Transpennine Route Upgrade

Jack Lane Underbridge (MDL1/24), Batley Carr, West Yorkshire

Historic Building Investigation and Recording

August 2025

Client: BAM Nuttall on behalf of TRU Alliance

Issue No: V. 3
OA Reference No: L11502
NGR: SE 24650 22858

oxford archaeology

Client Name:	BAM Nuttall on behalf of TRU Alliance
Client Ref No:.	MDL1/24
Document Title:	Transpennine Route West, Jack Lane Underbridge (MDL1/24), Batley Carr, West Yorkshire
Document Type:	Historic Building Investigation and Recording
Report No.:	2024-25/2405
Grid Reference:	SE 24650 22858
Planning Reference:	2025/65/90117/E
Invoice Code:	L11502
OA Document File Location:	X:\Paul\Projects\L11502_TRU_West_Project\Reports\Jack_Lane_Underbridge
OA Graphics File Location:	X:\Paul\Projects\L11502_TRU_West_Project\Reports\Jack_Lane_Underbridge
Issue No:	V. 3
Date:	08 August 2025
Prepared by:	Cat Peters
Checked by:	Paul Dunn (Senior Project Manager)
Edited by:	Paul Dunn (Senior Project Manager)
Approved for Issue by:	Alan Lupton (Operations Manager)
Signature:	

Oxford office
Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 (0)1865 980 700

Cambridge office
15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SQ

t. +44 (0)1223 850 500

Lancaster office
Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD

t. +44 (0)1524 880 250

E: info@oxfordarchaeology.com
W: oxfordarchaeology.com
Oxford Archaeology is a registered Charity: No. 285627

Transpennine Route Upgrade, Jack Lane Underbridge (MDL1/24), Batley Carr, West Yorkshire

Historic Building Investigation and Recording

Contents

List of Figures

List of Plates

SUMMARY

In March 2025, Oxford Archaeology (OA) was commissioned by BAM Nuttall to undertake an Historic Building Investigation and Recording of Jack Lane Underbridge (MDL1/24), one of a number of historic railway bridges and structures requiring such works along the Transpennine Route between Huddersfield and Westtown (Dewsbury). This document is the final written, photographic and illustrative output for the historic building recording works undertaken.

Jack Lane Underbridge (MDL1/24) is a surviving example of a cast iron beam railway bridge, commonly used in railway infrastructure in the late 1840s. It is one of eleven cast-iron structures designed by Thomas Grainger on the Leeds, Dewsbury and Manchester railway line, and one of five surviving on the operational line, all five being Grade II listed. Jack Lane Underbridge (MDL1/24) represents a relatively early acknowledgement of the inherent weakness in cast-iron level beam bridges.

Jack Lane Underbridge (MDL1/24) comprises elements which are not purely functional, including ashlar pillars, cornices and parapet railings, which are of aesthetic and architectural value. Although this survey noted that four of the balusters were likely replacements, no longer retaining the mirrored tulip-formed decorative midsections, these features survive predominantly intact. Despite evidence of corrosion and damage to the steel girders, and some vegetation, the structure overall survives in good condition, with limited alterations, receiving alterations to its decking in the early 1900s, and therefore retains legibility of its original form.

Although the works to replace the bridge deck at Jack Lane Underbridge (MDL1/24) will result in permanent alterations to the Grade II listed structure, they have been designed to retain key elements of its historic and architectural elements and will ensure that the underbridge remains a viable feature of an operational railway in the future.

This Historic Building Investigation and Recording complies with the approved Written Scheme of Investigation, and, along with the deposition of the final, associated archive, completes the archaeological condition of Listed Building Consent for the works.

ACKNOWLEDGEMENTS

Oxford Archaeology would like to thank BAM Nuttall for commissioning and facilitating this archaeological work, on behalf of the client, TRU Alliance. Thanks are also extended to Yoan Kostov of BAM Nuttall for facilitating the onboarding and site survey elements.

The survey was undertaken by Cat Peters, who also wrote the report. The figures were produced by Anne Stewardson. The project was managed by Paul Dunn, who also edited this report. Overall quality assurance was provided by Alan Lupton.

1 INTRODUCTION

1.1 Project Background

1.1.1 In March 2025, Oxford Archaeology (OA) was commissioned by BAM Nuttall to undertake Historic Investigations and Building Recordings of a number of historic railway bridges and structures located along the Transpennine Route between Huddersfield and Westtown (Dewsbury). Jack Lane Underbridge (MDL1/24) is one of these, and, as a Grade II listed structure (NHLE 1452193), required a recording level, equivalent to Historic England's Level 3 standard (Historic England 2016). This document is the final written, photographic and illustrative output for the historic building recording works undertaken.

1.1.2 The requirement for historic building recording of Jack Lane Underbridge (MDL1/24) was identified in the Heritage Statement (Network Rail 2025), submitted to support the Listed Building Consent application, and forms part of the agreed mitigation under the Listed Building Consent (Planning Reference 2025/65/90117/E). For Jack Lane Underbridge (MDL1/24), the Transpennine Route Upgrade works, to accommodate the increase in line speed, requires the replacement of the existing pair of mild steel twin half through decks with a voided reinforced concrete bridge deck, and the replacement of the internal masonry cills, handrail and walkway.

1.1.3 The Written Scheme of Investigation (WSI; Network Rail 2024) stipulating the methodology for the historic building recording works had been submitted to the Conservation Officers at Kirklees Council and the Senior County Archaeologist at West Yorkshire Archaeological Advisory Service (WYAAS) and has been adhered to in full. The associated survey work was completed on Thursday 19th June 2025.

1.2 Origins and Location

1.2.1 Jack Lane Underbridge (MDL1/24) was built between 1845 and 1847 by Thomas Grainger, principal engineer, for the Leeds, Dewsbury & Manchester Railway. It was designed to carry railway tracks over Jack Lane, allowing continued access to two mills in Batley Carr, a part rural/part industrial area between Dewsbury and Batley.

1.2.2 Jack Lane Underbridge (MDL1/24) is located within Batley Carr, historically a small village in the borough of Kirklees, but now a more urban area to the north of Dewsbury. Jack Lane Underbridge (MDL1/24) is situated approximately 1.2km north-east of Dewsbury Railway Station and approximately 1km south-west of Batley Railway Station (centred on NGR SE 24650 22858; Figure 1).

1.3 Aims and Objectives

1.3.1 The principal aim of the current report is to comply with Listed Building Consent, and to provide a permanent record of the form and survival of Jack Lane Underbridge (MDL1/24) prior to any alterations occurring. These aims were achieved by adhering to the following objectives:

- to record the historic railway bridge, to a Level 3 standard, as defined in Section 5 of the WSI, in line with the Historic England Standards (2016);
- to disseminate the results of the recording works through deposition of an ordered digital archive and detailed report with the West Yorkshire Historic Environment Record (HER); and West Yorkshire Archive Service, in accordance with the requirements of the West Yorkshire Archaeological Advisory Service (WYAAS); and
- to disseminate the results of the recording works through deposition of the digital archive and this report with the Archaeological Data Service (ADS) and submit details of the project to the Online Access to Index of Archaeological Investigations (OASIS) Project.

2 METHODOLOGY

2.1 Introduction

2.1.1 For a full detailed outline of the Methodology refer to the Written Scheme of Investigation (WSI; *Appendix A*).

2.2 Historic building survey to a Level 3 standard

2.2.1 A Level 3 record is defined as 'an analytical record' which will produce an analysis of the structure's development and use and discuss in detail the evidence on which this analysis is based (Historic England 2016).

On-site survey and recording outputs

2.2.2 *Analytical/Descriptive Record*: written records using OA's *pro-forma* record sheets were made of all principal structural elements of the bridge, as well as any features of historical or architectural significance. Particular attention was paid to the relationship between those areas of the structure where its development, and any alterations, could be observed.

2.2.3 *Drawings*: annotations and notes were made on-site on plans and elevations of the bridge provided by the client. Where appropriate, sketches were made of particular architectural details which could inform on phasing and/or alterations in use/requirements. The aim being that these would be utilised to create drawings in an industry-standard GIS package (ArcGIS Pro) to support the narrative of this report, and provide a full and final record of the structure. In the event, sketches and notes were made on-site, but no features of particular architectural interest were identified which warranted detailed drawings, and photographs have been used to support the narrative as a result.

2.2.4 *Photographic Record*: a Canon EOS 2000D digital SLR (24 megapixel) camera, with a selection of lenses, was used for the photographic record. The record comprises landscape and detailed photographs; detailed photographs of archaeological features incorporated a scale bar where appropriate/possible. The locations and directions of each photograph used in this report to support the narrative are included in Figure 2, and plans and elevations of the bridge as existing are including in Figures 2 and 3. Archival images comprise jpgs and Canon RAW format files (cr2) saved as 8-bit TIFFs (Historic England 2015b). The data is stored on two separate servers on different sites, with appropriate back-up and disaster plans in place.

2.2.5 *Archive*: a full professional archive has been compiled in accordance with current Chartered Institute for Archaeologists (CIfA; 2020) and Historic England guidelines (2015a). The digital archive will be deposited with the ADS on completion of the project.

3 HISTORIC BACKGROUND

3.1 Introduction

3.1.1 A detailed historical background of the Transpennine Route has been included within the WSI (*Appendix A*), and as such, is not reproduced fully here. A heritage statement for the entire route has also been produced (Alan Baxter Associates 2019), as well as a specific heritage statement applicable to Jack Lane Underbridge (MDL1/24) itself (Network Rail 2025). Relevant information from these three documents has been utilised to inform the narrative below, supported by additional research as applicable.

3.2 Origins and Evolution

3.2.1 Jack Lane Underbridge (MDL1/24) has its origins as part of the Leeds, Dewsbury & Manchester Railway, built between 1845 and 1847, by Thomas Grainger, principal engineer. It was designed to carry railway tracks over Jack Lane to allow continued access, westwards, to Batley, from Hanging Heaton. Grainger was one of the leading railway engineers in Scotland during the Pioneering Age of railway building (1825-1841), working alongside John Miller for the Monkland and Kirkintilloch Railway (1824-1826) and the Glasgow and Garnick Railway (1826-1831). His English work, in addition to the Leeds, Dewsbury & Manchester Railway (1845-1848) included the East and West Yorkshire Junction Railway (1846) and the Leeds and Thirsk Railway (1845-1852). Thomas Grainger is particularly known for the imaginative way in which he tailored the routes to difficult terrain and his bold use of masonry and distinctive iron bridge designs (Alan Baxter Associates 2019).

3.2.2 Jack Lane Underbridge is one of five surviving examples of cast-iron beam bridges of the original eleven constructed along the route of the former Leeds, Dewsbury & Manchester Railway, all designed by Thomas Grainger (Network Rail 2025, 19). Four of these (Toad Holes Underbridge, Ming Hill Underbridge, and George Street Underbridge) form a consecutive sequence and are in close proximity; all are Grade II listed. Jack Lane Underbridge is of slightly different design to the other three. It utilises cast-iron shallow-arched girders, recognising the inherent structural problems in constructing cast-iron beam bridges. It also includes decorative elements, including ashlar pillars, cornice and parapet railing, which are unnecessary in terms of functionality (*op cit*). Jack Lane Underbridge is a good example of a mid-nineteenth century cast iron underbridge, that is imposing in scale and displays craftsmanship in its construction and detailing (*ibid*, 18).

