge also carries the gasmain, watermain & telephone/broadband cables for the communities of Blaengwrach and Cwmgwrach and should the existing bridge suffer an uncontrolled collapse these services would be lost, potentially for a number of weeks/months.

The proposed options are listed in Appendix A and the location of the bridge is shown in Appendix B.

Financial Impact

The work is to be funded by the Councils Capital Programme Steering Group

Integrated Impact Assessment

A first stage impact assessment has been undertaken to assist the Council in discharging its legislative duties (under the Equality Act 2010, the Welsh Language Standards (No.1) Regulations 2015, the Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016.

The first stage assessment, attached at Appendix C, has indicated that a more in-depth assessment is not required. A summary is included below:-

A full impact assessment is not required as the proposed new footbridge will provide a benefit for the local communities and provide a safe environment for pedestrians, cyclists, school children and residents.

Valleys Community Impacts

There are '**No implications**' associated with this report.

Workforce Impacts

There are '**No Implications**' associated with this report.

Legal Impacts

There are '**No Implications**' associated with this report.

Risk Management Impacts

There are no risk management impacts associated with this report.

Consultation

No formal consultation has taken place.

The local member has been consulted and support the scheme.

Recommendations

It is recommended that in consultation with the Leader and relevant Cabinet Member that the existing footbridge is fully demolished and replaced with a new single span structure (Option 3), with the partial demolition of the existing structure to be carried out immediately.

Reason for Proposed Decision

To reconnect pedestrian access and maintain Statutory Undertakers services to the communities of Blaengwrach & Cwmgwrach.

Implementation of Decision

The decision will be implemented immediately.

Appendices

Appendix A - Blaengwrach River Bridge - Options Report.

Appendix B - Location Plan - Blaengwrach River Bridge Replacement.

Appendix C - Integrated Impact Assessment - Blaengwrach River Bridge Replacement.

Background Papers

None.

Officer Contact

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88-Blaengwrach River Bridge Partial Collapse of Central Pier - Options

A large scour pool formed under the upstream end of the central pier during Storm Dennis but as the water levels have been so high, it was not visible. The foundation has failed and dropped into the scour pool causing the masonry pier to partially collapse diagonally upwards from midpoint along the footing.

The central pier has a reinforced concrete capping beam onto which the prestressed beams sit. This has a hairline vertical crack in it directly above the hinge point in the footing. The capping beam is acting as a cantilever at the moment, which it wasn't designed to do. There is a high risk that the capping beam will fail in the near future, causing the bridge deck to sag resulting in the total collapse of the bridge.

The structure is closed to pedestrians for the safety of the general public, as there is potential for the pier to further deteriorate which could lead to the partial collapse of the deck slab. The Bridge is the only pedestrian access from the villages of Blaengwrach & Cwmgwrach to Glynneath where the school and medical centres are located.

There are 3 main options to the management of this structure:

Option 1 – Do nothing and keep the structure closed

Pros This would appear to be the easiest.

Cons 1. There is no safe alternative pedestrian diversion. Pedestrians have 2 options, either use the shorter route of crossing the busy A465 Trunk Road at the roundabout which is illegal and highly dangerous or use a 1.5km diversion route along the Unity Mine Access Road, which is unlit. To use the access road we would need to enter into a legal agreement with the owners and provide lighting at a **cost of approx. £100K**. There is also a likelihood that the mine will reopen and the access road will be trafficked with Lorries rendering it unsafe for pedestrian use. To provide a footbridge over the A465 at the roundabout would require land purchase and **cost approx. £2.0M**.

2. The weakened central pier is not likely to withstand any further damage without it fully collapsing. It is noted that the River Neath during the winter months carries a large depth of fast flowing water, sometimes with large pieces of floating debris. Should the bridge collapse it would partially block the river leading to potential flooding concerns. This material couldn't be removed whilst the river is in high flow.

3. The BT cables, watermain & gas services feeding Blaengwrach & Cwmgwrach pass through the bridge and should the bridge collapse these services would be severed. The statutory undertakers have already confirmed that they can't let this happen and are looking into diverting their equipment. Some of these diversion routes are lengthy and involve directional drilling under the A465. The undertakers have all confirmed that they would be looking to recover the costs associated with the diversions from NPTCBC under the New Roads and Street Works Act 1991. These costs are likely to be **approx. £700K** depending upon the final routes.

Option 2 – Partially demolish the bridge and keep for 10-30 years.

Due to the form of construction it is possible to remove the beams and deck slab for the upstream 2/3rds of the bridge and leave the downstream 1/3rd of the bridge in place. **Approx. cost of £275K**.

Pros 1. The services are in the downstream 1/3rd of the bridge wouldn't need to be diverted. Although we would have to give assurances to the Statutory Undertakers that this option will provide long term support to their services, **which is difficult to achieve, given the age of the structure.**

2. The remaining width of bridge would be wide enough to accommodate pedestrians and only minor alterations would be needed to the public lighting.

