

Navigation Committee

11 June 2020

Agenda item number 10

Trowse Rail Bridge

Report by Director of Operations

Purpose

To update Members on progress by partner organisations on potential solutions for Trowse Rail Bridge and the content of the agreed Position Statement. The Trowse Rail Working Group is made up of the Broads Authority, New Anglia Local Enterprise Partnership, Norfolk County Council, Norwich City Council, Greater Anglia and Network Rail.

1. Introduction

- 1.1. Trowse Rail Bridge carries train services into Norwich from outside the county. The single-track bridge crosses the River Wensum on the approach to Norwich Station. It is the only opening (swing) rail bridge in the country that carries an overhead electrical power supply.
- 1.2. The rail bridge is already a constraint to rail traffic. It is at a pinch point on the network, having a notable effect on train punctuality into Norwich. The height of the rail bridge is also a constraint to larger vessels wishing to navigate to the port of Norwich, with 2.74m clearance measurements given at average high water.
- 1.3. Network Rail is required by law (British Rail (Trowse Bridge) Act 1985) to open the bridge on demand to allow vessels to access the historic port of Norwich. The Act states that the bridge “shall open for the passage of vessels on request at any time of day or night, except when engines or carriages shall be about to pass over the new bridge.”
- 1.4. The frequency of rail services makes ‘opening on demand’ difficult, in terms of finding a time when train services would not be affected. In practice, and because of the technical issues in operating this bridge, an opening can be arranged with seven days’ notice, and with an opening on a Sunday at around 4am.

2. Wider opportunity

- 2.1. Immediately adjacent to Trowse Rail Bridge, there are development sites with enormous potential for mixed-use housing and employment opportunities (Deal Ground, Carrow Works and Utilities Site). These brownfield sites could form a new sustainable quarter of the city with good transport links, and deliver around 4,000 new homes and 6,000 new jobs.

- 2.2. Access to the sites to the east of the railway bridge is constrained by the rail bridge, which hinders vehicular, pedestrian and cycle access to the sites from the city centre. The local authorities are working with the development industry to bring forward opportunities, but planning is made more difficult by uncertainty about whether a scheme to replace Trowse Rail Bridge will come forward, the timing of this, and whether options involving a fixed bridge will be favoured.

3. Financial implications

- 3.1. The Broads Authority recognises that, if Trowse Rail Bridge was to be considered for improvement, there are cost differences between a fixed bridge and an opening bridge as well as implications for the navigation. With the recent removal of the old Thai Floating Restaurant (Vagabond) and the Sea Scouts Training base (The Lord Nelson), the need for the bridges to open has been further reduced.
- 3.2. The Authority is working within the partnership to find mitigation measures that would facilitate improvements to this structure and its operation.
- 3.3. Rail service providers recognise the need for additional and quicker services between Norwich and London. There is also a wider ambition for improving the frequency of Norwich to Cambridge services; the introduction of new services on East West Rail, which will connect Norwich via Cambridge to Bedford, Milton Keynes, Oxford and beyond; and improvements to the Midlands and the north (via Peterborough). An upgrade to the Trowse Rail Bridge is not seen as necessary for any of these improvements. However, the bridge is likely to be a constraint if the combination of improvements to routes into Norwich is considered.

4. Options

- 4.1. The 'do nothing' approach is not favoured by the majority of the working group, as it does not address any of the issues. Therefore, possible solutions are:
- a twin track fixed rail bridge
 - a twin track opening bridge
 - two single track fixed bridges

5. Next steps

- 5.1. The working group has prepared a Position Statement (Appendix 1) outlining the issues each group member faces from the Trowse Rail Bridge. A meeting is being requested with Network Rail's Anglia Route Director.
- 5.2. Network Rail has an investment programme running between 2019 and 2024 to carry out major infrastructure projects in our region. So far, these have included renewing the signalling system at Cambridge, track replacement to increase capacity between Kings Lynn and Cambridge and replacing Victorian signalling and track sensors between

Norwich, Great Yarmouth and Lowestoft. The aim is to get Trowse Rail Bridge into this programme.

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[Broads Plan](#) objectives: 10.1

Appendix 1 - Draft Position Statement

Appendix 1 - Position Statement: Trowse Rail Bridge

What's the problem?