3.2.3 Maps from the mid-nineteenth century show that Jack Lane was a continuation of Batley Carr Road, a key access linking Batley Carr to Hanging Heaton, and that Batley Beck, to the west of Jack Lane Underbridge (MDL1/24), was a focus for woollen mill activity. Greenwood, Bingley and Teesdale's map of 1828 shows that the road is dotted by buildings, but that the wider vicinity, beyond the key roads, was open land (Plate 1).

Plate 1: Extract from Greenwood, Teesdale and Bingley's map of Yorkshire, 1828

3.2.4 By the mid-nineteenth century, the area had become increasingly industrialised, with four large woollen mills established between Batley Beck and the Gomershall and Dewsbury Turnpike Road known as New Road (later Bradford Road), and an Oil Mill to the immediate west of Jack Lane Underbridge (MDL1/24) by 1854 (Plate 2). The Ordnance Survey map of 1854 also shows an Old Tram Road to the east of Batley Beck (Plate 2). To the east of Jack Lane Underbridge (MDL1/24), Commonside retains a more rural character, demonstrated by buildings set around a triangular square, complete with inn, pump, well and pinfold, although tenter fields are also depicted, demonstrating the early impact of the woollen industry.

Plate 2: Extract from Ordnance Survey Six inch scale series, 1854

3.2.5 The area changed significantly during the second half of the nineteenth century; a result of the burgeoning textile, mining and malting industries boosted by the development and expansion of railway infrastructure, which facilitated faster transportation of raw goods and end products. To the east of Jack Lane Underbridge (MDL1/24), terraced and back-to-back housing had been constructed by 1890, eroding the previous rural character (Plate 3). Significant building had also occurred to the west, west of the mills, where the earlier fields accommodated additional mills, workers' housing, and a school (Plate 3). Close to Jack Lane Underbridge (MDL1/24), a new tramway had been added to the east of the mills, and an extra railway line, the Great Northern Railway (GNR), had been added to the west, with resultant neighbouring railway bridge to the west of Jack Lane Underbridge (MDL1/24; Plate 3), requiring the loss of the Oil Mill. A small railway station had also been established approximately 90m to the north-east, annotated Staincliffe and Batley Carr Station, constructed by LNWR, on the 1922 Ordnance Survey map. This station opened in 1878 (Network Rail 2025, 14).

Plate 3: Extract from Ordnance Survey Town series, 1890

3.2.6 In the early 1900s, the deck of Jack Lane Underbridge (MDL1/24) was rebuilt with riveted steel beams and transverse joints; the only recorded notable changes to the bridge since its construction (Network Rail 2025, 5).

3.2.7 The wider area continued to be increasingly built-up into the early twentieth century, particularly to the west of Jack Lane Underbridge (MDL1/24), where the number and size of mills expanded (Plate 4).

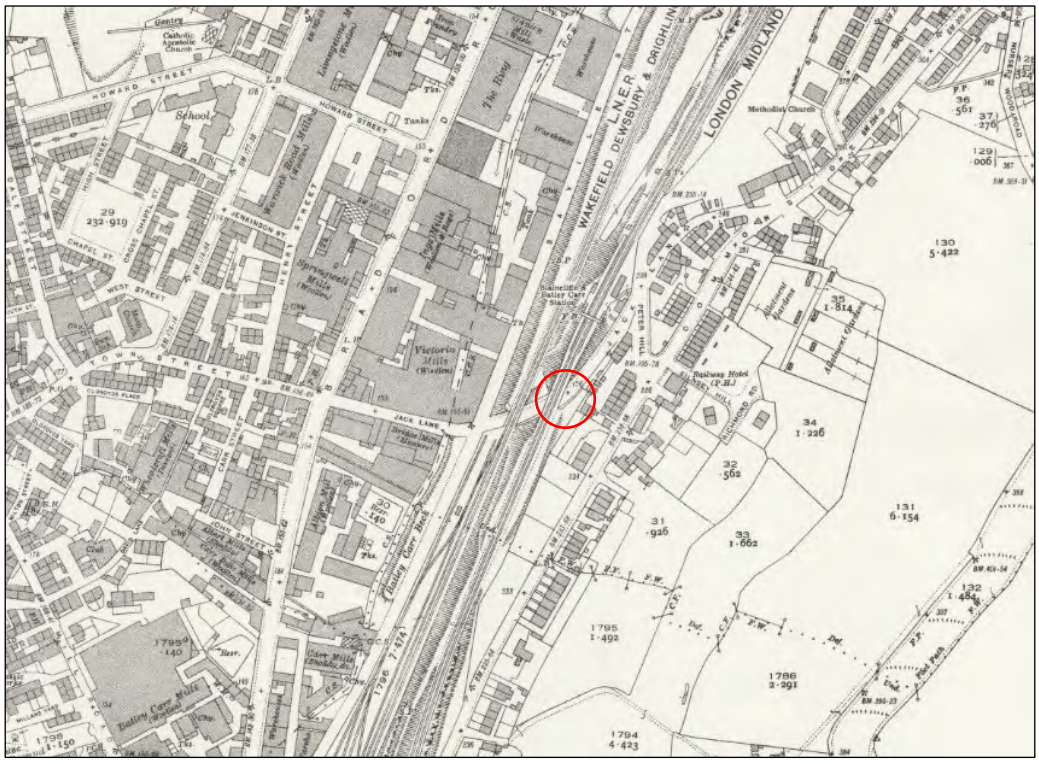


Plate 4: Extract from Ordnance Survey 25 inch scale series, 1941

3.2.8 By 1956, the former Staincliffe and Batley Carr Station to the north-east appears to be non-operational, although the remainder of the area in the vicinity of Jack Lane Underbridge (MDL1/24) appears relatively unchanged (Plate 5).

Plate 5: Extract from Ordnance Survey 1:1250 scale series, 1956

3.2.9 The railway between Dewsbury and Batley closed in September 1964, resulting in the removal of the former GNR Dewsbury and Batley Underbridge on Jack Lane, to the west of railway over Jack Lane Underbridge (MDL1/24; Network Rail 2025, 16). The character of the wider

area remained largely unchanged. Since the mid-twentieth century, the area has become increasingly residential as a result of the decline in the textile industry, the setting of Jack Lane Underbridge (MDL1/24) still features notable surviving large mills buildings, for example along Jack Lane to the west.

4 RESULTS OF THE SURVEY

4.1 Introduction

4.1.1 The survey was undertaken on Thursday 19th June 2025, in sunny conditions. Brightness and shadows have affected the photographic output. Access was gained from publicly accessible areas, to the north-east and south-west of Jack Lane Underbridge (MDL1/24), at road level; adjacent areas, in privately owned land, were not accessed. Access was not gained at track level.

4.2 Survey Results

4.2.1 Jack Lane ascends quite steeply from the west, beginning its ascent to the west of Jack Lane Underbridge (MDL1/24), from Batley Beck, with a particularly long, steep ascent from the bridge north-eastwards. On the north-east side of the bridge, the angle of Jack Lane is sharper, and this, as well as the ascent, necessitated substantial abutments and wing walls.

4.2.2 Jack Lane Underbridge (MDL1/24) is a single span skew shallow arched cast iron beam underbridge constructed from rectangular, rusticated stone blocks with a plinth (Plates 6 and 7), and moulded cornice with 'demi-acorn' finials at the corners as the impost or springing band (Plate 8); Historic England's list entry records them as such (Historic England 2025), however, they may in fact be more functional and less decorative than the name suggests.

Plate 6: West elevation of Jack Lane Underbridge (MDL1/24), facing north-east, 2m scale (IMG_1152)

Plate 7: East elevation of Jack Lane Underbridge (MDL1/24), facing west-south-west, 2m scale (IMG_1009)

Plate 8: Detail of southern extent of east elevation showing 'demi-acorn' finial, 2m scale (IMG_1027)

4.2.3 Both the east and west facing elevations have square ashlar pillars which extend to track level, where there is a moulded cornice. Above track level, the square parapet piers become narrower and culminate in a second moulded cornice (Plates 9 and 10).

Plate 9: Detail of southern pillar of west elevation, 2m scale (IMG_1178)

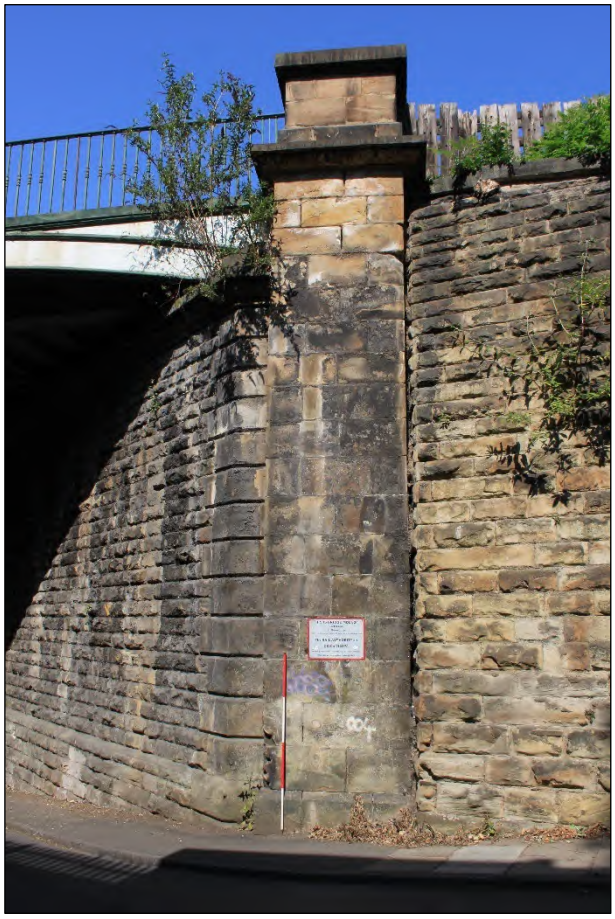


Plate 10: Detail of northern pillar of east elevation, 2m scale (IMG_1018)

4.2.4 Extending between the parapet piers at track level is a wrought iron parapet handrail of balusters with mirrored tulip-formed decorative midsections. These are supported by cast-iron fascia beams formed by an arched girder with infilled spandrels. A moulded impost band is immediately beneath the balusters (Plates 11 and 12).

Plate 11: Parapet piers and balusters, east elevation (IMG_1055)

Plate 12: Parapet piers and balusters, west elevation (IMG_1255)

4.2.5 Although predominantly intact, on the east side, three of the balusters were missing their mirrored tulip-formed decorative midsections (Nos. 20, 47 and 49 as numbered from the south), and one of these (No 49) was brown instead of painted green like the others. Similarly, on the west side, one

baluster (No. 39 as numbered from the south) had no mirrored tulip-formed decorative midsection (Plate 14). These are likely to be replacement balusters.

Plate 13: Detail of southern balusters, west elevation (IMG_1057)

Plate 14: Detail of balusters, east elevation (IMG_1257)

4.2.6 Attached to three of the four square ashlar piers of Jack Lane Underbridge (MDL1/24) are gently curving and angled wing walls of rectangular, rusticated stone blocks with square ashlar coping. The wing walls on the east side are particularly substantial, the southern side extending up the incline of Jack Lane to meet a boundary wall demarking a pavement to the west of properties fronting the lane (Plate 15). At the western extent, this is topped by timber fencing bounding a property closest to the railway line. East of this fence, the wing wall is topped by a drystone rubble boundary wall, with vegetation cover (Plate 16). In places, vertical gaps between the stone blocks of the wing wall are evident, which may have been deliberate, for drainage (Plate 17). At the eastern extent, the southern wing wall is topped by a metal fence, bounding the path accessing Nos. 45-51 Jack Lane (Plates 18 and 21). The northern wing wall on the east side of Jack Lane Underbridge (MDL1/24) supports a large embankment and is abutted by a higher drystone rubble wall which continues to edge the pavement eastwards on the north side of Jack Lane (Plates 19 and 20). Both eastern wing walls culminate at a square pillar (Plates 21 and 22).

