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<b>HPK/2010/0289</b>	<b>BRIDGE 42</b>	<b>LISTED BUILDING CONSENT FOR</b>
<b>10/06/2010</b>	<b>BUXTON ROAD</b>	<b>REMOVAL OF EXISTING</b>
	<b>ADJ GISBOURNE WORKS</b>	<b>RAILWAY BRIDGE AND</b>
	<b>WHALEY BRIDGE</b>	<b>REPLACEMENT WITH MODERN</b>
		<b>DECK STRUCTURE</b>
		<b>(LISTED BUILDING CONSENT -</b>
		<b>ALTERATION)</b>
	<b>NETWORK RAIL</b>	
	<b>INFRASTRUCTURE LTD</b>	

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**HPBC INTEREST:** None known

This application has been brought before the Development Control Committee as the proposals are considered to be of local interest.

**SITE LAYOUT / DESCRIPTION:**

Bridge 42 spans Buxton Road in Whaley Bridge and forms part of the Buxton to Stockport route (BEJ). The structure is grade II listed and lies just outside the conservation area boundary. The bridge is dated 1863 and is a cast iron structure on stone abutments. The structure is skewed at 45 degrees over the Buxton Road. In 1896 the entire original cast iron floor section was removed and replaced with wrought iron beams and concrete slab.

**THE APPLICATION:**

Listed Building consent is being sought for the removal of existing skewed bridge and its replacement with a modern deck structure. The reasons for the application are as follows:

1. The route is capable of speeds of 50mph. However there is a 10mph speed restriction imposed over the current bridge due to the risks associated with its capacity and structural defects.
2. Capacity is limited on the line and freight movements are restricted to weekend only as interspersing it with passenger trains would impact on travelling times.
3. Dove Holes tunnel will be closed for a lengthy period due to drainage problems and freight will not be able to use this route. The alternative is the re-route freight along the BEJ line.
4. Network Rail freight customers have indicated that it is essential to retain the flexibility to re-route trains using this route and speed and capacity restrictions imposed by bridge 42 are unacceptable to freight users.
5. There is a presence of defects in the bridge structure with no guaranteed repair and strengthening techniques. The structure not designed to be capable of carrying the

expected loads.

6. The clearance from the road level and bridge spans is below modern highway standards. As a result there is potential bridge “bash” by vehicles passing underneath. Given it is cast iron then a collision could be potentially catastrophic.

#### **PLANNING HISTORY:**

HPK/2008/0622 - Listed Building Consent for reconstruction of bridge deck – Withdrawn.

#### **PUBLICITY EXPIRY DATES:**

**Site Notice** – 15<sup>th</sup> July 2010

**Neighbours** – 12<sup>th</sup> July 2010

**Newspaper** – 15<sup>th</sup> July 2010

#### **REPRESENTATIONS / NEIGHBOURS:**

Four letters of support have been received stating the following:

1. The railway line on which Bridge 42 is situated is of great importance to the transport needs of the area, the proposals will ensure that the line is capable of carrying modern heavy trains.
2. The increased incidence of bridge strikes by HGV's is sufficient to raise concern of the future of the line.
3. A recently repaired railway bridge at Smithy Bridge is sufficient to raise concern for the future of the line.
4. The strategic rail benefits clearly outweigh the arguments for retaining a defective structure. A full archaeological record should be made.
5. Whaley Bridge has a bypass, which other villages including Furness Vale, New Mills and Newtown do not.
6. The proposed increase in clearance, coupled with the attractive bow-spring design is supported.
7. The replacement of the bridge will ensure that HGV's are removed from the local road network.

The replacement of the bridge will secure the future of the line, for which Whaley Bridge should support.

Two neutral letters have been received raising the following points:

1. Although the need for the replacement bridge is accepted, the proposed replacement bridge design has not been considered adequately, the visual impact would be one of a concrete slab, rather than the existing arches which provide a positive visual impact when walking through Whaley Bridge.

2. Freight train transport is clearly important to the wider local economy, however has sufficient community consultation been undertaken to address the strategic issues associated with the application.

