

## **HISTORICAL RAILWAYS ESTATE**

### **Appendix: Future Long Term Plan (draft)**

#### **1. Purpose**

1.1 To develop a long term Strategic Plan (the Plan) which seeks to address the key issues and concerns identified in the HE continuing to manage the Historical Railways Estate (HRE) on behalf of the Secretary of State.

#### **2. Background**

2.1 The HRE consists of 3200 disused former railway structures in England, Scotland and Wales. The vast majority of these structures were constructed in the Victorian era and are nearly all over 120 years old and all have been disused for at least the last 40 years. The disused nature of the structures allied to continued uncertainty about their future ownership and purpose over the last thirty years has resulted in the long-term adoption of a Do-Minimum approach in respect of their maintenance. This regime of delivering high volumes of low cost reactive maintenance interventions has seen the HRE fall into an overall state of gradual deterioration. This approach is not sustainable in the longer term.

2.2 Until September 2013 these structures were the responsibility of the former British Railways Board (Residuary) Limited. Since that date the statutory responsibilities associated with the safe and effective maintenance of the HRE has rested with the Secretary of State for Transport. The related functions have been discharged on behalf of the SoS by HE under the terms of the HRE Protocol. In delivering these functions HE receives a specific level of Resource funding from DfT for the inspection and maintenance of the HRE. The Protocol and all associated funding only cover the period of RIS1.

2.3 The level of funding provided by the DfT under the Protocol both reflects and reinforces the long-term Do-Minimum approach. Whilst there is some uplift in funding during RIS1 to reflect inflationary pressures (i.e. from £7.802m in 2015/16 to £8.730m in 2019/20) there is no realistic prospect of improving the overall condition of the HRE in that period. The clear consequence is that the overall condition of the HRE will continue to gradually deteriorate.

2.4 Section 5.3 of the Protocol states that HE should act “.. as if they were the owner of the HRE”. Contrastingly, such a long-term position of managed deterioration exposes the HE to increasing levels of both reputational and financial risk through its delivery of the HRE Protocol. This position will only get worse for both the DfT and whoever delivers the statutory functions on their behalf in future without a transformational change in the overall approach and a significant increase in funding.

2.5 To change this position will require a fundamental shift from current sub-optimal inspection based approach (i.e. high volume of reactive and low cost interventions) to one that is increasingly intervention based (i.e. low volume of planned and best value

interventions). However, the challenge of making such a shift requires significant ambition which needs to be matched by the appropriate level of investment over a defined period.

2.6 Adoption of intervention based approaches to the management of infrastructure is one increasingly being adopted by clients and providers and has clear benefits in respect of reducing risks and liabilities and can actually save money in the longer term. It must be recognised that the proposed ten year period to bring about such a dramatic improvement in the overall condition of the HRE is relatively short period when compared to the length of time under which it has been subject to managed deterioration. With the vast majority of the 3500 structures in the HRE ideally requiring some level of similar significant intervention, the scale of the challenge can be fully appreciated.

2.7 Should the HE be asked to manage the HRE after RIS1 then there needs to be clear and reasonably quick agreement between HE and DfT as to the terms under which that future arrangement would be delivered. Within a small team such as the HRE (7.6 FTE) the level of effort required to ramp up to deliver a long term programme is in itself a significant task and would require a minimum mobilisation period of 18 months.

2.9 The end of 2017/18 is the critical point by which the HE would require a clear decision about whether they will continue to manage the HRE during RIS2 and RIS3.

### 3. The Proposal

3.1 Detailed and contemporary knowledge of the condition of the HRE, particularly where there is a public interface, will always be essential to its safe effective management. The HRE team will continue with its existing effective practices of regular inspection, review and prioritisation of all interventions. There is no case to change this.

3.2 A commitment to the proposed change in approach by both DfT and HE is required before any major actions should be undertaken. Without that commitment there is no compelling case to increase resource levels within the HRE team. Although some uplift in funding for a very small number of significant but currently unaffordable schemes may be required during RIS1. This is manageable with current staff resource levels.

3.3 There are steps that can be taken in the short term that will partially shift the current approach and which would start to mitigate the level of risk and liability to which the HE is currently exposed. These actions would also help to prepare for a more significant shift in the future. These actions are proposed as Phase 1 of the Plan and are based upon current funding and resource levels and are within the terms of the current HRE Protocol. These proposed actions are also non-abortive should there be no commitment or request for HE to deliver the HRE functions after RIS1.

3.4 No approvals or additional annual funding, other than potential uplifts for a small number of currently unaffordable schemes, are required from DfT but it would be helpful if

the proposed actions within Phase 1 are formally acknowledged by both DfT and the Board. Phase 2 would only be delivered if DfT appoint HE to manage HRE during RIS2 and RIS3.