Plate 15: Wing walls to east of Jack Lane Underbridge (MDL1/24), facing north-east, 2m scale (IMG_1219)

Plate 16: Western extent of southern wing wall east of Jack Lane Underbridge (MDL1/24), 2m scale (IMG_1221)

Plate 17: Example of gaps between stone blocks of southern wing wall east of bridge, 2m scale (IMG_1223)

Plate 18: Eastern extent of southern wing wall east of bridge, 2m scale (IMG_1228)

Plate 19: Northern wing wall east of Jack Lane Underbridge (MDL1/24), 2m scale (IMG_1253)

Plate 20: Northern wing wall east of bridge facing north-east (IMG_1188)

Plate 21: Eastern extent of southern wing wall east of bridge, facing south-east, 2m scale (IMG_1238)

Plate 22: Eastern extent of northern wing wall east of bridge, facing north-west, 2m scale (IMG_1243)

4.2.7 On the south side of the western elevation, the wing wall is abutted by a later stone wall, associated with the former second bridge to the west (*Section 3.2.4*; Plate 23). A red brick archwayed embankment, associated with the former railway it carried, survives to the south-west, extending from the southern extent of this abutting stone wall but was not included within the scope of this survey. On the north side of the western elevation the wing wall extends sharply north-westwards across private land, and a modern fence fixed to the northern parapet pier, with mature trees beyond, obscures visibility (Plate 24). Where the three visible wing walls meet the square ashlar piers of Jack Lane Underbridge (MDL1/24) are narrow recessed gaps, varying in size dependent on the angle required by the wall against the skew bridge (Plates 25, 26 and 27).

Plate 23: Wing wall west of Jack Lane Underbridge (MDL1/24), facing south-west (with surviving section of former, later GNR bridge beyond road sign) (IMG_1129)

Plate 24: Northern extent of west side of bridge, facing north-west (IMG_1113)

Plate 25: Join between southern wing wall and bridge on east side, facing south-west, 2m scale (IMG_1031)

Plate 26: Join between northern wing wall and bridge on east side, facing west, 2m scale (IMG_1050)

Plate 27: Join between wing wall and bridge on west side, facing north-east, 2m scale (IMG_1144)

4.2.8 The remains of three metal bars extending from the lower ashlar blocks, adjacent to the north pier on the western elevation, suggest an earlier fence once extended from nearer the bridge opening (Plate 28). The remains of a black painted '24' on a yellow background, and a white 'MDL1/24' area are close by, at a higher level (Plate 28). Spray painted graffiti is apparent on the north pier, on the east side of Jack Lane Underbridge (MDL1/24), close to an area of damaged edging to the ashlar sandstone (Plate 26). A small metal fixing is also evident close by, on the third quoin from road level to the west of the pier (Plate 29). Close to the south pier on the east side of the bridge, as with the north pier on the west side of the bridge, are a black '24' on a yellow background, with 'MDL1/24' in white close by (Plate 29). Beneath the black '24' is a white and black oval symbol (Plate 29). Graffiti, some faded, is also present on the south pillar on the west elevation (Plate 30). No graffiti is evident on the rectangular, rusticated stone blocks of either the bridge itself, or the three wing walls.

Plate 28: Detail of north pier on west elevation, facing north-east, 2m scale (IMG_1110)

Plate 29: Detail of south pier on east elevation, facing south-west, 2m scale (IMG_1035)

Plate 30: Detail of south pier on west elevation, facing east, 2m scale (IMG_1144)

4.2.9 The decking of the railway track is set on an ashlar sandstone moulded cornice at the top of the rusticated stone blocks and ashlar quoins of the main structure (Plates 31 and 32). On the south side, above the cornice and beneath the deck, a mix of small concrete blocks, red brick, and grey engineering brick is visible, evidencing subsequent repairs and alterations since construction (Plates 33 and 34). Cables also run across the top of the cornice, supported by metal brackets. There are also cracks and evidence of water egress.

Plate 31: Southern extent of bridge supporting decking, facing south, 2m scale (IMG_1065)

Plate 32: Northern extent of bridge supporting decking, facing north-east (IMG_1086)

Plate 33: Detail of southern extent of bridge supporting decking, facing south-west (IMG_1072)

Plate 34: Detail of southern extent of bridge supporting decking, central area, facing south-west (IMG_1076)

4.2.10 The north side also incorporates red bricks, grey engineering bricks (Plate 35), and concrete blocks above the cornice (Plate 36), the concrete blocks on both sides located at the eastern extent. At a lower level, the plinth height throughout the bridge demonstrates the incline and camber of Jack Lane. On the north side, it is one block high at its eastern extent and five at its

western extent (Plate 31). On the south side, the plinth extends to four blocks high at its eastern extent and seven at its western extent (Plate 30).

Plate 35: Detail of northern extent of bridge supporting decking, western area, facing north-east (IMG_1078)

Plate 36: Detail of northern extent of bridge supporting decking, eastern area, facing north-east (IMG_1079)

5 CONCLUSIONS

5.1.1 Jack Lane Underbridge (MDL1/24) is a surviving example of a cast-iron beam railway bridge commonly used in railway infrastructure in the late 1840s. Jack Lane Underbridge (MDL1/24) is one of eleven cast-iron structures designed by Thomas Grainger on the Leeds, Dewsbury and Manchester railway line, and one of five surviving on the operational line, all five being Grade II listed. Four of these (Toad Holes Underbridge, Ming Hill Underbridge, and George Street Underbridge) form a consecutive sequence and are in close proximity. Jack Lane Underbridge is of slightly different design to the other three, utilising cast-iron shallow-arched girders.

5.1.2 Jack Lane Underbridge (MDL1/24) comprises elements which are not purely functional, including the ashlar pillars, cornices, demi acorns and parapet railings, which are of aesthetic and architectural value (Network Rail 2025, 19). It was designated as a Grade II listed structure in March 2018.

5.1.3 A number of bridge failures across the wider railway network were identified as being the result of cast-iron structural elements, resulting in widespread replacement from the later nineteenth century by less brittle metals such as steel (Network Rail 2025, 17). Jack Lane Underbridge (MDL1/24) represents a relatively early acknowledgement of the inherent weakness in cast-iron level beam bridges, utilising instead, arched girders as the underside of the beams. This allowed the additional loading on the bridge from passing trains to compress the arch against the abutments, rather than flexing downwards in the middle, placing the beam into tension, in a standard level beam (Historic England 2025). The cast iron beam of Jack Lane Underbridge (MDL1/24) survives as a decorative facia and is no longer load bearing.

5.1.4 Although the archaeological survey noted that four of the balusters were likely replacements, no longer retaining the mirrored tulip-formed decorative midsections, the decorative elements of Jack Lane Underbridge (MDL1/24) which raise it beyond the purely functional, survive predominantly intact. Despite evidence of corrosion and damage to the steel girders, graffiti and some vegetation, the structure survives in good condition. The only documented alteration has been to its decking in the early 1900s.

5.1.5 The setting of Jack Lane Underbridge (MDL1/24) has been seen to provide a limited contribution to the overall significance of the structure, partly due to the skewed angle of the bridge and its restricted visibility in the wider area. However, it could be argued that the significant associated wing walls, which result from, and respect, the topography of the landscape and the descent to Batley Beck provide a tunnel-like approach to the structure, which would have provided a dramatic entry for steam locomotives in the nineteenth century.

5.1.6 The works to replace the bridge deck at Jack Lane Underbridge (MDL1/24) will result in permanent alterations to the Grade II listed structure. The works will ensure that the underbridge remains a viable feature of an operational railway in the future, and have been designed to retain key elements of its historic and architectural elements. This will enable Jack Lane Underbridge (MDL1/24) to remain a significant historic structure in the wider landscape.

5.1.7 The Historic Building Investigation and Recording works have allowed a fuller understanding of Jack Lane Underbridge (MDL1/24). This Historic Building Investigation and Recording complies with the approved Written Scheme of Investigation, and, along with the deposition of the final, associated archive, completes the archaeological requirement of Listed Building Consent for the works.

6 BIBLIOGRAPHY

Primary sources

Greenwood, C, Teedale, H and Bingley, J, Map of the County of Yorkshire, 1828

Ordnance Survey 6inch scale series, First Editon, Yorkshire Sheet 232, surveyed 1847-1851, published 1854

Ordnance Survey Town Plan Edition, Dewsbury and Batley Sheet CCXXX11.15.14, surveyed 1889, published 1890

Ordnance Survey Town Plan Edition, Dewsbury and Batley Sheet CCXXX11.15.15, surveyed 1889, published 1890

Ordnance Survey Town Plan Edition, Dewsbury and Batley Sheet CCXXX11.15.19, surveyed 1889, published 1890

Ordnance Survey Town Plan Edition, Dewsbury and Batley Sheet CCXXX11.15.20, surveyed 1889, published 1890

Ordnance Survey 25inch scale series, First Edition, Yorkshire Sheet CCXXX11.15, surveyed 1888-1892, published 1894

Ordnance Survey 25inch scale series, Second Edition, Yorkshire Sheet CCXXX11.15, surveyed 1905, published 1907

Ordnance Survey 25inch scale series, Third Edition, Yorkshire Sheet CCXXX11.15, surveyed 1915, published 1922

Ordnance Survey 25inch scale series, Fourth Edition, Yorkshire Sheet CCXXX11.15, surveyed 1938, published 1941

Ordnance Survey 1:1250 scale series, Sheet SE2422-A, surveyed 1954-55, published 1956

Secondary sources

Alan Baxter Associates, 2019 *Transpennine Route Upgrade – Routewide Statement of Significance*

CIfA 2020 *Standard and guidance for the creation, preparation, transfer and deposition of archaeological archives*, Reading

Historic England, 2015a *Management of Research Projects in the Historic Environment: the MoRPHE project managers guide*, London

Historic England, 2015b *Digital image capture and file storage: guidelines for best practice*, London

Historic England, 2016 *Understanding Historic Buildings: A Guide to Good Recording Practice*, London

Historic England 2025, National Heritage List for England: Railway underbridge MDL1/24, Jack Lane, [Online] available at: https://historicengland.org.uk/listing/the-list/list-entry/1452193?section=official-list-entry (accessed 23rd June 2025)

Network Rail, 2021 *Transport and Works Act 1992, Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006, The Network Rail (Huddersfield to Westtown (Dewsbury) Improvements) Order, Document NR15: Design and Access Statement*

Network Rail, 2024 *Transpennine Route Upgrade Written Scheme of Investigation – Historic Building Recording: Jack Lane Underbridge (MDL1/24)*

Network Rail 2025, *Network Rail (Dewsbury to Leeds W4 Scheme) Transpennine Route Upgrade: Jack Lane Underbridge (MDL1/24)- Heritage Statement*