Six letters of objection have been received, raising the following concerns:

1. Noise pollution, the increase freight numbers will cause significant noise pollution to residential properties close by. At the present time passenger trains cause very little noise pollution.
2. The Buxton line is used by a significant volume of commuters, running freight in parallel will have an impact on this essential service.
3. House devaluation.
4. By increasing the head height of the bridge, this will encourage more HGV's to travel through Whaley Bridge, rather than using the bypass. This will have an adverse impact on the school and properties along Buxton road.
5. The bridge design is intrusive and of a modern design. This will be out of keeping with the village, Conservation Area and the heritage of the High peak.
6. There will be significant disruption to the local community during any demolition and reconstruction works.
7. Works carried out by Network rail in the Furness Vale area have already caused damage to the foundations of residential properties.

#### **CONSULTATIONS:**

**English Heritage** – Bridge 42 represents an important surviving example of a cast iron arch railway under bridge. As a class of railway bridge these are rare not least due to their vulnerability to vehicle impacts and the past frequency of emergency and pre-emptive demolitions to bridges of this type.

The current application to demolish rests on the balance as laid out in Planning Policy Statement 5: Planning for the Historic Environment, paragraph HE 9.2 “local Authorities should refuse consent for substantial harm or total loss of significance, unless there are substantial public benefits that outweigh harm or loss.” This replaces the former guidance in PPG15 which referred to “community benefit” in this context, however in this case we do not believe the change in language would alter the issues to be addressed since the public benefits and losses relate to both the local and wider community both in terms of the historic environment and the operation of the rail network as “public goods.”

The removal of the arch structure and deck would clearly result in the substantial harm to the significance of the bridge and should be regarded as effectively removing most of the special architectural and historic interest for which it was listed.

We acknowledge that that the present arch structure could not be strengthened to carry heavy freight at line speed hence if the need for this can be demonstrated to your Authority's satisfaction and your Authority judges that the public benefits of demolition outweigh retention that you should determine on this basis. Should this be the case English Heritage would be keen to engage in a constructive dialogue with your Authority with regard to the recording, salvage and technical analysis of the cast iron segments. We would not however seek to take a view on the design of the new span. If in your Authority's opinion the case for overwhelming need for line speed heavy freight is not made we believe there may still be further scope to address options for bridge strengthening which will retain the historic arch structures in situ.

**County Archaeologist** - No objection subject to a condition requiring a full building record of the bridge structure prior to its removal.

**Highway Officer** – No objection, however the proposals will require consent from DCC for traffic management control during construction.

Over the last 20 years, DCC have been quite successful in encouraging local quarry businesses to switch trunk haulage of their product back to rail for environmental, highway congestion, road safety and highway maintenance reasons. The quarries in the Buxton area are nationally significant in rail terms and two have spawned large cement plants which also use rail to distribute their finished product as far as the London area and South West. Rail freight traffic is growing nationally and there is a strong desire, supported by Government to achieve both a 7 day railway and a strategic network for freight to meet company's commercial objectives.

While currently freight trains do not normally traverse the passenger route from Buxton to Manchester via Whaley Bridge, the separate freight route which accesses the Hope Valley Line at Chinley has a long tunnel under Dove Holes village which is beset with maintenance problems. This tunnel needs to be closed soon for several weeks to remediate the problems and the freight traffic diverted: the only alternative is the passenger line. There is also a need to be able to deal with the increasing freight traffic by using the passenger line at off-peak times. A frequent freight service is not planned and cannot be achieved along the line with the current signalling installed and fit in with aspirations to increase the train service to Buxton to two per hour all day. Nevertheless, there is a need for some heavy freight [and indeed all trains] to be able to operate at 50 mph on the line to operate efficiently and maintain their schedules. This is impossible with Bridge 42 in its current state, and deteriorating nature. So we support bridge replacement from a rail perspective. We also support replacement for the reasons outlined in my e-mail of 10 June 2009.

