The Network Rail (Leeds To Micklefield Improvements) Order

Crawshaw Wood Overbridge (HUL4/20) Heritage Statement

Author	Network Rail
Date	June 2023
Revision Number	Rev 1

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1. INTRODUCTION

1.1 Purpose

1.1.1 This Heritage Statement has been prepared to support the application for works required as part of the Transpennine Route Upgrade (TRU). TRU is a major, multi-billion-pound programme of improvements to bring more frequent, faster and greener trains between York, Leeds and Manchester on a better, cleaner, more reliable railway.

1.1.2 The TRU project involves a variety of works including: the electrification of the railway (installation of overhead line equipment (OLE) and associated infrastructure); removal, re-modelling and replacement of bridges and structures to accommodate OLE, track and signalling upgrades; and structural strengthening works. Due to the historic nature of the route, this includes works to listed structures. This document forms part of the Listed Building Consent (LBC) application for works to the Grade II listed Crawshaw Woods Overbridge (HUL4/20; NHLE 1419062; listed as Crawshaw Woods (Shippen House Farm) which are required to accommodate the proposed OLE.

1.1.3 The LBC will be submitted in parallel with the Transport & Works Act Order TWAO Application for the Network Rail (Leeds to Micklefield Enhancements) Order ("the Leeds to Micklefield Order"). The Transport and Works Act 1992 introduced section 12(3A) into the Planning (Listed Buildings and Conservation Areas) Act 1990, the effect of which is to "call-in" for determination by the Secretary of State applications to the local planning authority for Listed Building Consent where such consent is required in consequence of proposals included in an application for a Transport and Works Act Order (TWAO). The procedures in the Transport and Works Applications (Listed Buildings, Conservation Areas and Ancient Monuments Procedure) Regulations 1992 then apply to the call in of such Listed Building Consent applications.

1.2 Scope

1.2.1 This document has been prepared to support the LBC, as part of the TWAO Application, for works affecting Crawshaw Woods Overbridge (HUL4/20). It presents a statement of significance for the individual structures taking into account their architectural and historic interest, as well as placing them within the wider context of railway heritage. It goes on to provide an assessment of the impact of the proposed works on that significance in terms of harm caused in line with current planning policy. This document also provides a background to the development of the project, including decisions in relation to avoiding, minimising and/ or mitigating the impacts through options explored and design

evolution, drawing upon information set out in the Alternative Options Evaluation Studies. Finally, the public benefits are set out in brief in order to understand the harm reported and enable the scheme to be weighed in the planning balance.

1.2.2 This document is submitted alongside the following supporting information:

- Documents prepared by Alan Baxter and Associates, including the East of Leeds Statement of History and Significance (2014; included at Appendix C) and Transpennine Route Upgrade: Route-wide Statement of Significance (2019);
- Alternative Options Evaluation Studies for HUL4/20;
- Drawings and visualisations submitted as part of the listed building consent application; and
- Documents submitted as part of the Leeds to Micklefield Order, including Document NR04: Statement of Aims which provides the strategic case for the project, and Document NR13: Planning Statement.

2. SUMMARY OF PROJECT AND PROPOSAL

2.1 Transpennine Route Upgrade Project

2.1.1 The proposed Network Rail (Leeds to Micklefield) Transport and Works Act Order ('the Leeds to Micklefield Order') forms part of a wider programme of works, known as the Transpennine Route Upgrade (TRU). TRU is a major, multi-billion-pound programme of improvements to bring more frequent, faster and greener trains between York, Leeds and Manchester on a better, cleaner, more reliable railway.

2.1.2 TRU is a phased programme of works to address the existing overcrowding and congestion on the route attributable to the limited capacity and dated infrastructure. The project supports economic growth, and "levelling up" opportunities across the north of England. The existing route carries a mix of fast express trains, local stopping services and freight trains but has not seen significant investment for many years.

2.1.3 The TRU programme involves a variety of works including: the electrification of the railway (installation of overhead line equipment (OLE) and associated infrastructure); removal, re-modelling and replacement of bridges and structures to accommodate OLE, track and signalling upgrades; and structural strengthening works. Where level crossings are affected by the improved services proposed, TRU also involves level crossing closures and, where necessary, their replacement by safer alternatives. Collectively these works and land are referred to as the Leeds to Micklefield Order Scheme (the Scheme).

2.1.4 The Leeds to Micklefield Order falls under the Transport and Works Act (TWA). The process for a TWAO is governed by the Transport and Works (Applications and Objections) (England and Wales) Rules 2006 ("The Rules"). Pursuant to Rule 10(6) of the Rules, the TWAO application is accompanied by a request for a Planning Direction from the Secretary of State for Transport under section 90(2A) of the Town and Country Planning Act 1990. Under the Planning Direction, the required planning permissions are deemed to be granted for the development sought to be authorised by the Order, subject to any conditions. The Order does not, however, grant consent for any works affecting Listed Buildings which fall under the Planning (Listed Building and Conservation Areas) Act 1990 (the 'Act').

2.2 Project Works

2.2.1 Within the East of Leeds section of TRU, between Leeds and York, a number of TRU works require land outside the control of Network Rail. These works involve the demolition and construction of overbridges, the closure of level crossings and implementation of safer alternatives, and the use of land and access for construction and associated utility diversions. These works and associated land uses will be consented and acquired via the proposed Leeds to Micklefield Order.

2.2.2 The Leeds to Micklefield Order will include a range of powers including the acquisition of all necessary land and rights, the temporary use of land; the authorisation of works and deemed planning permission, the diversion or stopping up of public rights of way, environmental consents, closure of the level crossings and powers to alter public highways and to undertake street works.

2.2.3 The Scheme includes works to four Grade II listed bridges, three of which are subject to an application for deemed planning permission as part of the TWAO. LBC for each bridge will be submitted to Leeds City Council alongside the TWAO and it is expected that these LBC applications will be called in by the Secretary of State for determination in parallel with the TWAO application.

2.2.4 This Heritage Statement is submitted as part of the LBC application for works to the Grade II listed Crawshaw Woods Overbridge (HUL4/20) which falls within deemed planning permission. The bridge will be physically impacted; therefore, consent is required to undertake the works under the 1990 Act. Details of the proposals are provided in Section 6 below.

2.3 Consultation

2.3.1 Consultation has been undertaken with both Historic England and Leeds City Council throughout the project. Regular meetings have been held to discuss the project and evolving options for the listed structures.

2.3.2 The design development has been presented to the heritage stakeholders at a series of meetings. These included briefings on the objectives of the project, the requirement for intrusive works and the design evolution, as well as discussion of any concerns and to work collaboratively on design proposals. Meetings were held on the following dates:

- **Meeting on 2nd August 2018** to introduce the project to Historic England. A project overview was given alongside an outline of what was considered to be the key heritage issues. Historic England raised the need for a holistic approach to the assessment to understand the impact on the railway as a whole, not just individual structures. An approach to optioneering was also discussed with the outcome to provide an options appraisal and matrix outlining why the preferred option has been chosen.
- **Meeting on 20th October 2020** with Historic England to present updates to the project. The consenting process was explained and need for a TWA Order identified. The key listed structures to be affected by the East of Leeds section of TRU were identified and potential options put forward.
- **Meeting on 26th May 2021** with Historic England and Leeds City Council (LCC). It was clarified that only five listed structures now require significant works. More detail was presented regarding the options explored for each listed structure, including engineering intervention. The presence of historic mining and local geology was discussed due to its impact on the options. A request was made to consider bridge jacking as an option for the listed structures.
- **Meeting on 18th February 2022** with Historic England and LCC to discuss the results of the optioneering process. The results of the bridge jacking were presented and it was noted that specialists had concluded that it was not possible for HUL4/14, HUL4/15 and HUL4/21. Initial designs for replacement structures were also presented.
- **Meeting on 13th June 2022** with Historic England and LCC to present the proposed designs for replacement structures at HUL4/14 and HUL4/21. The intention to lift Crawshaw Woods bridge was also discussed and it was noted that structural surveys were required. It was noted during the meeting that screens are no longer required at Aberford Road Overbridge (HUL4/18), therefore the structure no longer required any works requiring Listed Building Consent.
- **Responses to statutory consultation** responses were received from both Historic England and LCC. Historic England noted agreement in principle for the loss of Brady Farm. In mitigation it was requested that

material from Brady Farm be re-used elsewhere within the scheme. The hybrid approach to the design of a replacement structure for Roman Ridge Road was also welcomed, but additional detail regarding the potential for rebuilding in stone was requested. This has subsequently been added to the Alternative Options Evaluation Study. Further detail was requested for the proposals at Austhorpe Lane and Crawshaw Woods. The response from LCC noted that the loss of the listed structures was deemed to represent substantial harm.