X:\Paul\Projects\L11502_TRU_West_Project\05_Project_Data\Geomatics\02_GIS\Jack and George Lanes\L11502_Jack_Lane\Fig001\L11502_JLU_Fig001.aprx*anne.stewardson*25/06/2025

GB Background: Contains OS data © Crown Copyright and database right 2025
Contains data from OS Zoomstack
GB_Hillshade: Contains OS data © Crown Copyright and database right 2023
Contains data from OS Zoomstack
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
GB Topographic: Contains OS data © Crown Copyright and database right 2025
Contains data from OS Zoomstack
World Hillshade: Esri, USGS

Figure 1: Site location

Non-designated Heritage Asset
Location and direction of plates

424610 424620 424630 424640 424650 424660 424670 424680 424690 424700
422890 422880 422870 422860 422850 422840

N

Down Main
Up Main
High Mileage ES2
Low Mileage ES1
ABT 1
ABT 2
WW1
WW2

C-C 042413
F-F 042413
A-A 042412
B-B 042412
E-E 042413
D- 042412
- 042412

Plate 21
Plate 19
Plate 22
Plate 16
Plate 18
Plate 7
Plate 26
Plate 10
Plate 11
Plate 31
Plate 17
Plate 36
Plate 20
Plate 13
Plate 29
Plate 35
Plate 23
Plate 34
Plate 33
Plate 8
Plate 25
Plate 28
Plate 15
Plate 24
Plate 32
Plate 14
Plate 12
Plate 30
Plate 9
Plate 27
Plate 6

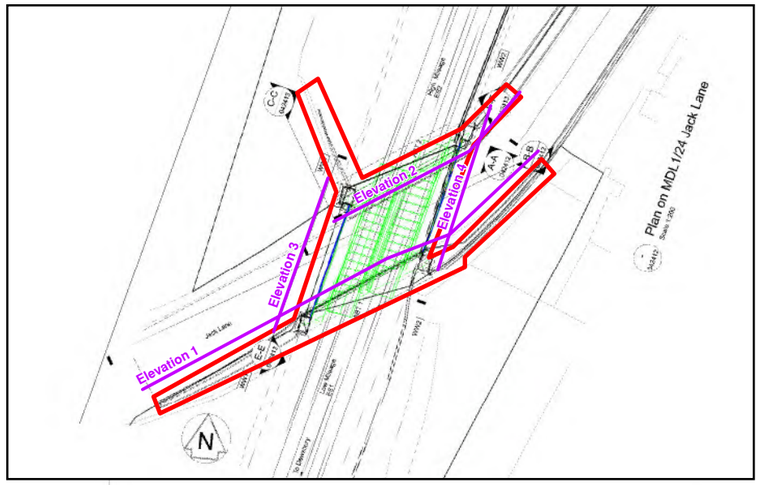
Jack Lane

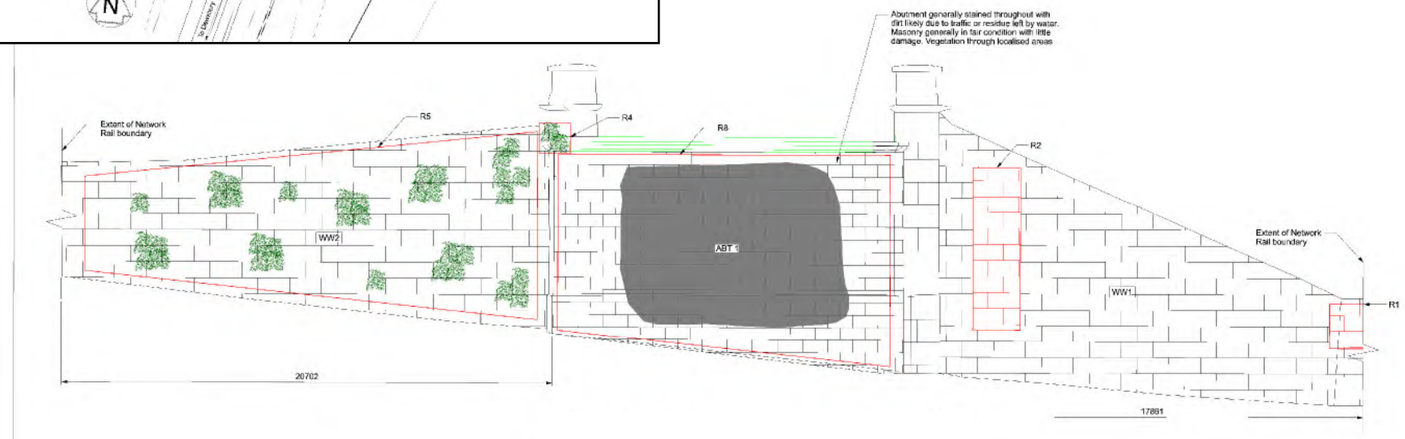
Plan on MDL 1/24 Jack Lane
Scale 1:200

0 1:250 @ A3 25m

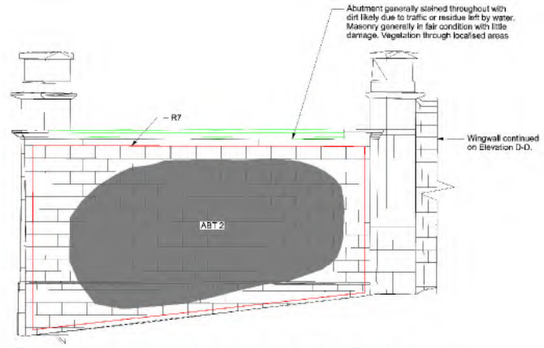
X:\Paul\Projects\L11502_TRU_West_Project\05_Project_Data\Geomatics\02_GIS\Jack and George Lanes\L11502_Jack_Lane\L11502_Jack_Lane.aprx*anne.stewardson*26/06/2025

Figure 2: Location and direction of photographs used as plates in report

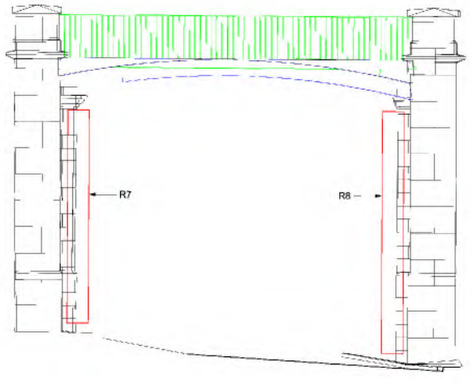




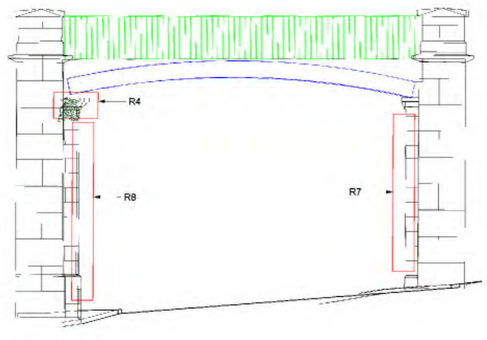
Elevation 1: South (low mileage) abutment



Elevation 2: North (high mileage) abutment



Elevation 3: West elevation



Elevation 4: East elevation

0 1:250 @ A3 25m

Figure 3: Elevations of Jack Lane Underbridge, as existing (from Network Rail drawings 151667-TSA-40-MDL1-DRG-C-ST-042412 and 151667-TSA-40-MDL1-DRG-C-ST-042413

APPENDIX A WRITTEN SCHEME OF INVESTIGATION

Trans-Pennine Route Upgrade

Written Scheme of Investigation – Historic Building Recording

Jack Lane Underbridge (MDL1/24)

Network Rail

January 2025

Contents

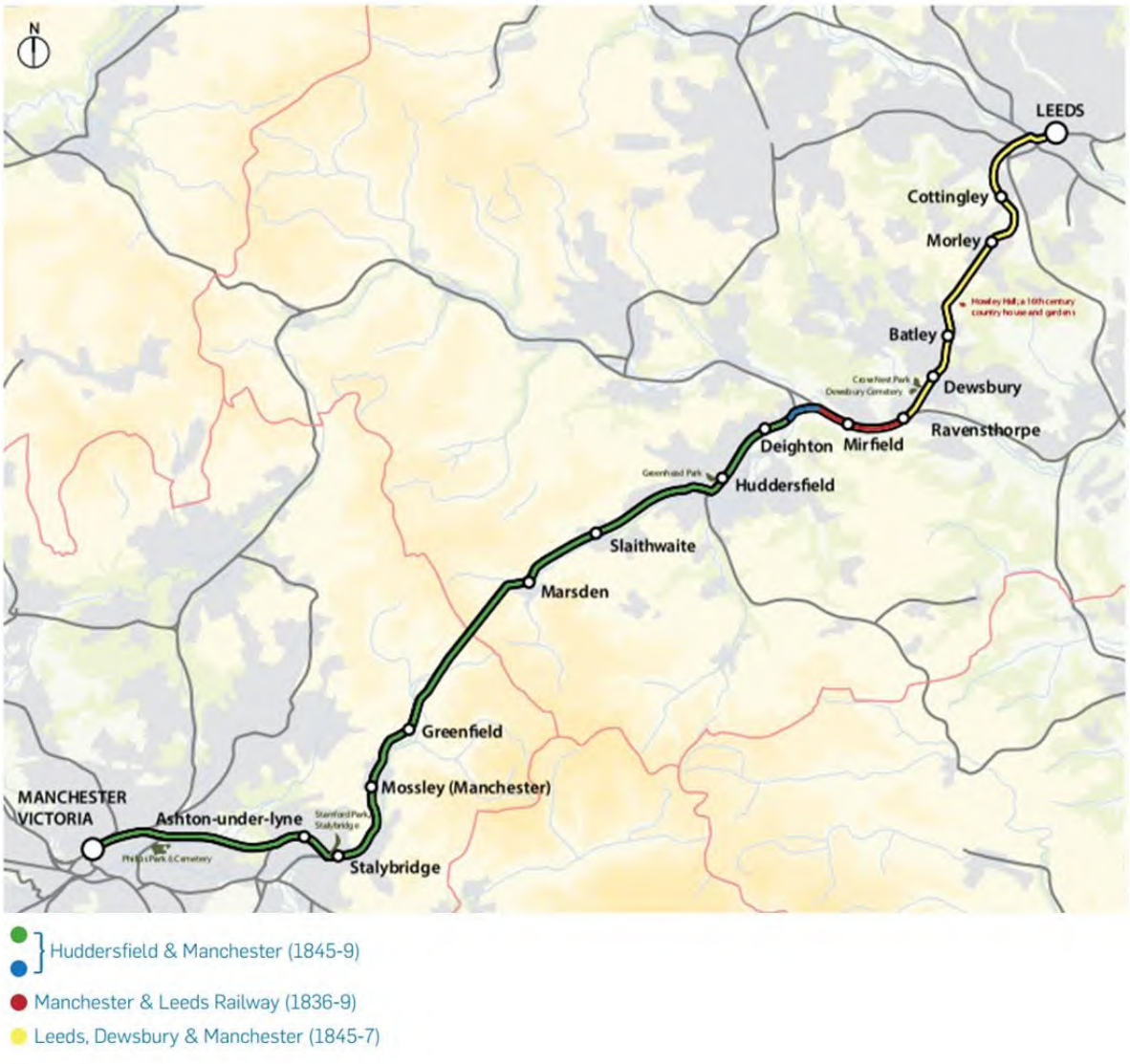
Tables

Inserts

1. INTRODUCTION

1.1 The Scheme

1.1.1 The objective of the Trans-Pennine Route Upgrade (TRU) is to improve the Trans-Pennine railway between Manchester, Huddersfield, Leeds and York and improve connections between key towns and cities across the north of England. The works to which this document relate lie within the TRU W4 Scheme between Westtown (Dewsbury) and Leeds which will contribute to the overall TRU aims of increasing service capacity and offering journey time benefits. This will deliver four tracking and upgrading of the existing railway line including track realignment, electrification of the line, increase in line speeds and remodelling and replacement of stations, as well as various other engineering works necessary to realise the benefits of the scheme including alterations to, or replacement or demolition of, existing bridge structures.