We believe Network Rail has made a strong case for demolition, cast iron is inherently weak in tension and if it is cracked the situation is made even worse, but the route is mainly used by lightweight passenger trains at present. Putting longer, heavier trains with axle loadings over 20 tonnes over the bridge on a regular basis adds considerably more risk of further weakening an already weak structure. From a Highway Authority perspective, we wish to see a structure that is at or above the minimum height clearance to avoid bridge bashing which is difficult to achieve currently even with road markings and signage due to the skew of the bridge and the bend in the road. We are likely to object to any proposal which involves lowering the road to provide the necessary clearance because of drainage and ongoing maintenance issues, and the disruption and cost of regrading junctions and property accesses to meet the new road profile as well as the cost of relocating services within the carriageway.

As the Authority responsible for child education and statutory school transport, having to provide more single-deck school buses to meet a reduced bridge height [rerouting double deckers is not a practical option in this case] will cost this Authority circa £30,000 per annum. We would, therefore, also vehemently object to a reduced headroom option which would not allow operation of double-deck buses for financial reasons as our budget is under constant pressure. There are also other double deck buses used on contracts to private schools in the area who would also probably seek some financial redress.

There will have to be considerable local disruption to road traffic, local bus and rail services during reconstruction/replacement whichever option is chosen. It would therefore, in our view, make sense for this to be spent on a cost-effective long-term solution that improves matters for all.

**Whaley Bridge Town Council** – Object to the application for the following reasons:

1. Noise and intrusiveness of freight trains through the night and day in Whaley Bridge and other villages on the Buxton to Edgeley Junction line.
2. The proposed replacement of this listed structure in the centre of the conservation area in Whaley Bridge should be subject to a consultation and selection process for an appropriate design.
3. Network rail should be required to provide details of the actual numbers and frequency of freight trains or estimated tonnage of freight transfer on the line as it is impossible for the planning authority to determine whether the benefits to the public justify removing the bridge in line with PPG15.

**Whaley Bridge Amenity Society** – The society deplores the proposals to replace a listed railway structure, on a 145 year old line, and clearly visible from the Conservation Area, indeed framing the view in/out of it with a modern structure of no merit.

**Crime Prevention Officer** – No comments to make.

## **RELEVANT POLICIES:**

### **High peak Local Plan Saved Policies**

BC1 - External Materials  
BC9 - Demolition of Listed Buildings

### **National Planning Policy**

Planning Policy Statement 5: Planning for the Historic Environment and its accompanying Practice Guide.

## **MAIN ISSUES AND COMMENT:**

### **Introduction**

1. Bridge 42 is a Grade II Listed Structure comprising cast iron arches with iron floor plates supported by masonry abutments with wing walls retaining the approach embankments. Recent investigations have identified a number of defects including two fractures in the cast iron arches. These, coupled with the skewed alignment of the arches and the intended use of the heavy freight trains on this route has resulted in the bridge being assessed as inadequate. Network Rail, in their application, have considered the following options;

- Repair – This would involve repair to the existing structure with little intervention. This does not allow the speed restrictions to be lifted and does not allow for increased freight capacity.
- Strengthening – It would not be possible to strengthen the cast iron structure to meet compliance with legislation and modern standards. New additions would need to provide significant or full support leaving the cast iron structure redundant.
- Reconstruction – This would allow line speed to be increased and would allow freight movements and effective diversionary route. A new bridge would allow clearance height from the road below. This would be the quickest solution in terms of disruption.

### **The application**

2. Listed Building consent is being sought for the removal of the bridge and its replacement. The supporting information accompanying this application identifies that Network Rail wish to upgrade the bridge in order to allow freight and passenger trains to achieve a 50mph speed, aligning with the speed elsewhere on the network. English Heritage has confirmed that the repair and strengthening of the existing bridge to meet this line speed is not achievable.