- **Meeting on 10th March 2023** with Historic England and LCC to provide an update on the preferred options for HUL4/14 and HUL4/15. The results of the structural survey for HUL4/20 Crawshaw Woods were also presented, confirming the ability to raise the cast iron structure. The new design for the bridge were presented. Updates were also provided regarding the widening of HUL4/21 Austhorpe Lane Overbridge to two lanes with integrated footbridge. Discussions were also held regarding the documents to be submitted as part of the LBC application and the proposed conditions, to include a Conservation Implementation Management Plan for HUL4/20 Crawshaw Woods.

2.3.3 Engagement with Historic England and LCC will continue throughout the period running up to submission and determination of the LBC and TWAO application and subsequently into the discharge of conditions to be attached to the Listed Building Consents.

3. PLANNING LEGISLATION AND POLICY CONTEXT

3.1 Legislation

Planning (Listed Buildings and Conservation Areas) Act 1990

3.1.1 The Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended) is the principal statutory instrument that must be considered in the determination of any application affecting listed buildings and conservation areas.

3.1.2 Under Section 16 of the Act, listed buildings are protected against unauthorised works, being those works not authorised by the local planning authority or the Secretary of State. This process is embodied within Listed Building Consent (LBC). The Act further states that 'the local planning authority or, as the case may be, the Secretary of State may grant or refuse an application for listed building consent and, if they grant consent, may grant it subject to conditions' (Section 16 (1)). Furthermore, 'in considering whether to grant listed building consent for any works the local planning authority or the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses' (Section 16 (2)).

3.1.3 Section 17 of the Act deals with conditions attached to a Listed Building Consent, including the preservation if particular features, making good after completion of the works and use of original materials. Of relevance to this application, Section 17 (2) states that a condition 'may also be imposed requiring specified details of the works (whether or not set out in the application) to be approved subsequently by the local planning authority or, in the case of consent granted by the Secretary of State, specifying whether such details are to be approved by the local planning authority or by him'.

3.1.4 In considering whether to grant planning permission which affects a listed building, Section 66 (1) of the Act requires that the local planning authority, or the Secretary of State 'shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses'.

3.2 National Planning Policy

National Planning Policy Framework (NPPF; MHCLG 2019)

3.2.1 The NPPF sets out the Government's planning policies for England and how these should be applied to contribute to the achievement of sustainable development. Section 16 of the NPPF sets out a series of policies that are a material consideration to be taken into account in development management decisions in relation to the heritage consent regimes established in the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990.

3.2.2 The NPPF describes the importance of being able to assess the significance of heritage assets that may be affected by a development proposal. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. Furthermore, they should take this assessment into account when considering the impact of a proposal on a heritage asset (paragraph 190). Significance is defined in Annex 2 as 'the value of an asset because of its heritage interest. This interest may be archaeological, architectural, artistic or historic and can extend to its setting'. The setting of a heritage asset is defined in Annex 2 as 'the surroundings in which a heritage asset is experienced'. The level of detail should be proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance (paragraph 189).

3.2.3 In determining planning applications, local planning authorities should take account of:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- the desirability of new development making a positive contribution to local character and distinctiveness (paragraph 192).

3.2.4 Paragraphs 193 to 196 of the NPPF introduce the concept that heritage assets can be harmed or lost through alteration or destruction or development within their setting. This harm ranges from less than substantial through to substantial. With regard to designated assets, paragraph 193 states that great weight should be given to an asset's conservation and the more important the asset, the greater the weight should be. Distinction is drawn between those assets of exceptional interest (e.g. grade I and grade II* listed buildings), and those of special interest (e.g. grade II listed buildings). Any harm or loss of heritage significance requires clear and convincing justification, and substantial harm or loss should be wholly exceptional with regard to those assets of greatest interest (paragraph 194).

3.2.5 In instances where development would cause substantial harm to or total loss of significance of a designated asset, consent should be refused unless that harm or loss is 'necessary to achieve substantial public benefits that outweigh that harm or loss' (paragraph 195). In instances where development would cause less than substantial harm to the significance of a designated asset, the harm should be weighed against the public benefits of the proposal including its optimum viable use (paragraph 196).

Planning Practice Guidance (MHCLG 2019)

3.2.6 The Planning Practice Guidance (PPG; MHCLG 2019) is a government produced on-line document that expands on national policy presented in the NPPF. It expands on terms such as 'significance' and its importance in decision making. The PPG clarifies that being able to properly assess the nature, extent and the importance of the significance of the heritage asset and the contribution of its setting, is very important to understanding the potential impact and acceptability of development proposals (paragraph 008).

3.2.7 The PPG discusses how to assess if there is substantial harm. It states that what matters in assessing if a proposal causes substantial harm is the impact on the significance of the asset. It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed (paragraph 017).

3.2.8 The NPPF indicates that the degree of harm should be considered alongside any public benefits that can be delivered by development. The PPG states

that these benefits should flow from the Proposed Development and should be of a nature and scale to be of benefit to the public and not just a private benefit and would include securing the optimum viable use of an asset in support of its long term conservation (paragraph 020).

Historic England Advice

3.2.9 Historic England has published a series of Good Practice Advice (GPA) notes, of which those of most relevance to this appraisal are GPA2 - Managing Significance in Decision-Taking (March 2015) and Advice Note 12 Statements of Heritage Significance (Oct. 2019).

3.2.10 GPA2 emphasises the importance of having a knowledge and understanding of the significance of heritage assets likely to be affected by the development and that the 'first step for all applicants is to understand the significance of any affected heritage asset and, if relevant the contribution of its setting to its significance' (paragraph 4). Early knowledge of this information is also useful to a local planning authority in pre-application engagement with an applicant and ultimately in decision making (paragraph 7).

3.2.11 Advice Note 12 outlines a recommended approach to assessing the significance of heritage assets in line with the requirements of NPPF. It includes a suggested reporting structure for a 'Statement of Heritage Significance', as well as guidance on creating a statement that is proportionate to the asset's significance and the potential degree of impact of a proposed development. The Advice Note also offers an interpretation of the various forms of heritage interest that an asset can possess, based on the terms provided in the NPPF Glossary (Annex 2: Glossary); namely archaeological, architectural and artistic, and historic.

3.3 Local Planning Policy

3.3.1 The Leeds Core Strategy sets out the strategic policy framework for the Leeds district up to 2033. Policy P11: Conservation recognises the importance of heritage in shaping the city and aims to conserve and enhance the historic environment. Specific note is made of the contribution made by the 19th century transport network. Development proposals will be expected to demonstrate a full understanding of historic assets affected, with a requirement to produce a heritage statement assessing the significance of assets, the impact of proposals and mitigation measures to accompany development proposals.

