TP/LNW/2007/074

June 2010



# Heritage, Design & Access Statement

Application for Listed Building Consent for the Replacement of Bridge 42, Buxton Road, Whaley Bridge

#### 1.0 Introduction

- 1.1 Network Rail is applying for listed building consent to reconstruct Bridge No.42 spanning Buxton Road in Whaley Bridge, carrying railway traffic from Buxton to Edgeley Junction.
- 1.2 The bridge comprises cast iron spandrel arches with iron floor plates supported by masonry abutments with wing walls retaining the approach embankments. The bridge originally supported three tracks, the Up and Down between Chapel en le Frith and Whaley Bridge and the "Cromford and High Peak" railway line. The latter was closed in 1952 and the track subsequently removed.
- 1.3 Recent investigations have identified a number of defects including two fractures in the cast iron arches. These, coupled with deficiencies in the local capacities of members, skewed alignment of the arches and the intended use of heavy freight trains on this route, mean that the global stability of the bridge has been assessed as inadequate.
- 1.4 Following careful consideration and protracted discussion with English Heritage and High Peak Borough Council, Network Rail proposes to reconstruct the bridge with a box girder deck with feature bow-string arch elevations. This will result in the complete loss of the cast iron elements of the bridge and some alteration to the stone parapets down to springing level.
- 1.5 This application is a resubmission of HPK/2008/0622 which was withdrawn in November 2008.
- 1.6 The following statement and correspondence should be read in conjunction with report reference: R2200-P7F98-LBC-004 <u>"Support for</u>"

<u>Listed Building Consent</u>", which evaluates the existing structure and provides a reasoned justification for its reconstruction.

#### 2.0 Background

- 2.1 Network Rail owns over 2500 listed buildings and structures in the UK, and in the vast majority of cases, these are still functional as part of the operational railway. Minor alterations and modifications are usually sensitively handled to ensure that the aims of preserving and enhancing the built heritage are met whilst also meeting Network Rail's commitments to provide railway infrastructure fit for the 21<sup>st</sup> Century.
- 2.2 It is rare that these two aims conflict to such an extent that that demolition is contemplated. In the case of Bridge 42, the condition of the cast iron and design of the bridge have resulted in a restriction in terms of the weight, type and speed of rail traffic that can be accommodated on this route. In addition, it is the only weak point restricting the carriage of freight traffic between Buxton and Edgeley Junction and on towards Manchester.
- 2.3 In 2007, Network Rail instructed Birse Rail to work alongside its Structures Engineers to examine options for improving/rectifying the restrictions posed by the bridge. Given that the bridge is listed, the focus of the initial investigation was to determine whether strengthening of the existing structure could be achieved to meet the required loading capacity and line-speed, and to mitigate the risks posed by the defects in the cast iron members.
- 2.4 Thorough structural assessments were carried out which established that no amount of strengthening works could achieve the desired capacity and line-speed, and furthermore, the existing safety of the

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bridge could not be guaranteed due to the condition of the cast iron and high probability of further hidden defects.

- 2.5 Once it was established that repair and strengthening would not meet Network Rail's expectations both in terms of the performance and safety of the bridge, initial consultations took place with both English Heritage and High Peak Borough Council, beginning in 2007.
- 2.6 In September 2008 Network Rail submitted a listed building application for the reconstruction of the bridge, however this was subsequently withdrawn due to an objection by English Heritage citing that additional evidence was required in order to justify the loss of a listed building. A workshop was held on 26 January 2009 with both English Heritage and High Peak Borough Council to establish the level of work required in order to demonstrate beyond doubt that repair and strengthening works would not achieve an acceptable solution.
- 2.7 Following this meeting, additional work was undertaken by Birse Rail Consultancy which is covered in Report Reference: R2200-P7F98-LBC-004 "Support for Listed Building Consent".
- 2.8 After consideration of the detailed report, English Heritage were satisfied that no amount of strengthening work could satisfy the requirements for the bridge to carry heavy freight traffic at 50mph (letter dated 1 May 2009).
- 2.9 Emphasis now rests on the strategic and operational case for Bridge 42 to carry such traffic, and of course the overall safety of the bridge in terms of both the railway and roadway underneath which cannot be ignored. The strategic and operational need to carry heavy freight traffic is discussed in the abovementioned report, and is supported by

the Department for Transport (letter dated 29 January 2010) and EWS (letter dated 17 July 2008).