### **Policy Considerations**

3. In general there is a presumption in favour of the conservation of designated heritage assets (designated heritage assets are Listed Buildings, Conservation Areas, World Heritage Sites, Registered Historic Parks and Gardens or scheduled monument) , and the more significant the designated heritage asset the greater the presumption in favour of its conservation. Policy HE9.2 of PPS5 states that where an application will lead to substantial harm to or total loss of significance LPA's should refuse consent unless the following can be demonstrated:

- (i) the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh the harm or loss; or
- (ii)
  - (a) the nature of the heritage asset prevents all reasonable use of the site; and
  - (b) no viable use of the heritage asset can be found in the medium term that will enable its conservation; and
  - (c) conservation through grant funding or some form of charitable or public ownership is not possible; and
  - (d) the harm to or loss of the heritage asset is outweighed by the benefits of bringing the site back into use.

4. It is considered that criteria HE9.2 (ii) is not applicable in this case as the Bridge has only one function which is not influenced by other factors. Consequently in order to assess this application it is essential to determine whether the proposed demolition of the Listed Bridge is necessary in order to deliver substantial public benefits that outweigh the harm or loss. For the loss to be necessary there will be no other reasonable means of delivering similar public benefits for example through a different design or alternative site. In this

case the applicant should demonstrate that running freight at a speed less than 50mph would not deliver substantial public benefits.

5. Listed buildings are not a finite resource and once lost, cannot be replaced. Given the irreversibility of such a decision, the demolition or destruction of a heritage asset on these grounds should be viewed very much as a last resort and after alternative viable options have been exhausted. Loss affecting any designated heritage asset requires clear and convincing justification and loss of a grade II listed building should be exceptional.

### **The case for demolition**

6. Network rail have summarised their reasons for removal of the bridge as follows:

1. Line speed - The route is capable of speeds of 50mph, which other sections of the line currently operate at. However there is a 10mph speed restriction imposed due to risks associated with its capacity and bridge defects.

2. Line capacity – Capacity is limited on the line because of the risk associated with heavy freight trains, as such freight is restricted to weekend movements only. The speed restriction does not allow for freight to be interspersed with passenger trains.

3. Increase in freight axle weight – at the present time the maximum freight axles weight permitted on the line is 23t, it is proposed to increase this to 25.5t, which will allow the line to be used as an alternative to the Manchester to Sheffield line. It is stated that the Manchester to Sheffield line is near full utilisation and cannot support the anticipated growth in freight.

4. Most minerals quarried from the three Peak Quarries (Dowlow, Tunstead and Peak Forest) are carried by rail freight on the Chinley to Buxton line via the Dove Holes Tunnel. The tunnel is experiencing significant drainage problems which will need to be remediated in the near future. This will result in a lengthy closure of the tunnel. The only alternative route is the Buxton to Stockport route, however without the required capacity of Bridge 42 freight will have to be moved by road.

5. The existing headroom of the bridge is below modern highway standards, as a result there is potential bridge bash by vehicle passing underneath. Options to mitigate this could involve the introduction of traffic calming measures to create single file traffic in the centre of the road where clearance is greatest, or lowering the road to increase height. Whilst these options are feasible they would not be desirable due to the impact on traffic through Whaley Bridge and the presence of buried services in the road.

### **Analysis of the case**

7. In order to examine the above comments in more detail, officers prepared a series of questions for Network Rail. A copy of the questions and their response are contained at Appendix 1 accompanying this report. Whaley Bridge Town Council, the Whaley Bridge Amenity Society and English Heritage have been reconsulted on the responses provided by Network Rail. Any responses received will be reported on the update.

8. The 2007 White Paper: Delivering a Sustainable Railway, aimed to increase capacity and greater flexibility for train pathing and environmental sustainability throughout the network. In particular the White paper, in seeking to promote the enhancement of existing infrastructure, identified the need to eradicate pinch points on existing routes and provide diversionary freight routes. Network rail state that Bridge 42 is an existing pinch point, which prevents improved utilisation of the network.

9. The case for increasing the ability of the line to achieve 50mph speeds, and allow increase axle weight is finely balanced. On the one hand, it is the Councils responsibility to ensure that Listed Structures are not demolished, unless substantial public benefits can be demonstrated, and that outweigh the harm or loss. In response to the questions, Network Rail advises of the following public benefits:

1. Increased capacity to accommodate anticipated growth at Dowlow, Tunstead and Peak Forest quarries. If Bridge 42 were replaced a direct linkage would be made to Dowlow Quarry. This would allow more empty trains to be sent to the quarry, it would also allow a diversionary route to be created onto the BEJ line.