Insert 1-1 Route overview detailing Trans-Pennine Route Upgrade (TRU), showing the historic railway company development of the line between Manchester and Leeds, including the section between Westtown (Dewsbury) and Leeds (shown in yellow).

1.1.2 This Written Scheme of Investigation (WSI) covers historic building recording (HBR) of the grade II listed Jack Lane Underbridge (MDL1/24) (NHLE 1452193). This document sets out the methodology for historic building recording to a Level 3 standard.

1.1.3 The methodology for recording has been developed in accordance with the guidance set out in Historic England's *Understanding Historic Buildings: A Guide to Good Recording Practice*[1], which provides best practice guidance for historic building recording.

1.1.4 The requirement for historic building recording of this structure was identified in the Heritage Statement[2] submitted in support of the Listed Building Consent application and forms part of the agreed mitigation under the Listed Building Consent granting the scheme consent. Prior to being formally submitted to discharge the relevant Listed Building Consent condition, a copy of this WSI has been sent for review to the Conservation Officers at Kirklees Council and the Principal Archaeologist at West Yorkshire Archaeology Advisory Service (WYAAS).

1.2 Aims and Objectives

1.2.1 Historic building recording of bridges and railway stations proposed for alterations and removal was identified as recommended compensation during the development of the scheme. It is anticipated that the requirement for historic building recording will be secured via condition attached to the Listed Building Consent application for the works to be undertaken.

1.2.2 The aims of the historic building recording are:

- To document the current form and survival of historic railway structures proposed for alteration or removal on the W4 Westtown (Dewsbury) to Leeds section of TRU; and
- To provide an objective documentary record of the structures.

1.2.3 The objectives of the recording works are:

- To record Jack Lane Underbridge (MDL1/24), to a Level 3 standard, as defined in Section 5.2 of this WSI, in line with the Historic England guidance on recording within *Understanding Historic Buildings: A Guide to Good Recording Practice*[3];
- To disseminate the results of the recording works through deposition of an ordered digital archive and detailed report with the West Yorkshire Historic Environment Record (HER); and West Yorkshire Archive Service, in accordance with the requirements of the West Yorkshire Archaeological Advisory Service (WYAAS); and
- To disseminate the results of the recording works through deposition of digital data and report with the Archaeology Data Service (ADS) and submit details of the project to the Online Access to Index of Archaeological Investigations (OASIS) Project.

[1] Historic England, 2016. *Understanding Historic Buildings: A Guide to Good Recording Practice*
[2] Network Rail, 2025. *Network Rail (Dewsbury to Leeds W4 Scheme) Trans-Pennine Route Upgrade: Jack Lane Underbridge (MDL1/24) - Heritage Statement.*
[3] Historic England, 2016. *Understanding Historic Buildings: A Guide to Good Recording Practice*

2. HISTORICAL BACKGROUND

Historical Background – Trans-Pennine Route

2.1.1 The Trans-Pennine Route between Dewsbury and Leeds was constructed and opened between 1845 and 1847. The route today forms part of the wider Trans-Pennine Route between York, Selby and Manchester, which comprises sections of rail line developed by different railway companies. The complex chain of companies and projects is a typical product of the 'Railway Mania' of the mid-1840s, the height of a period of commercial confidence and expansion in the railways[4].

2.1.2 Between Dewsbury and Leeds, the Trans-Pennine Route comprises the line constructed by The Leeds, Dewsbury & Manchester Railway. The line formed part of a new, more direct route to the West Riding from Manchester, in competition to the earlier Manchester & Leeds Railway which had been constructed through the Calder Valley in the late 1830s. The more direct route was enabled partly through the advances in tunnel construction and large-scale engineering technology, notably realised through the construction of the 3-mile Standedge Tunnel, built by the Huddersfield & Manchester Railway, under the Pennine watershed to connect the line between the Upper Tame and Colne Valleys. Between Dewsbury and Leeds, the line is partly characterised by such examples of large scale and/or pioneering engineering structures, including tunnels, viaducts and both masonry and cast-iron bridges.

2.1.3 The development and expansion of the railways and their associated infrastructure during the first half of the 19th century, was characterised by the considerable influence on those towns which experienced the development of this new mode of transport. The railways resulted in place-making and industrial growth, as towns benefited from the connections and influences which they brought with them. The Trans-Pennine Route between Dewsbury and Leeds certainly had an influence on towns, forming an additional infrastructure element of the expansion of settlements such as Dewsbury and Batley, already underway as a result of the growth of textile, mining and maltings industries.

2.1.4 The railway line and its supporting structures were constructed during the Heroic Age of railway building (1841-50). Opening in stages between 1846 and 1849, when railway mania was at its height, the Leeds, Dewsbury & Manchester Railway was constructed under the oversight of principal engineer Thomas Grainger. Grainger was one of the leading railway engineers in Scotland during the Pioneering Age (1825-41) of railway building. He worked alongside John Miller for railways such as the Monkland and Kirkintilloch Railway (1824-1826) and the Glasgow and Garnick Railway (1826-1831). His work on railways in England include Leeds, Dewsbury & Manchester Railway (1845-1848), the East and West Yorkshire Junction Railway (1846); and the Leeds & Thirsk Railway (1845-1852). Grainger's work is notable for the imaginative way in which he tailored these lines to the difficult surrounding terrain and his bold masonry and distinctive iron bridge designs[5].

2.1.5 In 1847, the Leeds, Dewsbury & Manchester Railway along with the Huddersfield and Manchester Railway were absorbed into the London and North Western Railway (LNWR), providing a more direct route from Manchester to the West Riding and enabling the LNWR to access the textile and coal industries of West Yorkshire. By 1851, the LNWR was the most prominent railway company of the period, with over 800 miles of track and was the largest

[4] Alan Baxter Associates, 2019. *TransPennine Route Upgrade Route-wide Statement of Significance*. 14.

[5] Alan Baxter Associates, 2019. *TransPennine Route Upgrade Route-wide Statement of Significance*. 13.

joint-stock concern of its time, capitalised at £29 million[6].

Historical Background – Jack Lane Underbridge (MDL1/24)

2.1.6 Jack Lane Underbridge (MDL1/24) was built between 1845 and 1847 to the design of Thomas Grainger for the Leeds, Dewsbury & Manchester Railway. The underbridge is initially depicted in the 1851 1:1056 Town Plan Map (not reproduced here) which illustrated the accommodation of Jack Lane under the railway, and in turn access to an Oil Mill and Bridge Mill in the area of Batley Carr, between Dewsbury and Batley. At this time, the environs of the bridge were semi-rural and semi-industrial in character as per the open landscape and scattered mills. In the Six-Inch OS Map 1854 (not reproduced here), additional mills are shown in the vicinity of the underbridge, including Ings Mill, Victoria Mill, Ellis Mill, a sandstone quarry and Springwell Mill. Tenters for drying cloth, used within industrial textile process, line the hill sides between the mills and railway, and the small village of Commonside borders Jack Lane Underbridge (MDL1/24) to the east, with the larger settlement of Batley Carr encircling the area from both the south and west.

2.1.7 Development surrounding Jack Lane Underbridge (MDL1/24) was shown as having further expanded in the 1:500 Town Plan Map 1890 (not reproduced here). By this time the Great Northern Railway (GNR), Dewsbury and Batley Branch had been established to the west of the LNWR line, on which a secondary underbridge to the immediate west of Jack Lane Underbridge (MDL1/24) was established to accommodate this new line. During the second half of the 19th century, the development of the LNWR line had also continued, with Staincliffe & Batley Carr Station opening in 1878, to the north of Jack Lane Underbridge (MDL1/24). An industrial tramway was also shown by this point, running parallel to the railway lines along Savile Street, connecting Batley Carr to the Batley Corporation Gas Works and Soothill Colliery to the north-east.

2.1.8 Subsequent OS mapping from 1907 (not reproduced here) shows rapid expansion to the settlement of Commonside immediately east of Jack Lane Underbridge (MDL1/24) and the growth of industrial and suburban housing within Batley Carr to the west. This local boom in settlement and industrial areas are likely to have resulted in Jack Lane accommodating more traffic than previously, as the road became one of the key connectors within the area. To the east of the railway lines was a considerable amount of terrace rows along the hillside across Commonside and Crackenedge.

2.1.9 Later alterations within the area around Jack Lane Underbridge (MDL1/24) in the early to mid-20th century display a similar pattern of continued expansion recognised throughout other industrial settlements in the region. In the 1933 six-inch OS map (not reproduced here), increased development in Batley Carr effectively merged the neighbourhood with the former bankside settlement of Commonside By the mid-20th century, transportation networks in the area included the railway lines and associated infrastructure (including the bridges) and the Tramways which enabled accessibility for people and goods into and out of the area (though the earlier industrial tramway along Savile Street had ceased operation by the 1930s). However, as the textile industry declined from the mid-20th century onwards and mills in the area and wider region were closing, the character of Batley Carr changed, with more residential development, superseding the former industrial and semi-rural environment.

2.1.10 Aerial photography belonging to Historic England dating to 1949 (EAW027476) illustrates Jack Lane Underbridge (MDL1/24) on the edges of the industrial area of Batley Carr. The GNR underbridge immediately to the west of Jack Lane Underbridge (MDL1/14) remains intact and operational at this point, somewhat obscuring the presence for Jack Lane

[6] Alan Baxter Associates, 2019. TransPennine Route Upgrade Route-wide Statement of Significance. 5.

Underbridge (MDL1/24) beneath the railway when viewed together from the south-west.

2.1.11 The section of the GNR between Dewsbury and Batley closed in September 1964, and satellite imagery shows that by the end of the 20th century the former GNR Dewsbury and Batley Branch underbridge over Jack Lane had been removed, which better revealed the presence of Jack Lane Underbridge (MDL1/24) from the western peripheries of Batley Carr. Jack Lane Underbridge (MDL1/24) now remains the only defining feature between the industrial areas of Batley Carr and the semi-rural settlement at Commonside.

2.1.12 Through the later 20th century and first decades of the 21st century, although there is evidence for small scale expansion of industrial development within proximity of Jack Lane Underbridge (MDL1/24) and some demolition; the prevailing character of the setting remains largely similar to what is experienced at present, with no further alterations to the railway bridge.