3.3.2 The statutory development plan for Leeds is represented by the adopted Unitary Development Plan. Within this document are a number of policies

specific to the historic environment. With regard to listed buildings this includes:

- Policy N14: there will be a presumption in favour of the preservation of listed buildings. Consent for the demolition or substantial demolition of a listed building will be permitted only in exceptional circumstances and with the strongest justification.
- Policy N17: wherever possible, existing detailing and all features, including internal features, which contribute to the character of the listed building should be preserved, repaired or if missing replaced...

3.3.3 Also of relevance to this report is Policy N13 which states that 'the design of all new buildings should be of high quality and have regard to the character and appearance of their surroundings. Good contemporary design which is sympathetic or complementary to its setting will be welcomed'.

4. HERITAGE ASSETS AND THEIR SIGNIFICANCE

4.1 Heritage Baseline

Overview

4.1.1 The route reflects the agricultural development of the landscape until the arrival of the industrial age in the late 18th and 19th century. This had a striking effect on the landscape, particularly at the western end with the expansion of Leeds as an industrial centre.

4.1.2 The railway forms an important part in this industrialisation, cutting through the rural landscape to link the burgeoning towns. The railways took over from the canals in transporting goods and people across the country. The canals were focussed around the existing waterways, linking the industrial towns of the midlands and northwest. The railways provided the opportunity to link more rural areas and smaller towns to encourage a larger movement of people, and thus a workforce, over goods.

4.1.3 The East Leeds to Selby line was one of the first main lines to open after the Liverpool and Manchester Railway. The line was granted permission in 1830 and was constructed to the designs of notable engineer James Walker. A number of Walker's structures still remain as part of the line which has continued to grow and evolve as demand for its services has increased and railways have modernised. A survey of the structures was carried out in 2014 (Baxter et al) and, as a result, a number of structures, principally bridges, were given Listed Building status.

Landscape, Topography and geology

4.1.4 West Yorkshire has a diverse landscape character including open moorland, agricultural countryside, medieval villages and hamlets, market towns and urban centres such as Leeds, Bradford and Wakefield. The western border of the landscape is formed by the high Pennine watershed that slopes eastwards towards the Vale of York. The eastern Pennine slopes are characterised by five principal rivers; the Wharfe, Aire, Calder, Colne and Holme which drain eastwards. The region can be subdivided into three distinct geological groups: the Mill Stone Grit group, the Pennine Coal Measures and the Magnesian Limestone Belt with undifferentiated Permian sandstones. All of these factors have had an influence of the historic development of the area, particularly the rivers and coal measures which were important factors in West Yorkshire's industrial expansion. The geology has also influenced building patterns with a cohesion in the use of limestone in buildings and structures which give the area its characteristic vernacular.

Historic Development

4.1.5 During the early Medieval period, West Yorkshire had an agrarian based economy. Settlements consisted of small, nucleated villages, surrounded by regular and extensive open field systems. Towards the 15th and 16th centuries there was a shift towards an industrial based economy, the textile industry emerging first in Halifax and the Upper Calder valley.

4.1.6 By the early 17th century, the focus of the economy had shifted from agrarian to industrial, the coal fields providing a source of fuel for industry. Combined with the local availability of raw materials such as wool and the improving transport networks, rapid growth was experienced in textile and other manufacture during the industrial period. The industrial transformation of West Yorkshire meant that by the early 19th century towns were rapidly expanding. Quarries became large scale in the rural areas, workers' housing was constructed on a large scale and suburbs were developing.

4.1.7 A Leeds and Selby canal was proposed in 1769 in order to compete with the Leeds and Calder Navigation which provided the main transport route for moving raw and manufactured goods. A route was surveyed but the plans failed and attention soon turned to the railways instead. From 1814 the Leeds Mercury Newspaper had been promoting the idea of a Leeds to Selby railway and a Leeds and Hull railroad was formed in 1824. A route for the Leeds to Hull railway via Selby was surveyed by George Stephenson and Joseph Locke, but received little support due to both financial constraints and the difficult terrain. At a meeting in 1829 the Leeds and Selby railway company was founded, reviving a shortened version of the Leeds and Hull railway. The

route was resurveyed by James Walker, a prominent engineer who worked principally on marine works and docks, but who had previously provided advice to Stephenson on the Liverpool and Manchester line. The Leeds and Selby railway remains his most important railway project.

The Leeds and Selby Route

4.1.8 The Act of Parliament for the Leeds and Selby Railway was authorised in 1830, notably four months before the opening of the Liverpool and Manchester Railway, the world's first inter-urban railway. The Act suggested a single track with three passing places; however, land was purchased to accommodate four tracks at the suggestion of Walker. Walker's plans also avoided the difficulties in terrain through the use of locomotive power rather than inclined planes. In addition, much of the line was proposed to be constructed on land owned by stakeholders, immediately creating support for the venture. James Walker's altered plans were put to Parliament and accepted. Two contractors were selected, Nowell and Sons for the two mile stretch out of Leeds, and Hamer and Pratt for the remaining 18 miles.

4.1.9 The primary feature of the Leeds to Selby railway was Marsh Lane tunnel at Richmond Hill, at the time the longest tunnel in the world at 700 yards and the first open to passenger trains (the present tunnel has been substantially modified). Walker designed the tunnel to accommodate the line through the irregular topography east of Leeds, with the remainder of the track crossing the countryside via a combination of embankments and cuttings.

4.1.10 The line was constructed with a total of 43 bridges and 16 level crossings. Originally it was proposed to construct twin arch bridges to accommodate the four lines, but instead the distinctive single span 'basket' arch was employed, a feature unique to Walker's design. The choice of the single span bridge led to its own inherent problems, particularly in the stabilisation of the embankments and cuttings. A number of the bridges also failed and had to be rebuilt. Walker also favoured stone for his structures, using a combination of sandstone for the decorative elements and limestone for the facing. He did incorporate two iron bridges along the route, of which only HUL4/20 Crawshaw Woods bridge survives.

4.1.11 The railway was opened to the public on the 22nd of September 1834, delayed due to shortages of labour and materials and embankment landslides. In the 1840s, Walker designed the Hull & Selby Railway which extended the line to the docks. By 1869 the line had been lengthened from Marsh Lane to Leeds centre and from Micklefield to Church Fenton under the North Eastern Railway. A number of works were undertaken under their ownership. This included the rebuilding of many of the intermediate stations

in the house style, including Garforth Station in 1873. The Marsh Lane tunnel was widened and re-opened in 1894.

4.1.12 Crawshaw Wood Overbridge forms part of the original route, being one of two cast iron bridges erected. The bridge was constructed by the local Stanningley Ironworks, based in Leeds. The reason for using metal here remains unclear, but may have been due to concerns over the stability of the foundations (Baxter et al, 2014). The bridge provided access through agricultural fields leading to Shippen House; however, by 1915 it was also providing access for workers at the Barnbow Munitions Factory. Barnbow was the first munitions factory for filling shells and cartridges for use in the First World War. It was staffed almost exclusively by women, many of whom came from Leeds. The majority commuted to work by rail, using the Leeds to Selby line and it is likely that Crawshaw Woods Overbridge provided a means of access.