2. It is Network Rails responsibility as the primary provider of UK rail infrastructure to provide optimal levels of capacity, by reducing line speeds this does to achieve this strategic aim.

3. If capacity is increased on the BEJ line, freight traffic will resume on the MAS line, however this will be limited. The increased capacity on the BEJ line will take some traffic from the MAS line, relieving strain and providing potential further capacity if required.

10. Derbyshire County Council as the Authority responsible for child education and statutory school transport, consider that a strong case has been made for its demolition. This is on the basis that providing increased headroom will allow more double decker buses to use the local road network. The use of more single decker buses is not cost effective when compared to the provision of double decker buses.

11. There is no doubt that the removal of the listed bridge, and its replacement, would enable the capacity of the network to increase. This would allow both train and freight operating companies the opportunity to run more trains if required.

12. However it appears from the response that the increased capacity will allow potential and optimum levels of capacity, rather than accommodate actual and required levels. To remove a listed structure solely to accommodate potential capacity is not regarded as being within the public interest. PPS5 seeks to ensure that Listed buildings and structures are conserved, and the more significant the designated heritage asset, the greater the presumption in favour of its conservation. As noted by English Heritage, the bridge represents an important surviving example of a cast iron arch railway under bridge, which is in itself a rare example of this form of bridge.

13. Policy HE9.2 of PPS5 states that local authorities should refuse consent for the loss of a heritage asset unless it can be demonstrated that the loss is necessary in order to deliver substantial public benefits that outweigh the loss. The onus is on the applicant to provide clear and convincing justification. Whilst the applicant has stated a desire to

achieve optimum levels of capacity this is not set in the context of the benefit to the public. In addition, the applicant has not addressed what impact reduced speed limits would have on the retention of the bridge against capacity levels.

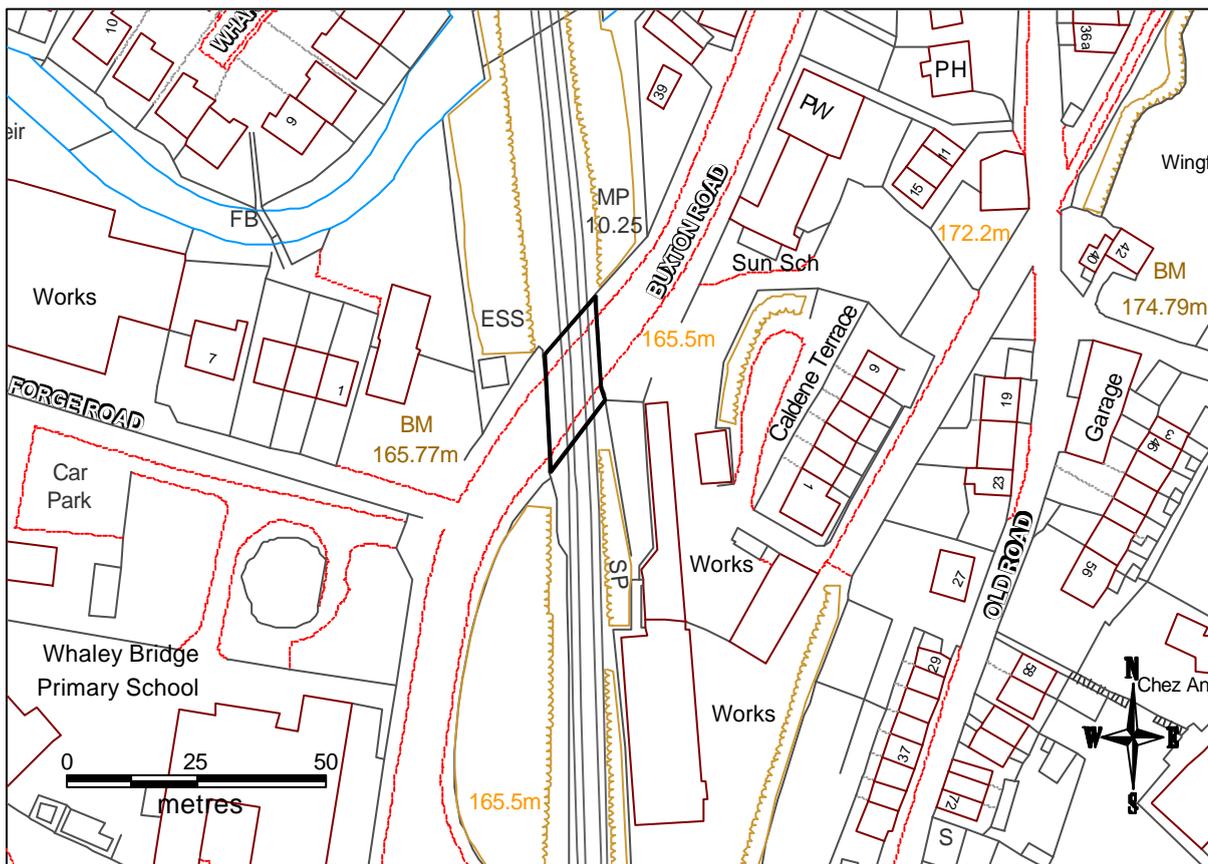
14. As a consequence there is insufficient evidence or justification to support the loss of this heritage asset as required by PPS5.