# 3.0 Planning History

- 3.1 Bridge 42 was constructed in c.1863 under the Stockport, Disley and Whaley Bridge Railway Act 1857.
- 3.2 Previous repair works were undertaken prior to the date of the listing (1998) therefore no planning history exists except for the previous application for listed building consent made in September 2008 Ref: HPK/2008/0622 (withdrawn).

# 4.0 Supporting Information

- Brise Rail Consultancy Report Ref: R2200-P7F98-LBC-004 dated 3 February 2009
- Department for Transport letter dated 28 January 2010
- Derbyshire County Council Environmental Services email dated 10 June 2009
- English Heritage letter dated 1 May 2009
- EWS letter dated 17 July 2008
- Drawings: Z0159-R2200-P7F98-2001 Existing GA
  Z0159-R2200-P7F98-001 Proposed GA

# 5.0 Heritage Statement

5.1 Bridge 42 was constructed as part of the extension to Buxton of the Stockport, Disley and Whaley Bridge railway which was authorised in

1857, the year that the original line was opened. The extension from Whaley Bridge to Buxton was opened in 1863 - the estimated year of completion of Bridge 42, citied in the listed text (refer to box below).

5.2 Within 40 years of the construction of the Whaley Bridge to Buxton line, the original cast iron floor sections that spanned between the arches of Bridge 42 were removed and replaced in their entirety with transverse steel RSJs, an arch deck plate, backed by a concrete slab in circa It is this arrangement that is still present today. 1896. It is not recorded as to why the cast iron elements were replaced, however the changes did not reduce weight, or provide an obvious betterment in terms of reduced floor thickness, or wider deck for example. It is envisaged that the cast iron cross girders may have been showing signs of distress from dynamic loading. Alternatively the works may have been undertaken in response to a number of cast iron railway bridge collapses starting with the 'Dee Bridge Disaster' in 1847 through to the Norwood Junction collapse of 1891. During the replacement of the floor in 1896 the archive drawings record the necessity to repair a crack in one of the cast iron arches. During the removal and replacement of the new deck elements, the opportunity was taken to repair the crack.

# Listing Text: SK0181 WHALEY BRIDGE BUXTON ROAD

912/1/10006 Railway Bridge

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Railway bridge. c1863. Possibly by William Baker, Chief engineer of the London and North Western railway. Cast iron with stone abutments. Quarry faced grindstone abutments with dressed stone caps. Double track bed carried on four cast iron arched ribs cast in two parts and joined in the centre. The spandrels each have five rectangular headed openings diminishing towards the centre. Cornice and solid parapet above, also iron. History: This bridge carries the Whaley Bridge to Buxton line of the Stockport, Disley and Whaley Bridge railway which was opened on 16/06/1863. It was an extension of the line from Stockport to Whaley Bridge which was opened in 1857. It became part of the London and North Western Railway in 1866. Reference: John Marshall, the Cromford and High Peak Railway, 1996, pps.30-32.

# 6.0 Planning Policy

6.1 The Government's national policy for the promotion of sustainable transport is enshrined within PPG13, which broadly supports the growth of the railway both in terms of passenger and freight movements, yet lacks specific advice regarding tackling substandard infrastructure in order to achieve those aims. Hence more recent guidance can be found within the Government White Paper: Delivering a Sustainable Railway.

# 6.2 Delivering a Sustainable Railway (2007) White Paper

The 2007 White Paper: Delivering a Sustainable Railway sets out the Government's strategy to deliver a sustainable, modern railway. Its aims are to target increased capacity, greater flexibility for train pathing and environmental sustainability:

"The Government envisages that the SFN [Strategy Freight Network] would both complement, and be integrated with, the existing rail network. It would provide an enhanced core trunk network capable of accommodating more and longer freight trains, with a selective ability to handle wagons with higher axle loads and greater loading gauge.