4.1.13 Repairs to the bridge were undertaken in 1943 when a new timber deck was installed[1] (Appendix 2). New deck timbers were installed above the original surface on supporting RSJs, rendering the original structure non-loadbearing. The works notes also suggest that a timber parapet had already been installed, replaced in the 1990s by steel sheet barriers. A set of drawings held by the Network Rail archives also suggest that the timber deck was replaced again in 1976, alongside repairs to the cast iron ribs[2] (Appendix 2)

4.1.14 The North Eastern Railway company was absorbed by the London North Eastern Railway in 1923, becoming part of the nationalised British Railways in 1948. In 1958 Marsh Lane station was closed followed by Hambleton in 1959 with East Garforth station opening in 1987. The Great North Eastern Railway proposed to electrify the section of the railway line between Leeds and Hambleton junction in 2005, however they lost the franchise in 2006.

4.2 Significance of Assets

4.2.1 The statement of significance has been assessed using a combination of desk-based sources and visual inspections. Key sources include the official designation reports (included at Appendix A) as well as the Statement of Significance undertaken by Alan Baxter to inform the early stages of this project (included at Appendix C). The report by Alan Baxter Ltd was used to inform the designation of a number of structures along the railway and

[1] Network Rail Archive Accession No. 497 LNER Garforth Bridge No 20 Leeds And Selby Branch. 1943

[2] Network Rail Archive Accession No. 497 Leeds To Selby Overbridge No 20 Renewal Of Timber Deck And Repairs To Ci Ribs. 1976

provides a comprehensive discussion of the architectural and historic interest of the railway. It is not the intention of this report to repeat this information.

4.2.2 Reference has also been made to the 2014 overview of significance for historic railways prepared as part of the National Heritage Protection Plan commissioned by Historic England. This sets out information regarding the significance of historic railway infrastructure in order to guide Historic England in managing change to the historic railway network, specifically in response to current programmes of planned change, including electrification.

Listed buildings

4.2.3 Forming part of the railway are a number of designated structures which highlight the importance of the historic railway itself. These structures were designated in 2015 after a comprehensive review of the line. The reasons for listing mainly focused on the uniform and unusual design attributed to James Walker and William Burges. These have group value, designed to the same design aesthetic and materials. Other railway structures were designated due to their individuality in design and construction, but forming part of the cohesive railway and contributing to the group value. These structures have historic interest as part of the Leeds and Selby Railway, one of the world's oldest working railways, as well as architectural interest in their design and execution.

4.2.4 Structures associated with original Leeds to Selby railway are regarded to have group value, as part of one of the world's earliest railways. The majority were constructed to a common design, one that was unique to the Leeds to Selby line and represent a feat of engineering specifically designed for their location. Variations to these are limited and largely represent later additions; however, two cast iron bridges were constructed as part of the original line. Only one survives extant, Crawshaw Woods Overbridge (HUL4/20).

HUL4/20 Crawshaw Woods Overbridge

4.2.5 Crawshaw Woods Overbridge (HHUL4/20) forms part of the original Leeds to Selby railway built between 1832-4. It was designed by Walker and Burges' and currently carries a bridleway over the over the railway. It is also used by agricultural vehicles but is not designated as a public highway.

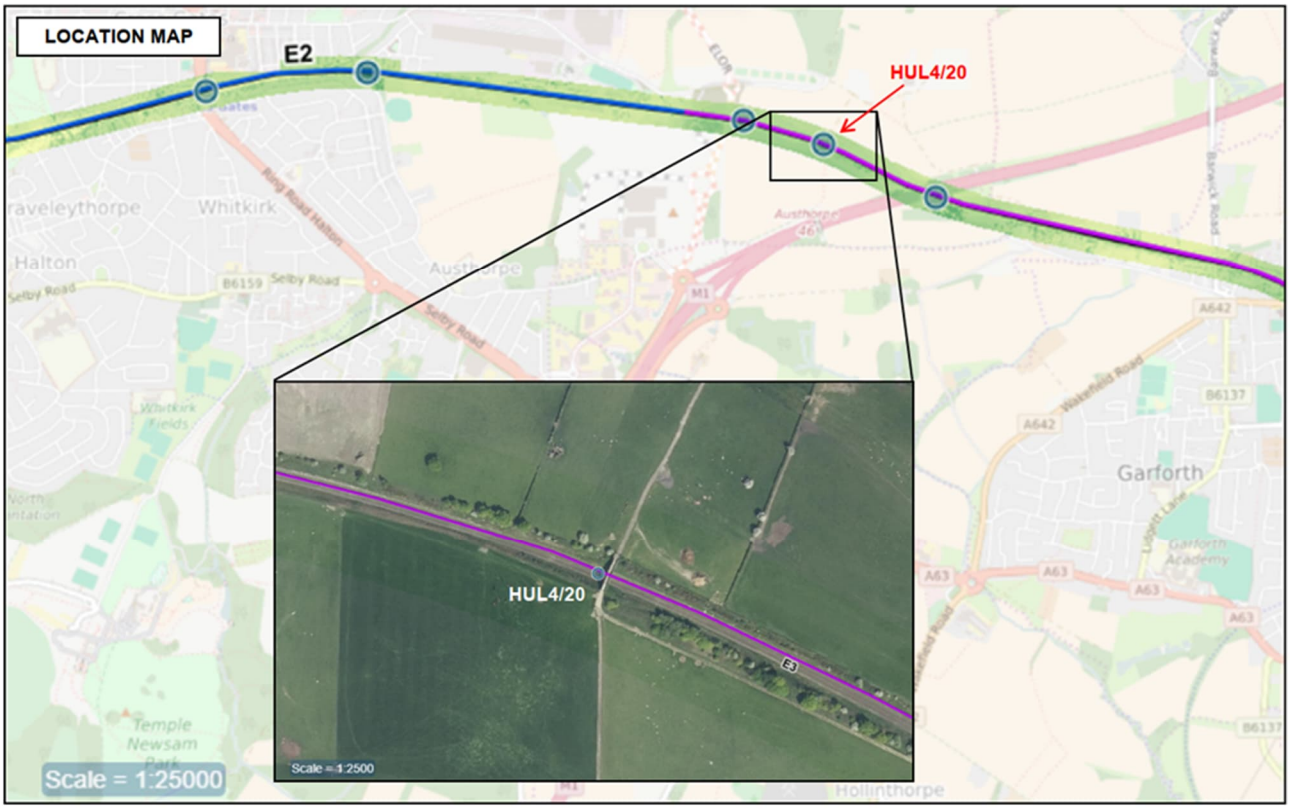

Figure 1 – Location Plan

Description

4.2.6 Crawshaw Woods bridge, HUL4/20 (NHLE 1419062; listed as Crawshaw Woods (Shippen House Farm) bridge was designed by Walker and Burges as one of only two cast-iron bridges built over the Leeds and Selby railway 1830-34. The bridge comprises a segmental cast-iron single arch with a 50 ft span with pierced balustrade, made by Stanningley Ironworks in Leeds. The span is formed by three arches with pierced detailing to the outer spandrels. The arches spring from quarry faced sandstone abutments with impost band and chamfered masonry above. The parapet is wrought iron with simple balustrade, ending in curved piers. Slotted in behind this are sheet steel parapets added in the 1990s, obscuring the parapets from deck level. The deck itself is an addition of the 1940s, renewed in the 1970s and strengthened in 2006. The deck is raised above the original on longitudinal girders and is structurally independent, rendering the cast iron structure non-load bearing. The decking itself is timber.

Figure 2 – Elevation from track

Figure 3 – Parapet detail

Figure 4 – Timber decking and steel parapets

Significance

4.2.7 The bridge is of particular historic interest as the earliest cast-iron bridge still in-situ over an operational railway in the world. This gives the structure elevated significance over and above its Grade II listed status. Additional historic interest is provided by the subsequent association of the bridge with the nearby scheduled monument of Barnbow National Filling Factory, providing access for many of its workers.