**CONCLUSION AND REASONS FOR REFUSAL:**

**RECOMMENDATION: REFUSE** listed building consent for the following reason:

1. The removal of the Listed Bridge would fail to comply with Policy BC9 of the High Peak Saved Local Plan Policies 2008 and Policy HE9.2 of Planning Policy Statement 5 which seek to conserve heritage assets unless substantial public benefits can be demonstrated. In the absence of such evidence, the loss of the Listed Bridge would fail to comply with the above policies.

**SITE PLAN**



## APPENDIX 1

### HPK/2010/0289: Listed Building Consent for the removal of existing railway bridge and replacement with modern deck structure, Bridge 42, Buxton Road, Whaley Bridge

#### Questions for Network Rail

1. Supporting documents refer to growth at Dowlow, Tunstead and Peak Forest Quarries and the need to accommodate increased freight growth. What is the existing production at these quarries and anticipated growth at these quarries, and over what time span? Please confirm what the present freight movements are from these quarries and the anticipated growth?

*The anticipated growth in production from Dowlow, Tunstead and Peak Forest quarries is determined by the wider economic climate. Recent events have seen the output from the UK's quarries reduce to levels seen 3-4 years ago. As a result, quarrying companies have focused their efforts away from smaller quarries, which are not connected to the rail network, to larger quarries which are. Therefore, the capacity required for quarry freight services is greater, and it is Network Rail's strategy to provide adequate levels of freight capacity for our clients, rather than limit it.*

2. The BEJ line is identified as a strategic option for increased rail freight in the future. Please quantify this in terms of the wider rail network. If freight trains were redirected onto the BEJ line, following the removal and replacement of bridge 42, what increase would you expect when compared to the existing levels of freight movement on this line?

*The increased use of the BEJ line would be created by a number of factors. Firstly, as a result of the replacement of bridge BEJ 42, there would be a direct linkage to Dowlow quarry. This direct linkage is required as it means that more empty trains can be sent to the quarry, increasing capacity which, as previously stated, will be needed. Secondly, this linkage increases capacity for BEJ's function as a diversionary route. Without the replacement of bridge 42, this capacity is reduced and opposes Network Rail's strategy of increasing freight capacity in the area, and throughout the wider network.*

3. It is stated that the MAS line is near full utilisation and cannot support the anticipated freight growth. What are the present number of passenger trains using this line, and the present number of freight trains using this line?