3. STANDARDS AND GUIDANCE

3.1.1 The archaeological buildings investigation, recording and reporting shall be undertaken in accordance with the following standards and guidance:

- Chartered Institute for Archaeologists. 2022 (originally published in 2014). *Code of Conduct: Professional Ethics in Archaeology.* Reading, Chartered Institute for Archaeologists;
- Chartered Institute for Archaeologists. 2020a. *Standard and Guidance for the archaeological investigation and recording of standing buildings or structures*. Reading, Chartered Institite for Archaeolgists;
- Chartered Institute for Archaeologists. 2020b (origionally published in 2014). *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*. Reading, Chartered Institute for Archaeologists;
- Ministry of Housing, Communities and Local Government (MHCLG). 2024 . *National Planning Policy Framework* (NPPF). London: Ministry of Housing, Communities and Local Government;
- Historic England. 2008. *Conservation Principles, Policies and Guidance*. London: Historic England;
- Historic England. 2015a. *Historic Environment Good Practice Advice in Planning: Note 2 – Managing Significance in Decision-Taking*. London, Historic England;
- Historic England. 2015b. *Digital Image Capture and File Storage Guidelines for Best Practice*. London, Historic England;
- Historic England. 2016. *Understanding Historic Buildings: A guide to good recording practice*. London, Historic England;
- Historic England. 2017 (origionally publisshed in 2015). *Historic Environment Good Practice Advice in Planning: Note 3 – The Setting of Heritage Assets*; and
- Institute of Historic Building Conservation (IHBC). 2007. *Code of Conduct*. Salisbury, Institute of Historic Building Conservation.

4. SCOPE OF WORKS

4.1.1 Historic building recording, as outlined in this WSI, is required to be undertaken of the grade II listed Jack Lane Underbridge (MDL1/24) as set out in Table 4-1 below. This structure is shown on the following Drawings submitted as part of the Listed Building Consent application for Jack Lane Underbridge (MDL1/24):

- Existing and Proposed Plan (151667-TSA-40-MDL1-DRG-C-ST-042470)
- Existing and Proposed West Elevation (151667-TSA-40-MDL1-DRG-C-ST-042471)
- Existing and Proposed East Elevation (151667-TSA-40-MDL1-DRG-C-ST-042472)
- Existing Proposed Typical Section on Abutment (151667-TSA-40-MDL1-DRG-C-ST-042473)

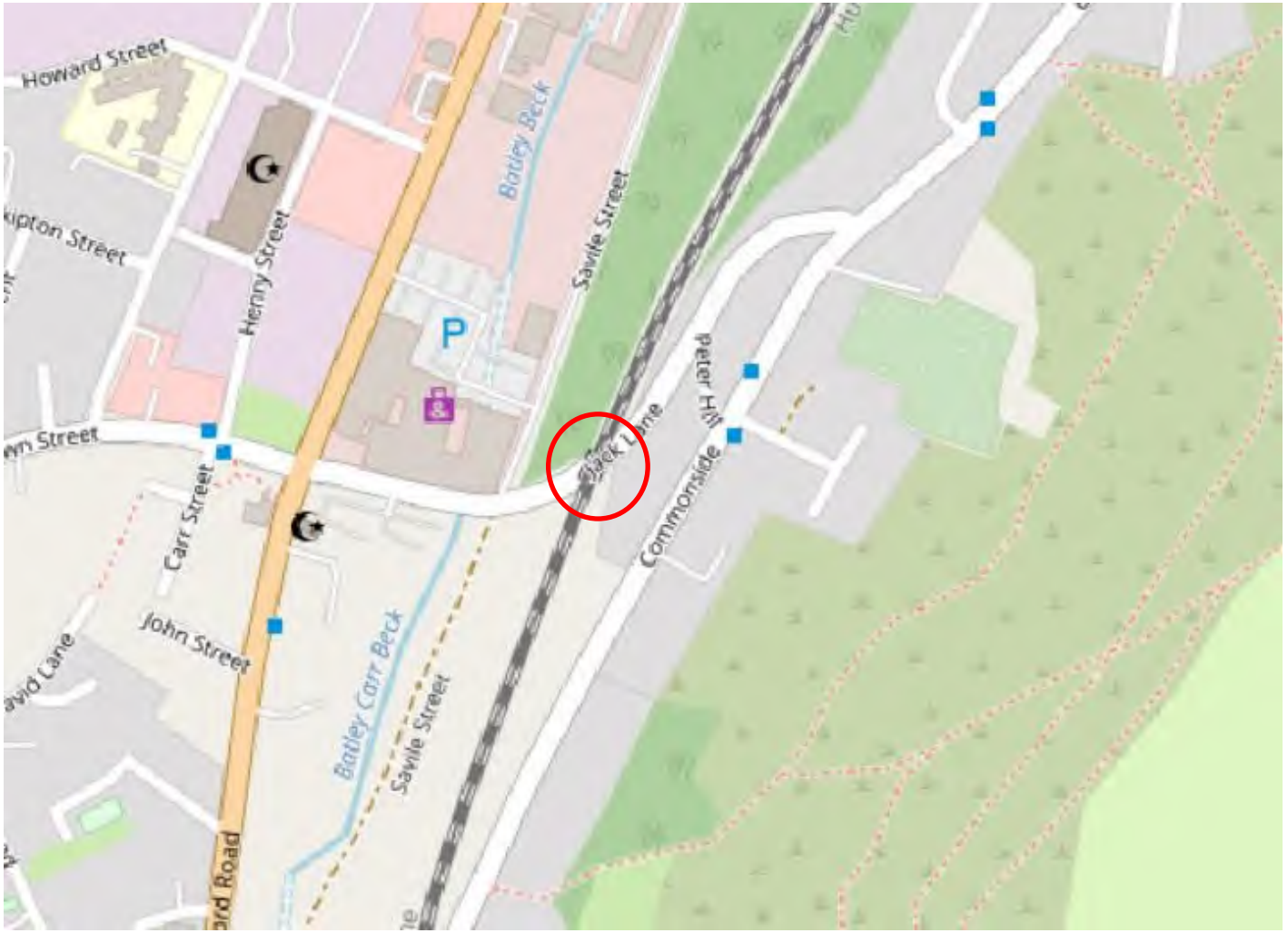
4.1.2 Drawings showing any detailed design developed during the period following the approval of Listed Building Consent (if any) will be provided to the building recorder where appropriate.

Table 4-1 Structures to be recorded

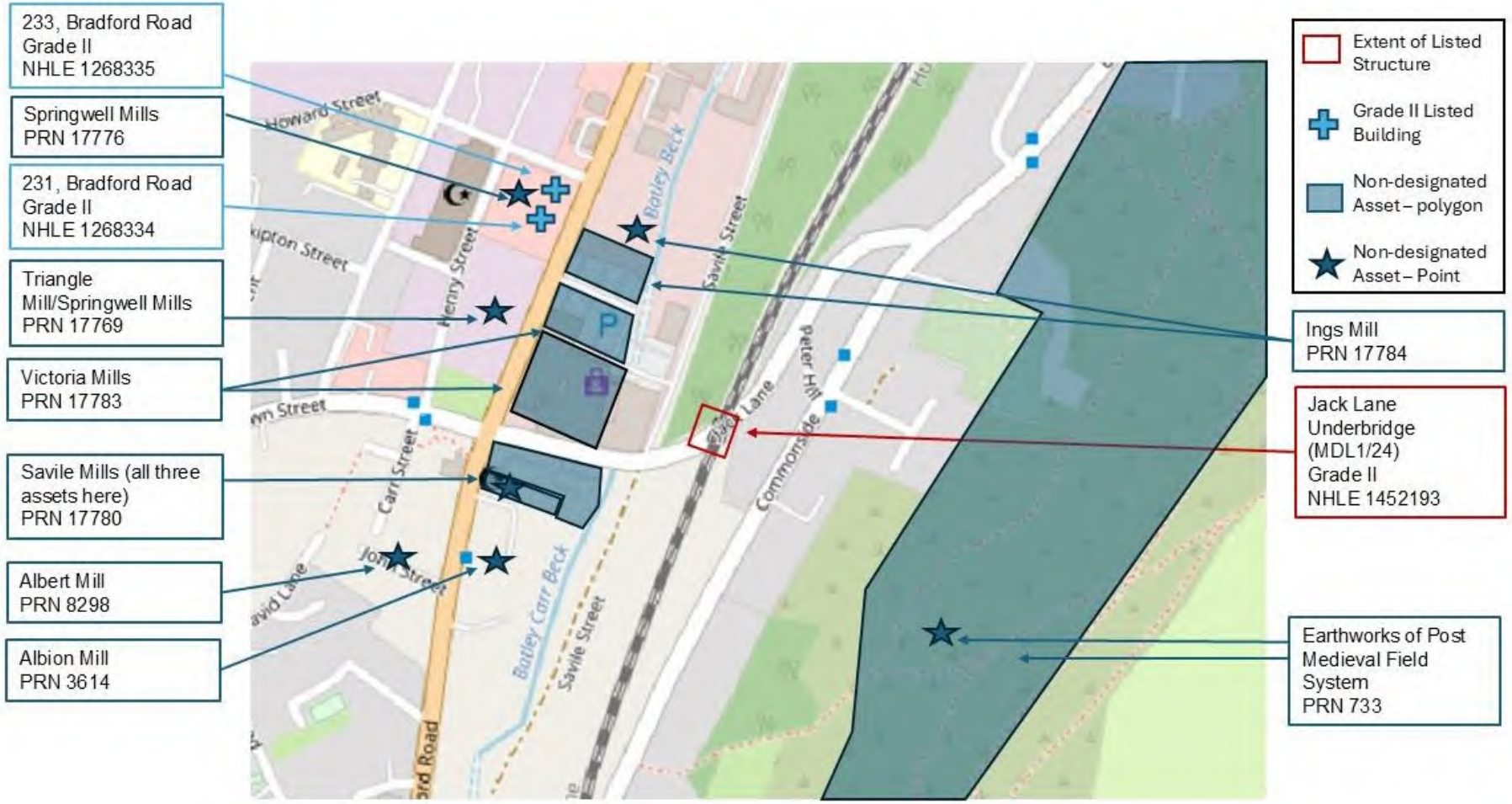
Asset Reference	Asset name	NGR	Summary Description	Level
MDL1/24	Jack Lane Underbridge	SE 24652 22859	Description: Jack Lane Underbridge (MDL1/24) was constructed as a shallow arched cast iron beam underbridge carrying the railway line over Jack Lane, which occupies a deep gully within the hillside, requiring the abutments and wing walls to be substantial structures. The structure comprises a single span skew underbridge, a surviving example of shallow arched level bridge with sandstone piers, albeit supporting a later early 20th century deck consisting of two half-through decks with riveted steel girders, with cast iron edge girders. Setting: The setting of Jack Lane Underbridge (MDL1/24) forms a distinctive transitional area between the historically industrial area of Batley Carr in the valley to the west and the semi-rural settlement on Commonside bank. To the east the prevailing character of the area is defined by the steep upwards topography rising eastwards, the rows of stone houses which line the bank and narrow windy roads to traverse this steep gradient. Due to the change in topography, the approach to the bridge is elongated from the eastern side and provides an extended and dramatic curved approach downhill enhancing the visibility of the presence of the	Level 3

Asset Reference	Asset name	NGR	Summary Description	Level
			railway along Jack Lane. From the west, the bridge forms a considerable presence as the road rises up the hillside. The abutment walling and remains of the former GNR railway underbridge to the west of Jack Lane Underbridge (MDL1/24) extend the experience of the underbridge, channelling views towards the railway structure from Jack Lane to the west. Significance: Jack Lane Underbridge (MDL1/24) derives historical value from being a surviving example, albeit with some alterations, of a mid-19th century cast iron level beam bridge built during the Heroic Age (1841-50) of railway development and designed by the notable Scottish railway engineer Thomas Grainger. The underbridge derives aesthetic value from elements such as its ashlar pillars, cornices and parapet railing which lift the structure's design above purely functional. Its group value, derived from being a sequence of three bridges sharing a common design language, also contributes to its overall significance.	

