

# Infrastructure Projects

## Northern Programmes



## The Network Rail (Dewsbury to Leeds W4 Scheme) Trans-Pennine Route Upgrade

### Dewsbury Viaduct (MDL1/19) – Heritage Statement

Network Rail

TP/LNE/2022-009

January 2022



## Contents

<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1 Report objectives .....	4
1.2 Current conditions .....	4
1.3 Summary of proposal.....	7
1.4 Legislative and policy context.....	7
1.5 Consultation .....	11
<b>2. HERITAGE ASSETS AND THEIR SIGNIFICANCE .....</b>	<b>13</b>
2.1 Dewsbury Viaduct (MDL1/19) (Grade II Listed, NHLE 1313659) .....	13
2.2 Other heritage assets.....	24
<b>3. PROPOSALS .....</b>	<b>28</b>
3.1 Background to proposals .....	28
3.2 Design development and justification .....	28
3.3 Description of proposals.....	29
<b>4. IMPACT OF PROPOSALS .....</b>	<b>32</b>
4.1 Impact on heritage assets .....	32
4.2 Mitigation and compensation.....	35
4.3 Public benefit.....	36
4.4 Assessment on Level of Harm.....	37
<b>5. CONCLUSION .....</b>	<b>39</b>
<b>APPENDIX A – LOCATION PLAN .....</b>	<b>41</b>
<b>APPENDIX B – HISTORIC ENGLAND LIST DESCRIPTION .....</b>	<b>42</b>

## Inserts

Insert 1-1 Dewsbury Viaduct (MDL1/19) from south-east, showing Spans 3 to 6, with former Spinkwell Mill in the background. ....	5
Insert 1-2 Evidence of spalling and vegetation growth. ....	6
Insert 1-3 Example of a longitudinal fracture within the masonry of the viaduct. ....	6
Insert 1-4 Evidence of drainage issues around a downpipe hopper head, with associated dampness and spalling. ....	7

Insert 2-1 Ordnance Survey Six-inch map (surveyed 1850-1851, published 1855) showing Dewsbury Viaduct (red circle).....	15
Insert 2-2 Spans 1 and 2 over Halifax Road (eastern elevation).....	16
Insert 2-3 Span 7 over Bradford Road (western elevation). ....	17
Insert 2-4 Span 11 over Greaves Road (western elevation).....	17
Insert 2-5 Projected pilaster, Span 7 (western elevation). ....	18
Insert 2-6 Spans 8,9 (with red brick infill) and 10 (western elevation).....	19
Insert 2-7 Proximity of buildings to Spans 8,9 and 10 and patters plates (eastern elevation). ....	19
Insert 2-8 Span 8 showing abutting buildings (eastern elevation). ....	20
Insert 2-9 Proximity of block flats west of the viaduct (western elevation looking north). ....	20
Insert 2-10 Soffit of Span 7, showing later addition of strike protection cladding plates. ....	21
Insert 3-1 Aerial view showing locations of OLE portals (represented by the red lines across the structure). The yellow numbers and arrows indicate the locations of viewpoints from the edge of the Dewsbury Town Centre Conservation Area (see Insert 3-2 below). ....	30
Insert 3-2 Indicative visualisation showing the OLE portals along the viaduct. Note the position of this visualisation is represented by viewpoint 3 indicated by the map in Insert 3-1 above. ....	31
Insert 3-3 Indicative visualisation showing an OLE bracket attached to the viaduct pier, avoiding physical impacts on the string course. ....	31

## 1. INTRODUCTION

### 1.1 Report objectives

- 1.1.1 The Trans-Pennine Route Upgrade (TRU) (herein referred to as the ‘Programme’) is a programme of works which will 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 section of the Programme between Westtown (Dewsbury) and Leeds is known (and henceforth referred to) as the W4 Scheme; it will contribute to the overall TRU aims of increasing service capacity and offering journey time benefits through:
- Electrification of the line;
  - Increase in line speeds;
  - Remodelling of stations including platform extension works at Dewsbury and Morley, as well as the construction of a new footbridge to replace the existing station subway at Batley;
  - Replacing the existing Lady Anne level crossing north of Batley with a footbridge.
- 1.1.2 As well as the works identified above, various other engineering works are necessary including strengthening of bridge decks (rail and highway); electrification of the line and provision of associated infrastructure will require alterations to bridge structures, including raising the height of parapets and the attachment of Overhead Line Electrification (OLE) fixings.
- 1.1.3 Under the Planning (Listed Buildings and Conservation Areas) Act 1990, consent is required from the local planning authority for any proposed works that would affect the character of a Listed Building. This Heritage Statement has been compiled in support of an application for Listed Building Consent by Network Rail in respect of the proposed works on the Grade II Listed MDL 1/19 Dewsbury Viaduct (NHLE 1313659), over Halifax Road and Bradford Road, Kirklees, West Yorkshire. A location plan is provided in Appendix A.
- 1.1.4 Dewsbury Viaduct (MDL1/19) was designated as a Grade II Listed building in July 1985. The Historic England list description (included in full in Appendix B) names the listed building as “Railway Viaduct (Dewsbury-Batley Line) Railway Viaduct (Dewsbury-Batley)”. Throughout this Heritage Statement the structure is referred to as “Dewsbury Viaduct (MDL1/19)”.
- 1.1.5 This Heritage Statement will seek to:
- Identify and discuss the heritage significance of the listed structure;
  - Present the design requirements of the Scheme at the structure;
  - Present the process of design development and optioneering which has led to the design proposal for the Scheme in relation to the structure;
  - Identify the impacts of the design proposal on the significance of the structure, in the context of current national and local planning policy and guidance;
  - Discuss any mitigation and/or compensation recommended in relation to the structure; and
  - Consider the public benefits to be gained from the Scheme weighed against the impact on the significance of the structure, in line with the National Planning Policy Framework, 2021 and Kirklees Local Plan, 2019.