*The MAS line currently carries both passenger and freight services. The train paths for this line are divided into two hourly paths during the day, all of which are highly utilised. However, there are limits to the amount of traffic the MAS line can take. Therefore, in order to maximise the capacity to Dowlow quarry, capacity needs to be maximised on both the MAS and BEJ lines. Although Network Rail can't provide specific numbers regarding passenger and freight traffic, its key objective is to maximise capacity to provide the most benefits to our customers.*

4. What improvements will be made to the passenger based trains on the MAS line if freight is removed from this line onto the BEJ route? E.g. Frequency of trains? Will the

MAS line be solely used for passenger trains only? If so will all freight trains be using the BEJ line?

*If capacity is increased on the BEJ line, freight traffic will resume on the MAS line but this will be limited. The increased capacity on the BEJ line will take some traffic from the MAS line, relieving strain and providing potential further capacity if required.*

5. Why run trains through the BEJ line at 50mph? What impact will this have on the BEJ route in terms of number, frequency of passenger and freight trains, compared to the number and frequency at the present speed restrictions?

*Increasing the maximum line speed at all parts of the BEJ line increases the maximum number of trains able to run on the line, which increases capacity. Doing so gives train and freight operating companies the opportunity to run more trains if required, increasing capacity. It is the role of Network Rail to provide the possibility of greater passenger and freight capacity where required, and the replacement of bridge 42 will enable us to fulfil this aspiration.*

6. What would the implications be of running freight trains over the BEJ line but at slower speeds ie 30 or 40mph. This should address the implications on freight movement and passenger service and also how this might achieve retaining and strengthening the original bridge structure.

*As stated previously, reducing the maximum line speed reduces the total capacity of the line. It is our responsibility as the primary provider of UK rail infrastructure to provide optimal levels of capacity for our customers and by reducing the line speed, we would not be doing this. The condition of bridge 42 means that retention and strengthening does not guarantee the bridge will function at the level required by our wider route strategy, regardless of the speed at which traffic runs over it.*

*Furthermore, it is worth noting that Network Rail has carried out a number of other works along the BEJ line which maintain this maximum line speed. To not carry out the appropriate replacement of bridge 42 would be to the detriment of our other works on this line, both in terms of the value of our previous financial expenditure and the performance of the BEJ line for our customers.*

7. The report also refers to the need to transfer freight onto the BEJ for a temporary period during refurbishment works to The Dove Holes Tunnel. How long will this work take? Once completed will future refurbishment be required? If so, how often?

*There is an on going issue with Dove Holes Tunnel in the fact due to its location in relation to the local water table there is a lot of water infiltrating the tunnel and due to the surroundings this water contains calcite deposits which in time turn into a solid mass and cause track defect problems and are ongoing, therefore no timescale can be put on when heavy maintenance/refurbishment will cease in the tunnel.*

8. The report refers to a number of other Listed Bridges, which have been refurbished, rather than replaced. Why has it been possible to refurbish these, as oppose to replacing them?

*The decision as to whether a bridge is refurbished or replaced depends on the condition of the bridge in question and its ability to fulfil its purpose as part of the operational rail network. Technical assessments and reports are carried out on bridges separately. In this case, bridge 42 is deemed to be unable to operate to the level required of it, as highlighted in report R2200-P7F98-LBC-004. The fact that this is not the case with other bridges is irrelevant – they are judged on a bridge-by-bridge basis using the same assessment criteria and have been found to be in better condition.*

*In conclusion, the decision to replace bridge 42 considers a number of risks and opportunities. While the bridge is in poor condition, the capacity of the BEJ line is limited, and thus so is its capacity to act as a diversionary route for traffic or to provide direct linkage to Dowlow quarry, while complementing the strategy envisioned by other works carried out by Network Rail in the area.*

*Furthermore, without replacement there exists the possibility of major bridge failure, which would result in closure of the line, as well as closure of the road underneath the bridge. In addition, in planning replacement work we will be able to plan any line or road closures in advance, rather than react ad-hoc to an emergency situation, which is in no-one's interest. Ultimately, the replacement of bridge 42 will lead to an increase in line capacity, which will bring potential benefits to the area, both for visitors to and businesses in the region.*