- Cons
1. As the river bed has already been disturbed and a large scour pool has been formed it would be difficult and costly to prevent the remaining 1/3rd of the central pier from scouring out. If we chose to harden the invert a Sedimentologist's Report will be needed.
 2. Work will be needed to the upstream edge of the remaining 1/3rd to create a new cutwater. It will be technically difficult to structurally combine the new cutwater into the existing 70 year old masonry pier whose construction details are unknown.
 3. There will be ongoing maintenance liability to prevent scour to the pier.
 4. The existing bridge is 70 years old so its design life is only a further 20-30 years. After which it will have to be demolished and replaced, along with pedestrian & service diversions.
 5. The pedestrian diversion needs to be in place for the duration of the work, to protect the central pier and a new parapet will need to be installed along the upstream edge.

The structural integrity of the remaining structure will be difficult to guarantee in the medium term and it due to the age of the structure it is not a long term solution.

Option 3 – Fully demolish & replace with new single span structure.

Due to the form of construction it is possible to remove the beams and deck slab for the upstream 2/3rds of the bridge and temporarily leave the downstream 1/3rd of the bridge in place. A new single span steel truss footbridge can then be lifted into place, the services can then be diverted onto the new bridge and the downstream 1/3rd of the bridge can then be demolished. **Approx. cost of £710K.**

- Pros
1. The partial demolition work can be done as a matter of urgency to prevent the full collapse of the structure and then the new bridge can be installed in a couple of months' time. The remaining downstream 1/3rd of the bridge should ideally be demolished prior to the onset of the winter months.
 2. The new bridge would have a design life of 120 years, so can be used by future generations.
 3. The new bridge will have no central pier so there will be no ongoing scour maintenance liability.
 4. The proposed service diversions would be shorter and easier to manage. Approx £100-150K which has been allowed for in the £710K.
 5. There will be no need for Consents from Natural Resources Wales or a Sedimentologist's Report.

Cons The pedestrian diversion needs to be in place for the duration of the work. Although with careful management pedestrians will be able to use the new footbridge when the downstream 1/3rd of the bridge is being demolished.

Recommendation

I can recommend that option 3 is the most viable and the cheapest option with the partial demolition of the existing structure to be carried out immediately.

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Client



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Project **Blaengwrach River Bridge**
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 Location Plan
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File No.		Financial Code No.		
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Date	Mar 2008	Date	Date	Date
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Impact Assessment - First Stage

It is essential that all initiatives undergo a first stage impact assessment to identify relevance to equalities and the Welsh language as well as an evaluation of how the proposal has taken into account the sustainable development principle (the five ways of working); an incorrect assessment could ultimately be open to legal challenge.

The first stage is to carry out a short assessment to help determine the need to undertake a more in-depth analysis (the second stage).

Relevance will depend not only on the number of people/service users affected, but also the significance of the effect on them.

When completing the first step you must have regard to the following:

- Does the initiative relate to an area where important equality issues have been, or are likely to be, raised? (For example, funding for services to assist people who are victims of rape/sexual violence or individuals with particular care need; disabled people's access to public transport; the gender pay gap; racist or homophobic bullying in schools)
- Is there a significant potential for reducing inequalities, or improving outcomes? (For example, increasing recruitment opportunities for disabled people).
- Does the initiative relate to instances where opportunities to use the Welsh language are likely to be affected or where the language is likely to be treated less favourably? (For example, increase the number of Welsh speakers moving from/to a certain area; closing specific Welsh language services or put those services at risk services;
- Does the initiative relate to the improvement of economic, social, environmental and cultural well-being? To what extent does the initiative prevent things getting worse? (For example, funding for services to assist in cultural well-being; changes in policies that promote independence and/or assist carers)

1. Provide a description and summary of the initiative.

Identify which service area and directorate has responsibility for the initiative.

2. Identify who will be affected by the initiative.

If you answer **Yes** to service users, staff or wider community continue with the first stage of the assessment

If you answer **No** to service users, staff or wider community or **Yes** to 'Internal administrative process only', go to **Question 5 – sustainable development principle**.

3. Using relevant and appropriate information and data that is available to you think about what impact there could be on people who share protected characteristics; whether they are service users, staff or the wider community.

Some things to consider include:

- transport issues
- accessibility
- customer service
- cultural sensitivity
- financial implications
- loss of jobs

Definitions of impacts (either positive or negative):

- High – likely to be highly affected by the initiative
- Medium - likely to be affected in some way
- Low - likely to be affected by the initiative in a small way
- Don't know - the potential impact is unknown

You **must** provide reasons, and indicate what evidence you used, in coming to your decision.

4. Using relevant and appropriate information and data that is available, think about what impact there could be on opportunities to use the Welsh language and in treating the language no less favourably than English.

Definitions of impacts are the same as in **Question 3**.