With the provision of appropriate diversionary routes, such a network would deliver not only greater capacity and reliability, but also improved seven-day and year-round availability. It would also allow the network to accommodate disruption more easily." In specifically promoting enhancements to infrastructure, the policies aims are to eradicate pinch-points on existing routes and to provide diversionary freight routes such as that of the Buxton to Edgeley Junction line:

"Enhance infrastructure to improve both frequency and capacity. This requires a package of measures, such as radio-based signalling, major station redevelopment, higher-capacity trains, <u>elimination of pinch-points on lines</u> and <u>provision of diversionary routes</u>"

"the railway must make best use of the infrastructure corridors that it has inherited. Current forecasts suggest that, by the 2020s, on key main lines and the approaches to major cities, passenger demand will increase beyond the scope of relatively easy incremental changes such as train lengthening, peak spreading, or minor local layout and signalling modifications. Significant freight growth is also expected, particularly to serve container traffic to and from ports."

"Path take-up is heavily influenced by the need to have duplicate paths to avoid engineering possessions and to accommodate short-notice possessions. Better predictability of possessions and diversionary routes would improve freight path take up."

# 6.3 PPS5: Planning for the Historic Environment

In considering any proposal for the complete or substantial demolition of a listed building, advice provided in Planning Policy Statement 5: "Planning for the Historic Environment" must be followed. Policy HE9: "Additional Policy Principles Guiding the Consideration of Application for Consent Relating to Designated Heritage Assets" states that:

"Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional"

In assessing the case of Bridge No.42, paragraph HE9.2 states that consent should be refused unless the following can be demonstrated (each is considered in turn):

*(i)* The substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that harm or loss;

The public benefits of enhancing the capabilities of railway infrastructure have never been more important. In this instance, the replacement of Bridge 42 will permit the regular carriage of freight on the Buxton to Edgeley Junction railway line thus reducing roadbased freight and increase capacity on the congested Manchester to Sheffield (Hope Valley Line), increase the restricted clearance height for road vehicles passing under the bridge, and in turn will reduce the inherent risk posed by the bridge defects and risk of collapse from a 'bridge bash'.

These, together with economic benefits of running rail freight on the Buxton to Stockport route are discussed in more detail in the accompanying report ref: R2200-P7F98-LBC-004.

In assessing the loss of the designated historic asset against these public benefits, one must consider the significance of Bridge 42 to the local community and nationally as a record of the Country's rail heritage.

Locally, the Derbyshire Historic Environment Record (HER) documents the history of the former Cromford and High Peak Railway (CHPR) which was built between 1826-31 connecting Cromford Canal to the Peak Forest Canal at Whaley Bridge, used largely for the transportation of limestone. As Bridge 42 was constructed much later in 1863, it is not considered to form part of the historic CHPR, despite being designed to carry the route alongside the two tracks of the London & North Western Railway.

Architecturally, the bridge contributes to the street scene but does not define the character of the area. Indeed, it is excluded from the boundary of the Whaley Bridge Conservation Area which incorporates a wide area comprising the town centre extending south and spanning the railway via Old Road but excluding the crossing of Buxton Road.

Nationally, Network Rail owns approximately 50,000 bridge structures, of these, 664 are listed buildings. There are thus many other examples of historic railway bridges that will remain in existence suggesting that Bridge 42 is not unique in terms of form and function. Indeed, the following bridges are of a similar arch design: Croal Viaduct, Bridgewater Canal, Gloucester Street, Deansgate, Chester Road, Castle Street, Rochdale Canal, Water Street, Salford Viaduct and Great Ducie Street (Manchester).

*ii)* (a) the nature of the heritage asset prevents all reasonable uses of the site; and

As part of the operational railway, Bridge 42 does not in itself prevent other uses of the site. Regardless of what type of bridge span were in place, the railway spanning Buxton Road is clearly the only reasonable use for the site.

> (b) no viable use of the heritage asset itself can be found in the medium term that will enable its conservation; and

As an operational railway bridge, no alternative viable use would be feasible.

(c) conservation through grant-funding or some form of charitable or public ownership is not possible; and

The reasons for pursuing removal and replacement of Bridge 42 are not based on the financial viability of repairing the structure (ie, no amount of money could remove the risks posed by the existing structure, nor deliver the functionality sought in terms of freight loading and increase in line speed).