4.2.8 Architecturally the bridge is of interest due to the use of cast iron over the stonework favoured elsewhere. This also provides evidential interest in reflecting the ability of the original engineers to overcome the problems presented by the local geology. It is also architecturally interesting in its construction with the incorporation of aesthetic elements into what is essentially a utilitarian structure. This aesthetic has been degraded by the insertion of the steel parapets and the bridge itself no longer functions as a load bearing structure. However, it remains in its original use and continues to provide access over the railway.

5. DETAILED PROPOSALS

5.1 Description of proposals

5.1.1 The TRU project involves the electrification of the line between Leeds and York . As part of the electrification of the line it is necessary to increase clearance under existing underbridges. The majority of structures can accommodate this increase without the requirement for physical intervention; however, this is not possible at Crawshaw Woods. A number of options have been considered in order to gain clearance, as presented in the accompanying Alternative Options Evaluation Studies (AEOS), including track lower and track slue. However, it remains necessary to do extensive work to Crawshaw Woods Overbridge.

5.1.2 The proposed works to the bridge are presented in the following drawings which form part of this application:

- 151666-TRA-00-HUL4-DRG-R-SG-320001 – Location Plan
- 151666-TRA-00-HUL4-DRG-R-SG-320002 – Proposed Plan
- 151666-TRA-00-HUL4-DRG-R-SG-320003 – Elevations West
- 151666-TRA-00-HUL4-DRG-R-SG-320004 – Elevations East
- 151666-TRA-00-HUL4-DRG-R-SG-320005 – Proposed Sections
- 151666-TRA-00-HUL4-DRG-R-SG-320006 – Existing Sections

5.1.3 The proposal is to lift the bridge, build up the existing parapets with re-used stone, and replace the cast iron superstructure at a higher level.

5.1.4 The cast iron structure would be dismantled piece by piece, to be reconstructed 1.4m higher than present. The additional height will be achieved by adding additional stone courses to the existing abutments. The wing walls would also be removed and reconstructed at a higher level.

5.1.5 The cast iron elements would be removed form site for restoration prior to being reconstructed. A condition survey of the bridge has identified a number of defects which could be repaired offsite. It did not identify a requirement to replace any element. The additional courses of stone for the abutments would be in matched stone taken from elsewhere within the scheme.

5.1.6 Parapet works would be required to ensure consistency with safety. The modern sheet steel parapets would be removed and replaced with something more sympathetic, to be agreed by condition. In addition, a new deck would be installed above the non-structural cast iron arches, to provide the public right of way and private vehicle access over the railway.

5.1.7 A detailed methodology for deconstruction, restoration and reconstruction will be provided in the Conservation Implementation Management Plan (CIMP), to be agreed with statutory consultees prior to works commencing.

6. IMPACT OF PROPOSALS

6.1 Impacts to Heritage Assets

6.1.1 Crawshaw Woods Overbridge (HUL4/20) will be significantly altered as part of the scheme. The heightening of the abutments and the reconstruction of the deck will involve permanent physical changes to the structure; however, the retention and restoration of the bridge will result in the retention of the key historic element of the structure. The use of re-used stone in the abutments will result in little alteration to the aesthetic of the structure and the key feature of the cast iron arch. In addition, the opportunity to restore the ironwork is considered to be beneficial to its heritage significance, alongside the removal of the unsympathetic sheet steel parapets. The new parapets will be higher as a result of increased safety needs associated with electrification; however, the design will be more appropriate and reflect the historic arrangement.

6.1.2 Taking this into consideration, it is concluded that there will be less than substantial harm to the heritage asset.

6.2 Mitigation and Compensation

6.2.1 Significant optioneering has been undertaken to identify a suitable solution for Crawshaw Woods which limits harm to the structure. In addition embedded mitigation has been incorporated into the final design, including:

- The retention of historic elements, namely the cast ironwork, to preserve the historic and architectural significance of the structure;
- The incorporation of stonework from the removed bridge to maintain the aesthetic of the retained historic elements;
- The design of new elements to mirror or complement the historic aesthetic; and
- Repair works to be carried out to retained historic elements to prolong its lifetime.

6.2.2 In addition to the embedded mitigation, compensation for the harm caused will also be secured through the planning process. This will take the form of planning conditions, to include:

6.2.3 Archaeological recording of the bridge. The level of recording will be agreed with the statutory authorities and in accordance with an agreed Written

Scheme of Investigation. It will be consistent with the recording levels set out within Historic England guidance;

6.2.4 A Conservation Implementation Management Plan (CIMP) to further define the mitigation and compensation measures for the heritage assets affected. The document will set out the methodology for demolition and construction of structures, as required, and will also set out any measures for improving and/ or enhancing the setting and sustainability of heritage assets affected. This includes maintenance schedules to secure the long term condition of heritage assets affected. A draft CIMP is provided as part of this LBC application; and

6.2.5 Detailed design drawings of the reconstructed structure, including details of any new elements, including the parapet design. The design details to be signed off by Leeds City Council and Historic England.

6.3 Public Benefits

6.3.1 The strategic benefits of the project are presented in the Statement of Aims (Document NR 04) which accompanies the TWAO application. In summary, TRU is an important commitment made by the Secretary of State for Transport that aims to create a better performing railway that passengers can depend on; one that provides more trains, more seats and creates a better-connected North. Specifically it will support the Government in providing a network which:

- Provides the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs;
- supports and improves journey quality, reliability, and safety;
- supports the delivery of environmental goals and the move to a low carbon economy; and
- joins up our communities and link effectively to each other.

6.3.2 More locally, the Transpennine route is a key transport corridor for providing connections between cities (and Manchester Airport) in the North of England and its upgrade will support the delivery of economic growth and “levelling up” opportunities across the North of England.

6.3.3 The Scheme is a key contributor towards the delivery of the TRU and the full realisation of the aims of the overall TRU programme of works. The overall benefits of TRU will be:

- an improved journey time for Leeds – Manchester Victoria of 43-44 mins;
- an improved journey time for York to Manchester Victoria of 67-69 mins;
- performance of the Transpennine Route to be 92.5% or higher each period;

- freight paths/rights to be retained as existing; and
- a contribution to Network Rail's Decarbonisation Strategy and climate policy.

6.3.4 The Scheme includes the construction of OLE to electrify the railway. This will assist in the decarbonisation of the railway network. Electrification also assists with journey time and performance by allowing trains to accelerate faster, and brake more efficiently. The project will improve the provision of public transport (rail) through the local area and across the region in the long term, due to the intended provision of longer, faster and more reliable rolling stock on the route, alongside the reduction in freight across the road network.

6.3.5 In section 4.9 of the Leeds City Council Core Strategy (2019) notes that the electrification of the Transpennine route is an important part of its sustainable transport plan.

6.3.6 The City Council 'Connecting Leeds Transport Strategy' states that "The Transpennine Route Upgrade will enhance connections to Huddersfield and Manchester, providing reliable connections and quicker services." The delivery of the TRU is a major element of the West Yorkshire Combined Authorities Transport Strategy 2040.

6.3.7 Significant residual beneficial effects arising from the operation of the wider TRU have been previously identified in the approved Huddersfield-Westtown TWA Order Inquiry from December 2021, recognising the improved journey times, reliability, and capacity at the Local Authority area and in turn the sub-regional and regional level. These improvements will bring direct significant benefits to local businesses and the labour market through improved access to the local regions.