3.5 The proposed actions in each phase and the expected benefits are as follows.

Phase 1 (April 2016 to end of RIS1)

Action 1 - Utilise the small increases in HRE annual budget levels during the remainder of RIS1 to:

- Double the number of planned loading assessments of public road overbridges to gain improved knowledge of the current condition of these high risk structures, especially where the previous assessment requires updating within relevant guidance. This would also involve, for the first time, undertaking similar assessments on bridges which carry or cross private roads. As a category, these road bridges collectively represent the biggest financial and reputational risk to the HE in respect of the HRE as these carry or cross live traffic. It is of increasing necessity that the HRE team has as much knowledge of their current condition and capacity as can be obtained in order to ensure effective prioritisation of works.
- Deliver an additional 2-3 major schemes in each of 2017/18, 2018/19 and 2019/20. These additional schemes will deliver, as with all major schemes, a significant reduction in terms of risk and liability and be based on best value rather than lowest cost.

Action 2 - Develop a positive dialogue with the HRE client team in DfT in respect of the management and policy issues in respect of the HRE. This dialogue has begun and will see quarterly meetings taking place from April 2016. This dialogue provides the benefit of increasing the knowledge and awareness of broader HRE issues within the actual client team. This aspect has been missing until recently.

Action 3 - Work in partnership with DfT to ensure cooperation from those highway authorities that appear to be disregarding their obligations in respect of loadings on public road overbridges managed by the HRE team. All public road overbridges have a duality of responsibility between the HRE team and the highway authority. Loading assessments in some cases reveal that a structure may pass the obligation of the SoS (up to 28 tonnes) but fails the higher obligation placed on the highway authority, which is from 28 tonnes and up to 42 tonnes. Mostly, the highway authorities will cooperate with the HRE team to deliver the necessary strengthening works, preferably infilling, or put in place appropriate weight restrictions. In approximately 130 current cases there has been no cooperation from the relevant highway authority and the HRE team have exhausted all options open to them. Escalation to the SoS, as the bridge owner, is now required. This is an area of high reputational risk for the HE and DfT.

Action 4 - Approach DfT for additional funding to deliver a small number of major schemes which are unaffordable within budget levels during RIS1. These are often very large structures (i.e. long tunnels or viaducts) and the cost of preliminary or enabling works, such

as scaffolding, makes the delivery of the required maintenance unaffordable in one phase whilst also making the adoption of a piecemeal approach to the works required fail to represent value for money. If these schemes were funded from current budgets then only a very limited number of other priority major schemes could be delivered over the same period. As a result, whilst the condition of one or two significant structures would be improved the overall condition of the HRE actually deteriorates. Securing additional funding to deliver these schemes has recently been broached with DfT and they have asked for individual business cases to be submitted for consideration and they appear receptive to the idea. Securing such an uplift of funding in each case ensures delivery of the targeted programme of major schemes between 2016/17 and 2019/20.

Action 5 - Develop and maintain a costed and prioritised 10 year programme of major schemes covering RIS2 and RIS3 which, if delivered, would deliver optimal interventions in respect of, at least, all of the highest liability structures. The 10 year outline programme should be used as a basis for discussion with DfT about the management of HRE after RIS1. In terms of a tool to inform the future management of the HRE the programme will be of clear benefit to whoever carries the responsibility for maintaining the HRE after RIS1.

#### Phase 2 (April 2018 to end of RIS3)

Action 6 – During years 2017/18 and 2018/19 clear decisions would need to be taken in respect of the resource levels and delivery mechanisms (e.g. outsource the programme management or recruit additional staff) including a decision about the long-term role, structure and location for the HRE team. It is almost certain that different contractual arrangements will be required which reflect the significant increase in the number of major schemes to be delivered.

Action 7 – By the end of 2018/19 the programme would need to be ‘fixed’ for years one and two in order to deliver the required level of scheme design and preparation by the end of 2019/20. This would represent a significant increase in the volume of design and preparation work during this year which would be in addition to ‘business as usual’.

Action 8 – By the end of 2019/20 put in place all required contractual delivery mechanisms and recruit any agreed additional resources within the HRE team. It is not certain that additional resources would be required as that will be dependant upon the agreed delivery model, e.g. a contracted programme management service.

Action 9 - Year 2020/21 onwards would see the delivery of the funded elements of the 10 year programme in addition to the delivery and review of annual inspections. The programme would need to be regularly reviewed with changes reported to the Exec as part of the bi-annual reports on performance against the HRE Protocol.

#### 4. The Ten Year Programme

4.1 This includes all of the structures for which the Secretary of State retains the statutory responsibility for inspection and maintenance. This is a total of circa 3500 different types of disused former railway structures (e.g. overbridges, underbridges, viaducts, tunnels, abutments, culverts, etc.) and includes 250 structures leased to Railway Paths Limited or Sustrans for which the SoS retains statutory responsibility.