(d) the harm or loss of the heritage asst is outweighed by the benefits of bringing the site back into use.

This is largely irrelevant as the bridge has been in continual use as part of the operational railway since its construction. It is the future continuation of this use that sits behind the proposal to replace the bridge.

### 6.4 Derbyshire Structure Plan (Saved Policies)

Although Regional Strategies were abolished towards the end of May 2010 by the coalition Government, it is useful to note the content of the Derbyshire Structure Plan given the County's role in managing transport infrastructure. The Structure Plan seeks to encourage improvements in rail services, and a reduction in the impact of freight by promoting a modal shift from road to rail.

The replacement of Bridge 42 accords with Policy 6 (Transport) which aims to "safeguard, enhance and improve existing rail infrastructure, including the opening of additional stations and improving the quality of stations."

Transport Policy 7 then actively encourages a shift to rail freight by promoting development that will assist in the movement of freight on rail, and the restoration of freight services on closed or disused lines. Whist the Buxton to Edgeley Junction route is open to passenger services, the proposals would allow for the addition of freight movements thus according with the policy. Environment Policy 10 seeks to preserve the historic building environment, and as such promotes the protection of listed buildings:

"Listed and other buildings of architectural or historic interest should be retained in situ and protected from inappropriate alteration and unsympathetic development that would harm their character or setting, having regard to their relative protection status."

This is a blanket policy which fails to recognise that there are, on occasion, overwhelming reasons to justify the removal of a listed structure. Railway infrastructure is set apart from most other protected buildings, in that it remains operational, often with no viable alternative use. There is an expectation that the Country should have a railway system fit for the 21st Century, hence modification of much of the 19<sup>th</sup> Century infrastructure is a given. Largely these alterations can be carried out sympathetically, yet occasionally the two objectives are not both achievable.

#### 6.5 High Peak Local Plan 2005 (Saved Policies)

Policy 24 of the Local Plan guides planning decisions involving the partial or total demolition of listed buildings. The Council has a presumption against the total or substantial demolition of any listed building without convincing evidence that real efforts have been made, without success:

*"• to sustain existing uses or* 

· to find viable new uses, or

• that the building is demonstrably beyond economic use, or •that clear evidence that redevelopment would produce substantial planning benefits for the community which would decisively outweigh the loss resulting from demolition."

In addition, the policy also states that:

"Planning Permission and/or Listed Building Consent will not be granted for development which will require the demolition of the whole or a substantial part of a Listed Building, unless: - the condition of the building makes it impracticable to repair or renovate, and demonstrable efforts have been made to sustain existing uses or to find viable new uses for the building; or..."

The condition of the bridge is covered in detail within the accompanying report ref: R2200-P7F98-LBC-004, which demonstrates that it is not possible to repair Bridge 42 to satisfactorily remove the risks associated with the defects, and to enhance its capacity to facilitate heavy freight movements. New or alternative uses for a railway bridge would not be practical.

- redevelopment would produce substantial planning benefits for the community which would materially outweigh the loss resulting from demolition; or

Refer to paragraph 6.3 above.

- there are detailed plans approved and contracts made to redevelop or otherwise environmentally improve the site.

This is not applicable to Bridge 42.

Where demolition is accepted, conditions will be imposed, and/or planning obligations sought, to ensure that redevelopment or other environmental improvements will be carried out promptly following demolition, and that the building to be demolished is satisfactorily recorded.

Policy TR8 promotes freight on rail and identifies road and rail haulage as an important business in High Peak linked to the area's extractive industries.

Road haulage however carries a significant environmental cost. Whilst the majority of goods will continue to be carried by road, the Council will promote greater use of rail freight. The Plan Area includes a number of the railway lines and there is considerable scope to expand the use of railway transport, including the provision of additional freight interchange.

This policy is clearly supportive of improving the existing rail infrastructure to promote the shift from road to rail based freight traffic.