1. Trowse Rail Bridge carries all train services into Norwich from outside the county. The bridge, across the River Wensum on the approach to Norwich Station, is a single-track opening bridge. It is the only opening rail bridge that carries an overhead power supply in the country. The bridge is already a constraint to rail traffic but not a significant problem to the current services operated if everything is running to time. It does however present performance issues in other circumstances. The bridge is a pinch point on the network, having a notable effect on punctuality of arrivals into Norwich, as well as affecting timetabling and frequency of services and potentially presenting a risk to resilience of the rail network in and out of Norwich.
2. Network Rail is required by law to open the bridge for passing river traffic (British Railways (Trowse Bridge) Act 1985). This is to allow vessels to access to the historic port of Norwich. The Act states the bridge "shall open...for the passage of vessels on request at any time of the day or night except when engines or carriages shall be about to pass over the new bridge". Current frequencies of rail services make it difficult to find times to open the bridge when train services would not be obstructed. Opening is restricted (after giving seven days' notice) to a Sunday at 4am.
3. Immediately adjacent to the bridge are development sites with enormous potential for mixed-use housing and employment opportunities. These brownfield sites could form a new sustainable quarter of the city with good, clean transport links and deliver 4,000 new homes and 6,000 new jobs. Access to the sites to the east of the railway bridge is constrained by the current railway bridge which hinders vehicular, pedestrian and cycle access to the sites from the city centre. The local authorities are working with the development industry to bring forward the opportunities, but planning is made more difficult given uncertainties about whether a scheme to replace Trowse Rail Bridge will come forward; the timing of this; and whether options involving a fixed bridge will be favoured.
4. Local stakeholders recognise (as well as the franchise commitment for additional services between Norwich and London and the desire for these to be quicker) that east-west connectivity is a challenge. Local stakeholders recognise the ambition to improve the frequency of Norwich to Cambridge services; introduction of new services on East West Rail, which will connect Norwich via Cambridge to Bedford, Milton Keynes, Oxford and beyond; and improvements to the Midlands and the north (via Peterborough). Trowse Rail Bridge is not seen as being required for any of these individual improvements. However, the bridge is likely to prove a constraint if the combination of improvements to other routes into Norwich is also considered.
5. The local stakeholders including the Broads Authority recognise that if Trowse Rail Bridge were to be considered for improvement, there are cost differences between a fixed bridge and an opening bridge. The Broads Authority wants to work with partners to find

mitigation measures that would facilitate improvements to this structure and its operation. Norwich is an historic port and the Broads Authority is the Harbour Authority. The Authority recognises that the port is unlikely to be operational in the same way that it has been in previous years.

What are the desired outcomes?

6. Rail outcomes

Rail improvements at Trowse could help deliver further franchise commitments and future service aspirations as set out in paragraph 4 and have a notable effect on punctual arrivals in Norwich (Paragraph 1). This in turn could help drive modal shift and deliver the clean growth agenda. A new Trowse Bridge could also provide improved rail performance and increased speed limits on the line. An improved junction at Trowse could provide additional growth delivered by more frequent and timely services.

7. Regeneration outcomes

There is a significant opportunity for the regeneration of the Deal Ground, Utilities and Carrow Works sites where 4,000 new homes and 6,000 new jobs could be delivered. The sites have huge potential and are easily reached from Norwich city centre and the rail station by walking, cycling and public transport. This provides the potential not only for a new highly sustainable quarter of the city of remarkable environmental quality but also to significantly improve access to the Broads for the City's population.

The redevelopment of the brownfield sites offers unique opportunities for rare and significant plots of land. The existing biodiversity in the River Wensum will be able to be enhanced through this redevelopment, along with the establishment of a 'green grid' of characterful landscape spaces. The creation of a marina down-stream of the Trowse Rail Bridge offers flood mitigation measures as well as port uses and the potential to transform the space into an area comparable to the Quayside buildings at Royal Williams Yard in Plymouth. A marina and other measures to improve navigation upstream has the potential to benefit navigation to a far greater extent than keeping the bridge open.

8. Transport outcomes

The development of the sites provides many benefits to the highway network if planned and delivered in a coordinated way. A new Trowse Bridge provides potential for enhanced links to the development sites including under the approaches to the bridge on both sides of the River Wensum significantly improving access to, and unlocking, important areas of brownfield land.

New river crossings have the potential to cut traffic congestion in an area where the inner ring road meets the outer ring road, which also happens to be the shortest route into Norwich City Centre from the Southern Bypass and a route regularly used for public transport. If fixed-bridge solutions were adopted management and maintenance of two existing cycle/footway bridges and the existing road crossing could be streamlined.

What are the options available?

9. There are a number of options available as well as the do-nothing, which is not considered to provide a solution. These include: a twin track fixed rail bridge; a twin track opening bridge; and two single track fixed bridges.
10. Network Rail intends to carry out a feasibility study. Local partners agree there is merit in an early piece of work to understand the constraints that an improvement at Trowse could help to unlock. It is local partners' view that this needs to be done now, in advance of the programmed Network Rail study into Norfolk and Suffolk connectivity. Local partners also consider that agreement needs to be reached about which of the bridge options needs to be considered. Reducing the numbers of options at the outset should lead to cost and time-savings in the feasibility work.
11. A fixed rail bridge provides the significant advantages of:
 - Being less costly to develop and deliver
 - Removes ongoing maintenance issues associated with an opening bridge
 - Allows fixed bridges to the development sites to be planned for and provided, making it more likely that regeneration can come forward
 - Potentially removes the need for existing road and cycle/pedestrian bridges to open, reducing maintenance liabilities.
12. A preliminary business case could also look at value for money and the wider economic benefits of a scheme at Trowse Rail Bridge.

Why now?

13. Progress on the rail studies is needed now to confirm that improvements to Trowse Bridge will be required. Once it is confirmed that 'do-something' will be needed agreement can be reached about which options should be looked at. If consensus can be reached on the options, with appropriate mitigation, this will enable local partners to make progress on planning the infrastructure required to open-up the development sites, as well as reducing the time and cost of the rail studies. Doing this now will give impetus to redevelopment of the sites and minimise the risk that this rare opportunity for redevelopment of the city is lost.
14. Taking forward work on the rail study now is also crucial to avoid Trowse Bridge becoming a blockage to future rail service improvements. Given the complexities of the matter these issues will take some time to resolve and it is critical that they are understood now so that the necessary feasibility and business case work can be started. This will avoid unnecessary delay to bringing forward improvements required to unlock rail service improvements to Norwich.