4.2 Based upon the current ranking of each structure, which takes account of such factors as condition, level of public interface, location, etc., the following decisions have been made:

1. What is the optimal intervention for each structure (e.g. transfer, infilling, demolition, repairs, etc.)?
2. When should the optimal intervention take place within the proposed ten year programme between 2020/21 to 2029/30?
3. How much would the optimal and other sub-optimal options cost?

4.3 The optimal option always removes or mostly reduces all future liabilities and mitigates the risk of reputational or financial harm to the HE in each case. This option must buy a minimum of 25 years of future life without the need for further significant maintenance. For each structure there is always an optimal option and at least one further less optimal option.

4.4 At this stage, average costings for each category of intervention for differing types of structure have been utilised. This work will require a level of refinement for each structure which will take several months to undertake given the volume of structures. Equally these average costings can be changed within the programme as these costings are refined over time and the effect on any change in respect of the overall cost of the remaining programme can be quickly estimated.

4.5 For 1700 public road over and under bridges and certain other structures, the optimal option is to seek to transfer ownership and all liabilities to another statutory body (e.g. local highway authority). An estimated dowry has been used to cost the transfer option. Based upon historical rates, these are often significantly less than the cost of the optimal works intervention.

4.6 There have been long held ambitions within DfT to transfer the freehold and statutory responsibilities related to all of the structures in the HRE to other statutory bodies (e.g. local authorities, Network Rail, devolved administrations in Scotland and Wales). These ambitions have continued to prove to be unachievable. Even when this ambition has been scaled down to only cover those bridges with a significant degree of public interface, and thus the highest risk, there is no current wholesale appetite amongst local authorities to take on such structures, even with a dowry, in the current economic environment. In addition, such a volume of transfers would be likely to require the introduction of primary legislation.

However, in many cases transfer remains the optimal option as it transfers ownership to those who gain the highest benefit from the structure.

4.7 The HRE team will continue to update the programme as inspection reports or loading assessments are undertaken and reviewed for any of the structures included in the programme. This will ensure that changes in structure rankings are taken into account to ensure regular reprioritisation and reviewing of the programme.

## 5. Benefits

5.1 By the nature of the HRE, it is difficult to quantify the actual cost benefits of the proposed approach. Each structure is also unique based upon construction type, location, level of public interface. However, the structure ranking system used by the HRE team will be key in ensuring that each intervention is based upon best value and improving the ranking significantly (i.e. buying a minimum of 25 years of life or removing or reducing the risk to public safety). Historically, the higher the value of any intervention produces a proportionate level of improvement in the structure ranking in all cases.

5.2. One example based on a typical infilling proposal using historical average costings and frequency of likely interventions can be found below.

Intervention	Years 01-10	Years 10-20	Years 20-30	Years 30-40	Years 40-50	Years 50-60
Infilling	£120,000	£0	£0	£0	£0	£0
Intermittent Repairs (£20k) and Loading Assessments (£5k)	£25,000	£25,000	£25,000	£25,000	£25,000	£25,000

5.3 This example attempts to illustrate the likely cost effects when comparing the optimal cost of a one-off infilling scheme, which it is assumed will buy at least a 60 year design life, when compared to repeat sub-optimal interventions which on average buy no more than 10 years of design life. Each sub-optimal intervention would also attract design and supervision costs in each case which are proportionally and cumulatively higher than the same costs for a single optimal intervention.

5.4 In addition, the sub-optimal approach does not remove or significantly reduce the level of liability and risk represented by a potential structural failure at any point. The optimal intervention removes or significantly reduces all future risks and liabilities associated with a structural failure for at least 60 years.

5.5. The aim of the Plan is to significantly reduce the level of liability and risk to the HE and DfT by delivering at least 25 years of future life for each structure, although interventions

such as infilling will provide at least 60 years. The Plan would also reduce the actual number of structures in the HRE (estimated to be between 10 and 15%) through demolitions. As a result both the number and frequency of future inspections would be significantly reduced. Actual cost savings of at least 50% in respect of future maintenance, inspections and loading assessments (currently £8m per annum) would be realised longer-term.

5.6 The significant improvement in the overall condition of the HRE following delivery of such a programme would also make the potential transfer of the structures to other statutory bodies more attractive as in all cases they would transfer with a much reduced level of liability for future maintenance than would be achieved under the continued Do-Minimum approach.

## 6. Estimated Costs

6.1 The proposed ten year programme can be adjusted to produce a number of costed scenarios. These could be based upon the number of structures to be included or by adopting a mixture of optimal or sub-optimal interventions based upon the category or type of structure.

6.2 Based upon the initial automatic allocation of each structure to a category and using standard costings for each type of intervention the initial range of estimated costs is between £370m and £560m. These figures are over and above the average annual figure of £8-9m.