## 7.0 Consultees

Network Rail has engaged with the following agencies and stakeholders prior to submission of the application for Listed Building Consent:

- The Department for Transport
- English Heritage
- High Peak Borough Council
- Derbyshire County Council (Highways)
- The Railway Heritage Trust
- EWS

# 8.0 Planning Permission

- 8.1 Separate planning permission is normally required for works that would result in a material alteration in the appearance of a building or structure. However, Network Rail benefits from deemed consent enshrined within Part 11 of Schedule 2 to the Town and Country Planning (General Permitted Development) Order 1995, as "Development under Local or Private Acts or Orders".
- 8.2 In this instance, the construction of the Buxton Edgelely Junction (BEJ) railway line was authorised by the Stockport, Disley & Whaley Bridge Railway Extension Act 1857. This Act contains the provisions set out in the "Railway Clauses Consolidation Act 1845" which incorporates powers for the then railway companies and their successors in title (now Network Rail) to undertake future works, not limited to the construction of the railway:

"They may erect and construct such houses, warehouses, offices and other buildings, yards, stations, wharfs, engines, machinery, apparatus, and other works and conveniences as they think proper;

They may **from time to time** alter, repair, or discontinue the beforementioned works or any of them, and **substitute others in their stead**;

and

They may do all other acts necessary for making, maintaining, altering or repairing and using the railway..."

- 8.3 The erection of any building or structure permitted under Part 11 first requires the "prior approval" of the LPA to the detailed plans and specifications, which must not be unreasonably refused, nor conditions imposed unless the development could or ought to be carried out elsewhere on the land, or that the design/external appearance is injurious to the amenity of the neighbourhood.
- 8.4 In submitting the application for listed building consent, a formal request for such prior approval will also be sought.

#### 9.0 Proposed Design

#### 9.1 Amount

The amount of development is insignificant as it will replace the existing bridge on the same alignment and be of the same massing and scale. The amount of rail traffic on the route may increase as a result of its increased capacity, however this is not a material consideration as the number of passenger trains could increase regardless.

9.2 Layout

The layout of the rail network and application site will not change as a result of the proposal.

9.3 Scale

There will be very little change to the existing scale of the structure.

#### 9.4 Landscaping

No landscaping is proposed as part of the development.

#### 9.5 Design

The existing cast iron bridge span will be removed, with the stone abutments modified to springing level to accommodate a new steel box girder bridge with feature bow-string arch elevation. This is a modern design yet reflects the arched nature of the original bridge.

Comments received in respect of the application made in 2008 raised concerns regarding the standardised, plain design of a modern box girder railway bridge, and subsequent liaison with High Peak Borough Council has focused attention on providing a bespoke design specific to the location in Whaley Bridge.

The design is shown on the proposed general arrangement drawing (Ref: Z0159-R2200-P7F98-001).

### 10.0 Access

10.1 There will be no change to the existing road and pavement arrangement beneath the bridge, however the clearance height will be

significantly improved. The only change to the rail traffic carried over the bridge is that it will be able to accommodate freight as well as passenger rail services.

#### 11.0 Conclusion

- 11.1 It is recommended that the overwhelming benefits to the local community, the wider transport system, local and wider economy and the environment provided by the replacement of Bridge 42 are given full consideration when assessing the proposal. Maintaining and enhancing the railway to support rail customer's demands and expectations is crucial to achieving a sustainable transport system for future generations.
- 11.2 The criteria for assessing proposals for demolition of a listed building as set out in PPS5 is very much tailored to buildings with alternative uses, and ones that could be sold or adapted to allow for continuing use. Whilst these criteria have been used to assess the proposed removal of the listed bridge deck, many are irrelevant given the nature of the structure and the ongoing use of the railway.
- 11.3 Expectations that the railway will be capable to expand to meet growing demand (both in terms of passenger and freight use) whilst retaining a sense of its historic roots are often successfully met, as demonstrated by recent projects such as the redevelopment of Kings Cross, or the refurbishment of New Bailey Street bridges, Salford, and High Level Bridge, Newcastle.
- 11.4 However, there are rare occasions where these two priorities conflict; and it is only in exceptional cases where the loss of a listed building is

the only feasible way of creating a sustainable railway fit for the  $21^{st}$  Century.