The classification 'Don't Know' should be categorised as 'High Impact' in both questions 3 & 4.

5. Consider how the initiative has embraced the sustainable development principle in accordance with the Section 7c of the Well-being of Future Generations Act 2015.

Give details of the initiative in relation to the 5 ways of working:

- **Long term** - how the initiative supports the long term well-being of people
- **Integration** - how the initiative impacts upon our wellbeing objectives
- **Involvement** - how people have been involved in developing the initiative
- **Collaboration** - how we have worked with other services/organisations to find shared sustainable solutions;
- **Prevention** - how the initiative will prevent problems occurring or getting worse

6. The most appropriate statement must be selected (and the relevant box ticked) based on the first stage of the assessment and an explanation of how you have arrived at this decision must be given.

In addition a summary of the how the initiative has embraced the sustainable development principle must also be included.

Where the first stage of the assessment indicates that a more in-depth analysis is required the second stage of the assessment will need to be completed and this will need to be started immediately.

A first stage assessment must be included as a background paper for all Cabinet/Cabinet Board/ Scrutiny Committee Reports.

Where the first stage assessment is completed by an accountable manager it must be signed off by a Head of Service/Director.

Impact Assessment - First Stage

1. Details of the initiative

Initiative description and summary: The demolition of the weakened two span Blaengwrach Footbridge and replace with a new single span steel footbridge. A large scour pool formed under the upstream end of the central pier during Storm Dennis. The foundation has failed and dropped into the scour pool causing the masonry pier to partially collapse. The structure is closed to pedestrians for the safety of the general public, as there is potential for the pier to further deteriorate which could lead to the collapse of the deck slab.

Service Area: Blaengwrach

Directorate: Environment

2. Does the initiative affect:

	Yes	No
Service users	✓	
Staff		✓
Wider community		✓
Internal administrative process only		✓

3. Does the initiative impact on people because of their:

	Yes	No	None/ Negligible	Don't Know	Impact H/M/L	Reasons for your decision (including evidence)/How might it impact?
Age	✓					At present the footbridge is closed to pedestrian access for safety. There is a long (1.5km) diversion route which is difficult for the very young and older people.
Disability	✓					At present the footbridge is closed to pedestrian access for safety. There is a long (1.5km) diversion route which is difficult for people with mobility difficulties.
Gender Reassignment		✓				

Marriage/Civil Partnership		✓				
Pregnancy/Maternity		✓				
Race		✓				
Religion/Belief		✓				
Sex		✓				
Sexual orientation		✓				

4. Does the initiative impact on:

	Yes	No	None/ Negligible	Don't know	Impact H/M/L	Reasons for your decision (including evidence used) / How might it impact?
People's opportunities to use the Welsh language		✓				
Treating the Welsh language no less favourably than English		✓				

5. Does the initiative impact on biodiversity:

	Yes	No	None/ Negligible	Don't know	Impact H/M/L	Reasons for your decision (including evidence) / How might it impact?
To maintain and enhance biodiversity		✓				

To promote the resilience of ecosystems, i.e. supporting protection of the wider environment, such as air quality, flood alleviation, etc.		✓				
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6. Does the initiative embrace the sustainable development principle (5 ways of working):

	Yes	No	Details
Long term - how the initiative supports the long term well-being of people	✓		The new footbridge will have a design life of 120 years and will provide the only pedestrian access from the communities in Blaengwrach and Cwmgwrach to Glynneath.
Integration - how the initiative impacts upon our wellbeing objectives	✓		The new footbridge will provide the pedestrian access from the communities in Blaengwrach and Cwmgwrach to the amenities in Glynneath i.e. Medical Centre, Pharmacy, Leisure Centre & Shops.
Involvement - how people have been involved in developing the initiative	✓		The Bridges section along with the local member for have worked together on this initiative.
Collaboration - how we have worked with other services/organisations to find shared sustainable solutions	✓		The existing bridge carries the only Gasmain, watermain & Telephone/Broadband cables into the communities of Blaengwrach and Cwmgwrach. The Bridges Section are working with the Statutory Undertakers to ensure that these vital services are maintained and incorporated into the new footbridge.
Prevention - how the initiative will	✓		There is potential for the bridge to fully collapse, so replacing it with a new

prevent problems occurring or getting worse			<p>one will prevent this.</p> <p>By replacing the structure with a single span bridge it removed the need for a central pier and any future liabilities resulting from scour.</p>
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7. Declaration - based on above assessment (tick as appropriate):

A full impact assessment (second stage) is not required	✓
Reasons for this conclusion	
A full impact assessment is not required as the proposals will provide a benefit for the local communities.	

A full impact assessment (second stage) is required	
Reasons for this conclusion	

	Name	Position	Signature	Date
Completed by	Hasan Hasan	Engineering Manager		21/05/2020
Signed off by	David Griffiths	Head of Service/Director		21/05/2020