6.3.8 As part of the TRU Programme, the TWAO for Huddersfield to Westtown Improvements was approved by the Secretary of State in November 2022. The TWAO had nine Listed Building Consents all of which were approved. The Inspector noted in their report that 'I find that, although the proposals would result in harm to a number of designated heritage assets, the tests set in paragraphs 200 to 202 of the NPPF are met, in that that harm would clearly be outweighed by the public benefits of the Scheme'. In those cases where there would be substantial harm to the significance of two Listed Buildings, I find that the harm to the heritage assets is necessary to achieve those public benefits.'

6.3.9 The Inspector comments further on the public benefits outweighing the harm 'As set out earlier in this report, the pressing need for the Scheme has been clearly demonstrated and the public benefits that would flow from its implementation are substantial [3.37, 8.88]. These benefits would include a

number of heritage and other benefits that would be secured through the interventions to the designated assets [3.136, 3.140, 3.147, 3.164, 3.187, 3.193].'

7. CONCLUSIONS

7.1.1 The TRU project will bring substantial benefits to the transport network in the form of faster and more energy efficient trains and will contribute to the UK Government's climate change targets. To facilitate this, works are required to the historic railway network, including physical works to a number of designated structures. Works to Crawshaw Woods Overbridge (HUL4/20) fall within these required works and are essential in achieving the proposed electrification of the route. Without works to the listed structure then the TRU Programme cannot be delivered and the benefits of the TRU Programme will not be realised.

7.1.2 The Transpennine route has evolved from an historic network of railways, principally the Leeds to Selby Railway which was conceived and built in the 1830s. It was constructed at the start of the Railway Age, conceived prior to the completion of the Liverpool and Manchester Railway. Being completed prior to the railway mania of the 1840s and 50s, it represents a significant heritage asset in its own right. Its significance is increased by the involvement of pioneering railway engineers including James Walker, responsible for designing many of the structures along the route.

7.1.3 However, the route was designed to accommodate the technology of the time and is unable to accommodate the required upgrades. The upgrades are required to improve journey times and capacity between key destinations, to improve overall reliability and resilience, and deliver environmental benefits from both a modal shift to rail and the part electrification of the Transpennine route.

7.1.4 Where harm will be caused to designated assets, a process of optioneering has been undertaken. This considered options which did not result in physical impacts. This included deviations from current Network Rail standards which limited the number of structures affected. As a result, four Grade II listed structures have been identified as presenting engineering challenges and line possessions which could not be accommodated. A number of options were then considered to limit the harm caused to the structures; however, it was concluded that modifications are required to Crawshaw Woods Overbridge.

7.1.5 The retention of the key historic elements of the bridge and the sympathetic approach to the new works have kept the harm to a minimum, therefore it is considered that the harm lies at the lower level of the scale and the benefits associated with the overall upgrade should be weighed appropriately.

7.1.6 The less than substantial harm caused to the designated asset of Crawshaw Woods Overbridge needs to be assessed in line with the test presented in the NPPF (paragraph 202). Thus the harm needs to be weighed against the substantial public benefits of the proposal, which have been recognised at public inquiry by the Huddersfield to Westtown Inspector and confirmed by the Secretary of State for Transport.

8. BIBLIOGRAPHY

Alan Baxter and Associates Ltd. 2019. Transpennine Route Upgrade: Route-wide Statement of Significance

Alan Baxter and Associates Ltd. 2014. NTP-E Statement of History and Significance: East of Leeds

Department of Communities and Local Government. 2019. National Planning Policy Framework (https://www.gov.uk/government/publications/national-planning-policy-framework--2)

Historic England. 2015. GPA2: Managing Significance in Decision-taking (https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/gpa2/)

Historic England. 2016. Understanding Historic Building: A Guide to Good Recording Practice (https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/heag099-understanding-historic-buildings/)

Historic England. 2017. GPA3: Setting and Views (https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/)

Historic England. 2019. GPA12: Statements of Heritage Significance (https://historicengland.org.uk/images-books/publications/statements-heritage-significance-advice-note-12/heag279-statements-heritage-significance/)

National Heritage List for England (https://historicengland.org.uk/listing/the-list/)

North Yorkshire County Council. 2010. Historic Landscape Character: North Yorkshire, York and the Lower Tees Valley (https://archaeologydataservice.ac.uk/archives/view/nyorks_hlc_2013/)

RPS. 2014. National Heritage Protection Plan: NHPP 4B3: Transport and Communications 4B3.102: Historic Railway Buildings and Structures: Overview of development pressure and review of significance: Volume 1 Overview and Significance and Investment Trends

West Yorkshire Joint Services and Historic England 2017. Leeds Historic Landscape Characterisation: Leeds (https://archaeologydataservice.ac.uk/archives/view/west_yorkshire_hlc_2017/index.cfm)

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APPENDICES

Appendix A – List Description

Heritage Category: Listed Building

Grade: II

List Entry Number: 1419062

Date first listed: 05-Mar-2015

Location Description: Crawshaw Woods Bridge, near Shippen House Farm, Leeds, West Yorkshire. Located at NGR: SE 38744 34201.

District: Leeds (Metropolitan Authority)

Parish: Non Civil Parish

National Grid Reference: SE3874534202

Summary

Railway cast-iron overbridge. c1830-34 by James Walker of Walker & Burges for Leeds & Selby Railway. Contractor Stanningley Ironworks.

Reasons for Designation

Crawshaw Woods Bridge, HUL 4/20, of c1830-34 designed by James Walker of Walker & Burges and constructed by Stanningley Ironworks for Leeds & Selby Railway, is listed at Grade II for the following principal reasons:

* Historic interest: as a cast iron overbridge built between 1830 and 1834 on the pioneering, first phase Leeds & Selby Railway, believed to be the earliest cast iron bridge in the world still in-situ over an operational railway, and used as the main access bridge to Barnbow Munitions Factory during the First World War;

* Engineer: designed by James Walker, a renowned C19 engineer, who constructed the line with an extra wide four-track bed with single-span overbridges mainly built in stone;

* Architectural interest: as a relatively early cast iron, single-span, segmental-arched bridge with wrought iron railing balustrades and curved mushroom-top stone piers;

* Intactness: the bridge remains intact.

History

In the early C19 Leeds was a major textile manufacturing centre and needed a good transport connection to the sea for the import of raw wool and export of finished cloth. The pre-existing river and canal system to Hull was slow and expensive and a railway link from Leeds to Selby and then onwards to Hull was considered to have potential to improve the transport infrastructure, and could also benefit local coal mine and quarry owners.

In 1825 George Stephenson was asked to survey a possible route to Selby. However, financial uncertainties led to the project being postponed and Stephenson concentrated on the Liverpool & Manchester Railway instead. In 1829 the engineer James Walker was asked to review the Stephenson proposal. Walker (1781-1862) is best known for designing harbours, docks and lighthouses, having been appointed consulting engineer to Trinity House in 1825. However, he also played an important role in the early development of the railway system. In 1829 he went into partnership with his assistant, Alfred Burges (1797-1886, father of architect William Burges), though Burges does not appear to have been involved in Walker's railway projects. Having resurveyed the route Walker suggested some adjustments to enable the use of horse or locomotive power without the inclusion of inclined planes worked with stationary steam engines. The proposed route ran from Leeds to the River Ouse at Selby via Crossgates, Garforth and Milford, a distance of just over 19 miles. Walker also suggested that the plan put before Parliament allowed sufficient land to be purchased for the construction of a four track line. It was authorised by Parliament in 1830, four months before the pioneering Liverpool & Manchester Railway opened, and was fully opened by December 1834.