4.1.3 The location of this structure is shown in the location plans in Inserts 4-1 and 4-2 below, with photographs of the structure included in Inserts 4-3 to 4-4.



Insert 4-1 Jack Lane Underbridge (MDL1/24) Location Plan.



Insert 4-2 Jack Lane Underbridge (MDL1/24) Location Plan showing nearby heritage assets (note none of these are to be included in the recording).

Insert 4-3 Jack Lane Underbridge (MDL1/24), east elevation, viewed from north-east along Jack Lane.

Insert 4-4 Jack Lane Underbridge (MDL1/24), west elevation.

Access requirements

4.1.4 The asset covered in this WSI is largely accessible from the public highway or public footpaths. Where access may be required off public rights of way to view certain areas of the asset, the details of this are provided below.

4.1.5 If the railway corridor is to be accessed, track access must be in place prior to undertaking the survey and will be arranged. **Track access should be considered as only to be utilised if absolutely essential to the survey.** Other approaches should be exhausted in planning before the need for track access is confirmed.

4.1.6 There are additional access requirements/restrictions at the asset as detailed below.

4.1.7 Due to the access restrictions for Jack Lane Underbridge (MDL1/24), liaison with the TRU Alliance, ***must*** be undertaken to arrange a suitable date to undertake the survey.

4.1.8 Taking into account the scope of the historic building recording, the survey of the underbridge will be principally able to be conducted from public rights of way. Jack Lane Underbridge (MDL1/24) carries the railway over Jack Lane, which connects the A652 Bradford Road, to the west, with Commonside, via Peter Hill, to the east.

4.1.9 The survey of the underbridge will be able to be conducted from the footway along Jack Lane, on either approach to and underneath the structure. The structure's skewed alignment in relation to the road and surrounding topography results in some access restrictions. On each approach to the structure, there is a footway only on the northern side of Jack Lane. Care should be taken to avoid any traffic while surveying the structure from the southern side of the carriageway on each approach, should this be required.

4.1.10 Should access to third party land be required, liaison to agree access arrangements with third party landowners will be undertaken by Network Rail or its representatives. Full details of access arrangements will be provided in advance of the survey being undertaken, the building recorder on site will need to adhere to any access parameters agreed with these landowners who may have health and safety protocols in place.

4.1.11 Vehicle access for the survey will be via the highways network either north or south of the structure. Safe parking locations will be agreed in advance of the surveys being undertaken.

4.1.12 Specific requirements for access procedures will be included in the relevant Work Package Plans (WPPs) and Task Brief Sheets (TBSs) for the surveys (see below, Section 6.2).

5. METHODOLOGY

5.1 Documentary research

5.1.1 Documentary research shall be undertaken to supplement currently known information already contained within the Heritage Statement produced to accompany the Listed Building Consent application. This shall involve examination of available historic maps, photographs, plans and other records held by the local record office, Network Rail or other archives as required.

5.1.2 Some existing resources will be provided to the Contractor by Network Rail. These are identified in the following sections of this WSI.

5.2 Historic building recording to Level 3 standard

5.2.1 A Level 3 record is defined in the Historic England guidance[7] as: "*an analytical record*" which will produce an analysis of the structure's development and use and discuss in detail the evidence on which this analysis is based. The record may contain some discussion of the structure's stylistic or historic context.

Drawn record

5.2.2 A drawn record shall be prepared of Jack Lane Underbridge (MDL1/24). As a minimum the drawn record shall include:

- Dimensioned / measured plans of the structure as existing. These will identify evidence for phasing, alteration, structural features of historic significance, evidence for fixtures and fittings etc. All plans will have a grid north point and an appropriate drawn metric scale clearly visible. Existing plans may be used where available, these plans will be provided by Network Rail (see below, 5.2.4);
- Measured drawings of significant structural, functional or architectural detail which cannot be captured in a single photograph or are so complex as to render features difficult to interpret in a photograph;
- Measured cross-sections or long-sections to illustrate the vertical relationships within the structure (for example heights of parapets, the form of the deck (if known));
- Measured drawings to show the form of any architectural decoration or small-scale functional detail not easily captured by photography;
- A site plan relating the underbridge to the wider landscape and surrounding structures;
- A plan or plans identifying the location and direction of accompanying photographs;
- Copies of earlier drawings i.e. from the construction of the underbridge, phases on notable alteration etc. (available from the Network Rail National Records Group (NRG));
- Three-dimensional projections when these are of value in understanding the underbridge; and
- Phased drawings, if deemed relevant, can be undertaken to show the changes over time to the underbridge. Successive phases of a structure's development may be shown by graded tone (dark to light, with the darker being the earlier) or by colour, by sequential diagrams or by annotation.

5.2.3 All drawings shall be annotated with information on structural detail, changes in building material, evidence for phasing, function and alteration, and any other relevant architectural

[7] Historic England, 2016. *Understanding Historic Buildings: A Guide to Good Recording Practice*

detail. All drawings will be produced using drawing conventions as laid out in *Understanding Historic Buildings: A guide to good recording practice* (Historic England 2016).

5.2.4 Existing plans for the underbridge will be supplied by Network Rail and may be employed as the basis for the drawn record, subject to verification and checking for accuracy. In the case of Jack Lane Underbridge (MDL1/24) existing measured plans of the bridge are available, including:

- Point cloud data from laser scans of the structures (available in CAD and POD format);
- Measured drawings of structures previously produced for the Listed Building Consent application; and
- Archival drawings of the structures from the Network Rail National Records Group (NRG) archives.

Photographic record

5.2.5 A photographic record of the structure will be made using a high resolution DSLR camera with a minimum of 10 megapixel resolution to capture colour images, using a tripod where necessary. Cameras with an FX sensor, which is close to equivalency with 35mm film, are preferable to DX sensor equipped cameras. The photographic record of the site shall be used to amplify and illuminate the archive drawings and supplement and verify the written record.

5.2.6 As a minimum the photographic record will include:

- General views of the bridge in its wider setting and landscape, where these can be safely obtained from public rights of way or from third party land where access has been granted;
- The overall appearance of the bridge, including oblique and parallel shots. Typically, a series of oblique views showing all external elevations of the bridge, to give an overall impression of its size and shape. Where an individual elevation embodies complex historical information, views at right angles to the plane of the elevation and detail shots will be required;
- The overall appearance of the principal circulation / accommodation routes under the bridge (i.e. under the deck / arch);
- Any external architectural detail, structural, functional or decorative, which is relevant to the bridge's design, development or use and which does not show adequately on general photographs;
- Any dates or other inscriptions; any signage, makers' plates or graffiti which contribute to an understanding of the bridge. A transcription should be made wherever characters are difficult to interpret; and
- Copies of maps, drawings, views and photographs, illustrating its development (As available from NRG via Network Rail or Kirklees Archives).

5.2.7 Care should be taken to ensure sharply focused well composed photographs are taken and when appropriate the camera should be set up and levelled on a tripod, for example when recording facades and larger interior spaces. The use of perspective shift lenses or pan and tilt adaptors may be necessary in some situations to achieve an acceptable image. Alternatively, lens distortion may be removed post-capture by software but this must be recorded in the photographic catalogue and details of the software used given in the report. Original pre-correction images should be included in the site archive. Photographs should be taken with a low ISO setting and low shutter speed to reduce noise in the images captured. All photographs will have a suitable scale (for example, 2m rather than 1m ranging pole, 10cm scales for detail) clearly visible in each photo.

5.2.8 Digital images shall be supplied in TIFF and JPG format and shall be taken using the highest resolution possible. All digital photography and subsequent data storage shall follow Historic

England guidance provided in *Digital Image Capture and File Storage Guidelines for Best Practice.*[8]

5.2.9 A photographic register detailing (as a minimum) location, direction and subject of shot must accompany the photographic record. The position and direction of each photograph and slide should be noted on a plan of each structure. The Contractor must include metadata embedded in the image file. This metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name (**Dewsbury**) the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph.

Written record

5.2.10 A written record of the underbridge will be made on site. This will include the following:

- The precise location of the structure as an address and in the form of a National Grid Reference (NGR);
- A note of any statutory designation (i.e. Listing, Conservation Area);
- The date when the record was made, the name(s) of the recorder(s) and the location of any archive material; and
- A summary statement describing the building's type or purpose, historically and at present, its materials, possible date(s), including any evidence of phasing, and notable aspects of its setting, so far as these are apparent from the inspection.

5.2.11 The written recording of the structure, historic surfaces and associated heritage assets shall be undertaken using pro forma record forms and should include examinations of the buildings' exterior and interior fabric.

5.3 Post-Fieldwork reporting

5.3.1 A single historic building report shall be provided presenting the results of the Level 3 historic building recording. As a minimum this report shall include:

- A non-technical summary of the results (an 'abstract');
- Acknowledgements to all those who have made a significant contribution to the making of the record, or who have given permission for copyright items to be reproduced;
- A description of the background to and circumstances of the work. This shall include the dates on which the survey was undertaken;
- The structure's location, parish and National Grid Reference (NGR);
- Aims and objectives of the historic building recording;
- A description of the methodology used for the survey;
- Historical background;
- A longer summary statement. This account should summarise the structure's form, function, date and sequence of development. The names of architects, builders, patrons etc. should be given. Its purpose is to serve as an introduction to the more detailed body of a record that may follow, for users who may need a summary of the report's findings;
- Interpretation of the results and assessment of the significance of the findings of the historic building recording on a local, regional and national basis;

[8] Historic England, 2015b. *Digital Image Capture and File Storage Guidelines for Best Practice.*

- A summary of the findings of any specialist reports (for example paint analysis);
- General and detailed location plans at appropriate scales, showing the location of the building. The general location plan shall be presented at not less than 1:10,000 scale, and detailed location plans shall be presented at not less than 1:100 scale;
- Plan drawings presenting the results of the Level 3 historic building recording. Drawings shall be presented at an appropriate scale and in accordance with the guidance and conventions provided in *Understanding Historic Buildings: A Guide to Good Recording Practice*.[9] All elevations will have an appropriate drawn metric scale clearly visible and should be cross-referenced to the relevant plans and overall site plan;
- Reproduction of the complete photographic record produced at a high resolution and at sufficient size to make the detail in each photograph fully visible upon reproduction;
- A detailed selection of colour digital photographs to illustrate the written report;
- Fully referenced bibliography and cartographic sources;
- A glossary of architectural or other technical terms likely to be unfamiliar to readers;
- Photographic registers as an appendix in addition to drawn photographic plans detailing the position and direction of each shot at an appropriate scale;
- Index to and location of the archive;
- Copy of this WSI within an appendix; and
- OASIS form within an appendix.

5.3.2 In addition to the specific requirements identified above, the report shall include:

- A title page, which includes the name of the project, the title of the report, the name of the Sub-Consultant;
- A contents list; a list of illustrations or figures;
- The logo of the Client shall appear on the front cover of the report;
- A unique report number or reference;
- Report author(s) and company/organisation details where appropriate;
- Date when the report was completed;
- An accurate 6 figure NGR grid reference centred on the project location;
- Clear reference to the Listed Building Consent application, including the wording of the relevant condition; and
- Primary Record Numbers (PRN) referenced for structures recorded in the West Yorkshire HER (where applicable).