Walker acted as consulting engineer, and in common with other early railway builders, had a resident engineer for the day-to-day supervision and some of the detailed design, using Thomas Dyson, and, from 1832, George Smith. Nowell & Sons of Dewsbury and Homer & Pratt of Goole were the two contractors. The scale of the project was unusual because of the decision to provide four tracks. This resulted in a trackbed of 66ft (20.1m) rather than the typical two track line which had a trackbed of 30ft (9.1m); even Brunel designing for his broad-gauge track used that dimension. The extra width gave the railway a quite different character from the simple lines and waggonways that had preceded it. The most distinctive characteristic of the line was the design for the overbridges, which had to span the four tracks rather than the usual two tracks. Walker did not use a twin-span bridge, but designed a bridge with a single, basket arch (three-centred arch where the height is less than half the span) and an unprecedented span of around 60ft (18.2m). In the event only a twin-track line was laid, and in many cases one side of the arch is obscured by the earth embankment.

The bridges were built of stone with the exception of a brick underbridge at Barwick Road Garforth, and two iron bridges, one of which survives at Crawshaw Woods, also designed by Walker. The Crawshaw cast-iron overbridge was constructed by Stanningley Ironworks, and, together with the demolished bridge, was the first of its

kind completed by the firm. They subsequently cast other similar bridges over the River Calder on the Leeds & Huddersfield Railway. The Crawshaw Woods Bridge is believed to be the earliest iron railway bridge in the world still in situ over an operational railway. Two earlier iron bridges are known to have been designed by George Stephenson, but only one survives and it has been relocated to the National Railway Museum in York.

In the First World War the bridge was the main access bridge to the Barnbow Munitions Factory. The bridge deck was renewed in 1943 by the London and North Eastern Railway, and again in 1999. The present deck is raised above the cast-iron spans and is structurally independent. It has solid steel parapets which stand inside the unaltered, original iron railings.

Details

Railway cast-iron overbridge. c1830-34 by James Walker of Walker & Burges for Leeds & Selby Railway. Contractor Stanningley Ironworks.

Materials: Cast iron, sandstone and Bramley Fall gritstone abutments, wrought-iron balustrade.

Plan: single-span carrying track over the railway which has provision to accommodate four tracks.

The surviving cast-iron bridge of two c1830-34 cast-iron bridges on the Leeds & Selby Railway. The arch supporting the original cast-iron deck is a 50ft (15.2m) segmental span formed by three cast-iron arched girders with pierced spandrels with vertical struts, and braced by a set of X-section ties towards both outer edges and two sets of I-section ties towards the centre of the span. The stone abutments have tooled Bramley Fall stone quoins and square-cut impost bands from which the cast-iron arch springs. The inner abutment walls and the gently curving wing walls are of squared and coursed, quarry-faced, local, lower coal measures sandstone.

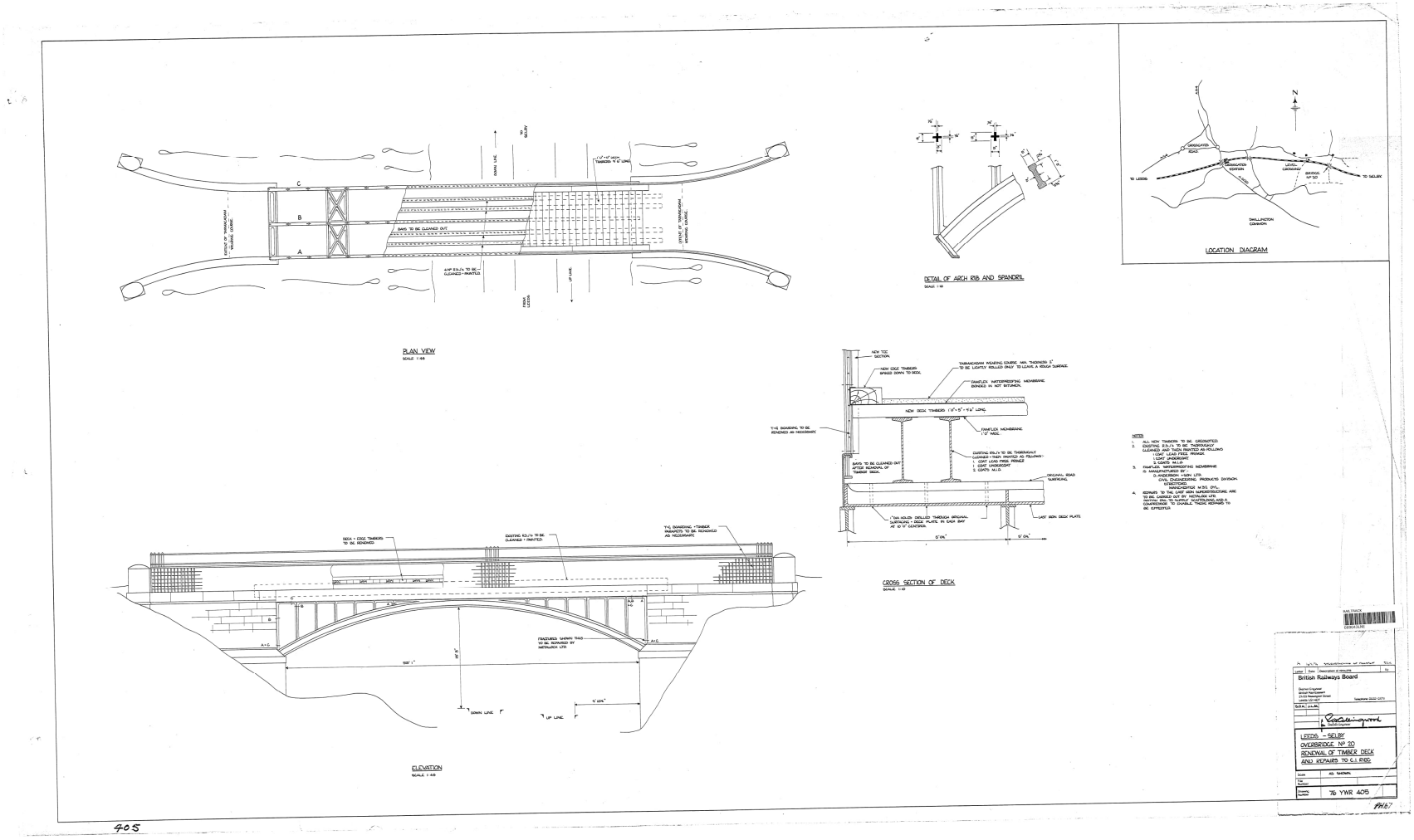
The wing walls are topped by moulded string courses. The parapets consist of wrought-iron balustrades of closely-spaced, plain railings with a plain iron handrail. They are set on top of the original deck and the string courses of the wing walls end in curved mushroom-top stone piers.

Exclusions: Pursuant to s.1 (5A) of the Planning (Listed Buildings and Conservation Areas) Act 1990 ('the Act') it is declared that the modern deck of timber planks raised above the original deck and modern, sheet steel parapets standing inside the original iron railings are not of special architectural or historic interest.

Appendix B – Archive Drawings

The Network Rail (Leeds to Micklefield Improvements) Order

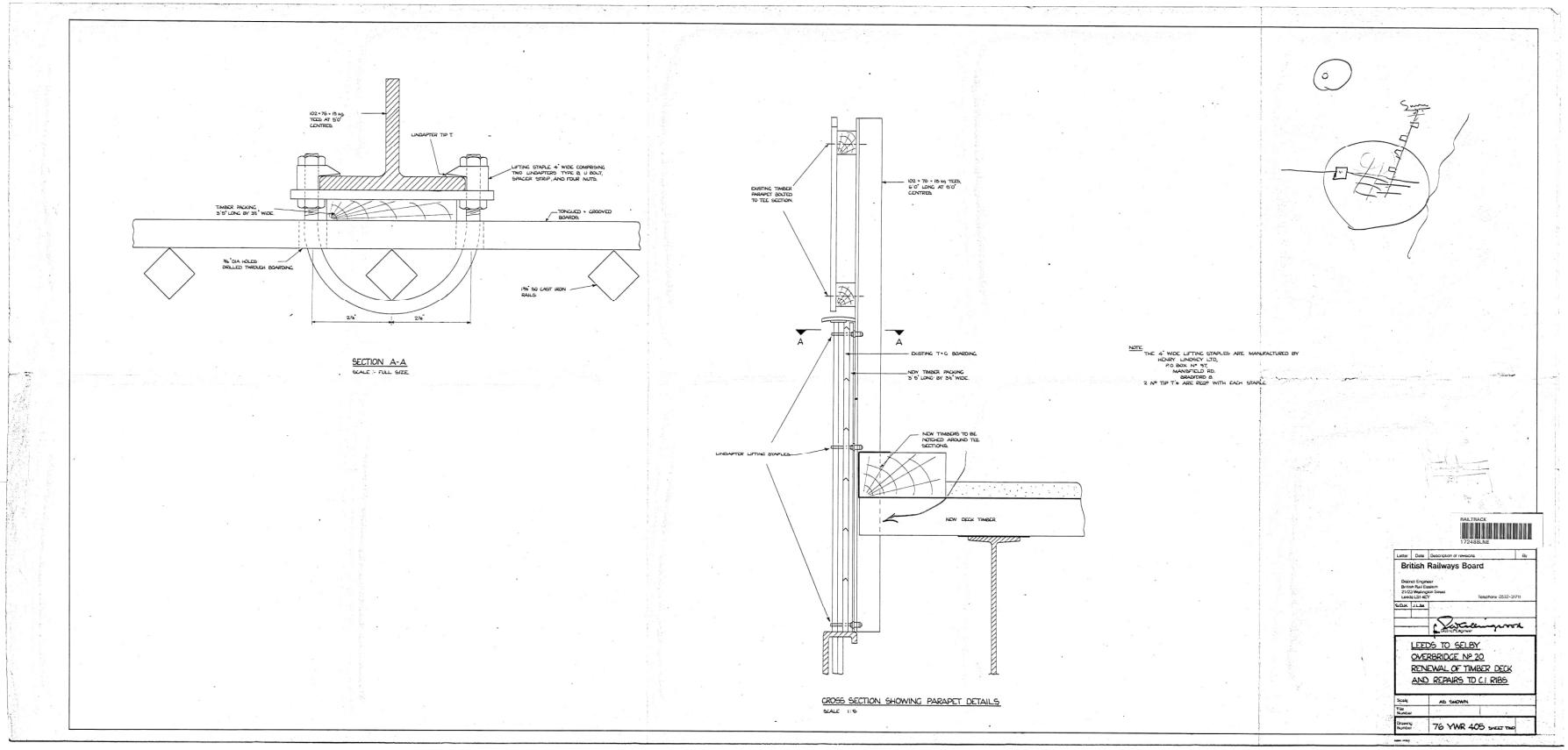
Crawshaw Woods Overbridge (HUL4/20) Heritage Statement



Network Rail Archive Accession No. 497 Leeds To Selby Overbridge No 20 Renewal Of Timber Deck And Repairs To Ci Ribs. 1976

The Network Rail (Leeds to Micklefield Improvements) Order

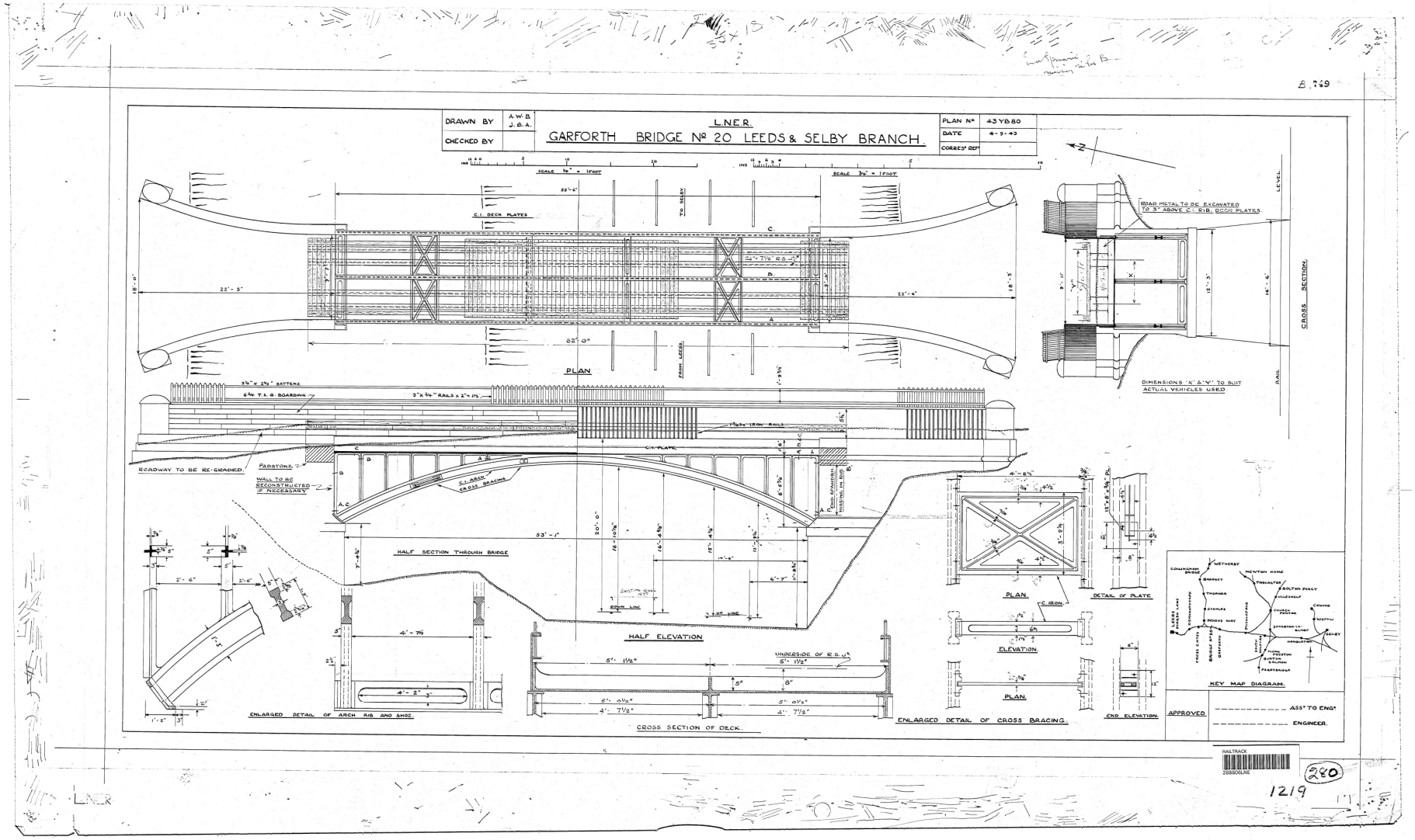
Crawshaw Woods Overbridge (HUL4/20) Heritage Statement



Network Rail Archive Accession No. 497 Leeds To Selby Overbridge No 20 Renewal Of Timber Deck And Repairs To Ci Ribs. 1976

The Network Rail (Leeds to Micklefield Improvements) Order

Crawshaw Woods Overbridge (HUL4/20) Heritage Statement



Network Rail Archive Accession No. 497 LNER Garforth Bridge No 20 Leeds And Selby Branch. 1943