5.3.3 A draft of the report shall be submitted to the Project Heritage Lead for comment no later than four weeks after the completion of the fieldwork. Any comments provided shall be addressed within 5 working days of receipt and a revised draft submitted for approval. This revised draft will subsequently be submitted to Kirklees Council and West Yorkshire Archaeology Advisory Service (WYAAS) for comment and any comments provided by the Council or WYAAS shall be addressed within 5 working days of receipt.

5.3.4 When submitted to Kirklees Council for comment, the draft report should be submitted to the appropriate Conservation Officer responding to all discharge of condition applications for this

[9] Historic England, 2016. *Understanding Historic Buildings: A Guide to Good Recording Practice*

structure. Contact details will be provided to the building recorder in advance of submission of the draft report.

5.4 Submission of report

5.4.1 When complete the historic building recording report shall be submitted to the Project Heritage Lead for it to be sent to the following repositories:

- A digital and hard copy of the final report for Kirklees Council; and
- A digital copy for West Yorkshire Historic Environment Record (HER), West Yorkshire Archive Service and the Archaeology Data Service (ADS) which will be accompanied by an archive of digital images and other digital outputs/data where available.

5.4.2 In light of the requirement for the completed historic building report to be submitted to West Yorkshire HER, the Contractor must complete the report in accordance with the archiving requirements set out in the building recording specifications of the West Yorkshire Archaeological Advisory Service (WYAAS) (see below, Section 5.6 for further details).

5.5 Copyright

5.5.1 This document and its contents have been prepared and are intended solely for Client Purpose.

5.5.2 Network Rail assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

5.5.3 The report will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record where it will be publicly accessible once deposited with the WYAAS unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposition. Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

5.6 Archiving

5.6.1 Post-fieldwork archiving shall be undertaken in accordance with the requirements of the *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (CIfA 2014b), and the requirements of the building recording specification of WYAAS on behalf of West Yorkshire HER. Digital data generated during the recording works, including the full digital photographic archive shall be prepared in accordance with the requirements of the Archaeology Data Service (ADS). Photographs and reports should be archived with ADS.

5.6.2 Immediately upon completion of the finalised report, the report and any data or other documentation produced during the recording works shall be integrated into the site archive. The archive shall be stored in suitable conditions in a secure location until instructions are received from the Project Heritage Lead for its transfer to the final repositories.

5.6.3 West Yorkshire HER support the Online Access to Index of Archaeological Investigations (OASIS) Project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. On completion of the report, the Contractor will make a copy accessible to the wider research community by submitting it to the OASIS

Project.

5.7 Programme

5.7.1 An outline programme for the historic building recording is provided below:

Table 5-1 Programme for the historic building recording

Stage of Works		Timings
Site works / recording	Jack Lane Underbridge (MDL1/24)	Winter 2024/5
Submission of draft report to Project Heritage Lead for comment		4 weeks after completion of fieldwork
Project Heritage Lead review of draft report		2 weeks from submission of draft report
Submission of draft report to Kirklees Council/ WYAAS for comment		1 week from receipt of comments
Kirklees Council / WYAAS review of draft report		2 weeks from submission of draft report
Submission of final report to Project Heritage Lead (which will deposit with Kirklees Council; digital copy with West Yorkshire Historic Environment Record (HER), West Yorkshire Archive Service and the Archaeology Data Service (ADS), OASIS)		1 week from receipt of Kirklees Council / WYAAS comments

6. STANDARDS AND RESPONSIBILITIES

6.1 Project role definitions

6.1.1 The following project roles are relevant to this document:

- Network Rail as promoter of the Scheme;
- The Employer or Client means BAM Nuttall (part of the TRU Alliance), who will appoint the Contractor;
- Project Heritage Lead means the individual appointed by Network Rail / the Employer to fulfil this role;
- Contractor means the archaeological organisation appointed by the Employer to carry out the works as defined in this Written Scheme of Investigation (WSI); and
- The Curator means West Yorkshire HER, West Yorkshire Archaeological Advisory Service (WYAAS) and Kirklees Council conservation officers, or their representatives on this project.

6.2 Health and safety considerations

6.2.1 All works are to be carried out in accordance with the appropriate Chartered Institute for Archaeologists (CIfA) guidance standards, Health & Safety legislative requirements and TRU project procedures.

6.2.2 Staff undertaking the historic building recording shall undertake a ½ day project induction, which will be organised and led by the Employer, subject to the requirements of the TRU project.

6.2.3 The Contractor shall prepare project-specific Health and Safety Work Package Plans (WPPs) and Task Brief Sheets (TBSs), in line with the TRU project procedures for such WPPs and TBSs, and submit these to the Employer via the TRU Alliance prior to starting on site. No work shall be undertaken on site until these documents have been approved by the Employer via the TRU Alliance. If amendments are required to these documents during the works, the Employer must be provided with the revised document at the earliest opportunity.

6.2.4 As detailed above, **track access should be considered as only to be utilised if absolutely essential to the survey.** Other approaches should be exhausted in planning before the need for track access is confirmed. Where required, for example at stations and for trackside surveys, work must be carried out under the direction and supervision of a Safe Work Leader (SWL), Separated Zone Working with Site Warden warning.

6.2.5 Any site supervision or accompaniment from the client team during the survey works will be outlined in the required WPP and TBS documents and must be adhered to.

6.3 Monitoring

6.3.1 The Curators have a statutory duty to monitor fieldwork. Fieldwork may be subject to monitoring visits by the Project Heritage Lead and the relevant Curator(s). The Project Heritage Lead and Curator(s) will have unrestricted access to the records or any other information. The work will be inspected to ensure that it is being carried out to the required standards and that it will achieve the stated objectives in line with the approved WSI.

6.4 Communication and engagement

6.4.1 All enquiries on the archaeological works from Stakeholders and interested parties (including the media) should be referred to the Project Heritage Lead.

6.4.2 If engaged by members of the public, ensure communication is polite and respectful. If staff are abused verbally by members of the public or there is clear intent to harm staff, the Contractor should take appropriate action by either disengaging in conversation or exiting the site to seek safety. Any such incidents must be reported to the Project Heritage Lead immediately.

6.4.3 Any emergencies, near misses or close calls must be reported in accordance with the procedures set out within the relevant WPP and TBS for the survey works. This will include reporting both to the TRU Alliance and any on call supervisors for the works.

7. REFERENCES

Chartered Institute for Archaeologists, 2022 (originally published in 2014). *Code of Conduct*. Available at: https://www.archaeologists.net/sites/default/files/CodesofConduct.pdf

Chartered Institute for Archaeologists, 2020a. *Standard and Guidance for the archaeological investigation and recording of standing buildings or structures*. Available at: https://www.archaeologists.net/sites/default/files/CIfAS&GBuildings_1.pdf

Chartered Institute for Archaeologists, 2020b (origionally published in 2014). *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*. Available at: https://www.archaeologists.net/sites/default/files/CIFAS&GArchives_2.pdf

Department of Housing, Communities and Local Government, 2019 (Revised 2023). *National Planning Policy Framework*. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

English Heritage [now Historic England], 2008. *Conservation Principles Policies and Guidance: For the sustainable management of the historic environment*. Available at: https://historicengland.org.uk/advice/constructive-conservation/conservation-principles

Historic England, 2015a. *Historic Environment Good Practice Advice in Planning: Note 2 – Managing Significance in Decision-Taking.* Available at: https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/

Historic England, 2017 (Second Edition). *Historic Environment Good Practice Advice in Planning - Note 3: The Setting of Heritage Assets.* Available at: https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/

Historic England, 2015c. *Digital Image Capture and File Storage Guidelines for Best Practice.* Available at: https://historicengland.org.uk/images-books/publications/digital-image-capture-and-file-storage/

Historic England, 2016. *Understanding Historic Buildings: A guide to good recording practice.* Available at: https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/

Institute of Historic Building Conservation (IHBC), 2007. *Code of Conduct.* Available at: http://www.ihbc.org.uk/resources/A4-Code-of-Conduct.pdf

Network Rail
Waterloo General Office,
London,
SE1 8SW

www.networkrail.co.uk

APPENDIX B OASIS REPORT FORM

OASIS Summary for oxfordar2-535054

OASIS ID (UID)	oxfordar2-535054
Project Name	Analytical Buildings Record (level 3) at Jack Lane Underbridge
Sitename	Jack Lane Underbridge
Sitecode	MDL1/24
Project Identifier(s)	L11502
Activity type	Analytical Buildings Record (level 3)
Planning Id	2025/65/90117/E
Reason For Investigation	Planning: Post determination
Organisation Responsible for work	Oxford Archaeology (Lancaster)
Project Dates	19-Jun-2025 - 19-Jun-2025
Location	Jack Lane Underbridge NGR : SE 24650 22858 LL : 53.70157886902664, -1.628101409444265 12 Fig : 424650,422858
Administrative Areas	Country : England County/Local Authority : Kirklees Local Authority District : Kirklees Parish : Kirklees, unparished area
Project Methodology	Transpennine Route Upgrade. Jack Lane Underbridge (MDL1/24), Batley Carr, West Yorkshire Historic Building Investigation and Recording
Project Results	Jack Lane Underbridge (MDL1/24) is a surviving example of a cast iron beam railway bridge, commonly used in railway infrastructure in the late 1840s. It is one of eleven cast-iron structures designed by Thomas Grainger on the Leeds, Dewsbury and Manchester railway line, and one of five surviving on the operational line, all five being Grade II listed. Jack Lane Underbridge (MDL1/24) represents a relatively early acknowledgement of the inherent weakness in cast-iron level beam bridges. Jack Lane Underbridge (MDL1/24) comprises elements which are not purely functional, including ashlar pillars, cornices and parapet railings, which are of aesthetic and architectural value. Although this survey noted that four of the balusters were likely replacements, no longer retaining the mirrored tulip-formed decorative midsections, these features survive predominantly intact. Despite evidence of corrosion and damage to the steel girders, and some vegetation, the structure overall survives in good condition, with limited alterations, receiving alterations to its decking in the early 1900s, and therefore retains legibility of its original form. Although the works to replace the bridge deck at Jack Lane Underbridge (MDL1/24) will result in permanent alterations to the Grade II listed structure, they have been designed to retain key elements of its historic and architectural elements and will ensure that the underbridge remains a viable feature of an operational railway in the future.
Keywords	Underbridge - POST MEDIEVAL - FISH Thesaurus of Monument Types
Funder	Private or public corporation BAM Nuttall on behalf of TRU Alliance
HER	West Yorkshire HER - unRev - STANDARD

Person Responsible for work	Paul Dunn
HER Identifiers	
Archives	Digital Archive - to be deposited with Archaeology Data Service Archive;

Report generated on: 04 Jul 2025, 07:14

Cambridge office

15 Trafalgar Way,
Bar Hill,
Cambridgeshire, CB23 8SQ

T: +44(0)1223 850500
E: info@oxfordarchaeology.com

Lancaster office

Mill 3,
Moor Lane,
Lancaster, LA1 1QD

T: +44(0)1524 541000
E: info@oxfordarchaeology.com

Oxford office

Janus House,
Osney Mead,
Oxford OX2 0ES

T: +44(0)1865 **980700**
E: info@oxfordarchaeology.com
W: http:\\oxfordarchaeology.com

Chief Executive Officer
Ken Welsh, BSc, MCIfA, FSA
Oxford Archaeology Ltd is a
Private Limited Company, No: 1618597
and a Registered Charity, No: 285627