### 1.2 Current conditions

- 1.2.1 Dewsbury Viaduct (MDL1/19) (Insert 1-1) is an 11-span viaduct carrying the Trans-Pennine Route, located c. 200m north east of Dewsbury Station in Kirklees, West Yorkshire. The structure carries the railway over Halifax Road, Bradford Road and Greaves Road. The viaduct was built to the designs of Thomas Grainger for the Leeds, Dewsbury & Manchester

Railway, and opened in 1848 by the London & North Western Railway (LNWR).

- 1.2.2 The viaduct is constructed of quarry-faced stone and is largely unaltered. The structure has always carried two tracks and though some small alterations have occurred to parts of the structure; the viaduct is largely as it was when constructed in the late 1840s. The majority of the spans of the viaduct carry the railway over roads or areas of public realm, though towards the northern end of the structure a number of arches lie within or adjacent to commercial premises and are, or have previously been, tenanted.



**Insert 1-1 Dewsbury Viaduct (MDL1/19) from south-east, showing Spans 3 to 6, with former Spinkwell Mill in the background.**

- 1.2.3 Two tracks of railway pass over the viaduct; the Up line to Dewsbury and the Down line to Batley. The structure was subject to a detailed examination as part of Network Rail's maintenance regime in 2014, which identified that it was in a fair condition, with a few defects including:
- Spalled stonework (Insert 1-2 and 1-4)
  - Vegetation growing through cracks (Insert 1-2)
  - Longitudinal fractures (Insert 1-3)
  - Dampness (Insert 1-4)
  - Blocked or missing drainage (Insert 1-4)



**Insert 1-2 Evidence of spalling and vegetation growth.**



**Insert 1-3 Example of a longitudinal fracture within the masonry of the viaduct.**



**Insert 1-4 Evidence of drainage issues around a downpipe hopper head, with associated dampness and spalling.**

### 1.3 Summary of proposal

- 1.3.1 In order to achieve the TRU Programme objectives of improving the reliability and resilience of the railway, the Scheme will involve the electrification of the railway at Dewsbury Viaduct (MDL 1/19). It is proposed that five Overhead Line Electrification (OLE) portals are placed on the viaduct to support the electrification of the section of track at this location. Due to design constraints, this will require the attachment of OLE brackets to the exterior of the viaduct at pier locations.
- 1.3.2 The design development process has included appraisal of various options to identify an approach which delivers the operational requirements, while also minimising impact on the heritage significance of the structure as far as possible. This is outlined below in Section 3.2. The design has been developed alongside consultation with Historic England and the Kirklees Council Conservation Team; this is detailed below in Section 1.5.

### 1.4 Legislative and policy context

#### Legislation

- 1.4.1 The Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended) governs the designation and works to listed buildings in England.
- 1.4.2 The Act states in **s.1 (5)**:  
*‘In this Act “listed building” means a building which is for the time being included in a list compiled or approved by the Secretary of State under this section; and for the purposes of this Act—*  
*(a) any object or structure fixed to the building;*

*(b) any object or structure within the curtilage of the building which, although not fixed to the building, forms part of the land and has done so since before 1st July 1948, shall be treated as part of the building.'*

1.4.3 Under the Act, no one is permitted to undertake or cause to be undertaken any works that would affect the character of a listed building unless the works are authorised. **Section 16** of the Act identifies that whether such works can be carried out is determined by the local planning authority or the Secretary of State:

*'(1) Subject to the previous provisions of this Part, 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.*

*(2) 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.*

*(3) Any listed building consent shall (except in so far as it otherwise provides) ensure for the benefit of the building and of all persons for the time being interested in it.'*

1.4.4 In relation to the granting of Listed Building Consent, **Section 17** of the Act stipulates that conditions attached to Listed Building Consent may include those with respect to:

*'(a) the preservation of particular features of the building, either as part of it or after severance from it;*

*(b) the making good, after the works are completed, of any damage caused to the building by the works; [and]*

*(c) the reconstruction of the building or any part of it following the execution of any works, with the use of original materials so far as practicable and with such alterations of the interior of the building as may be specified in the conditions'.*

1.4.5 It is also defined in s.17 (2) 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'.*

1.4.6 The Act also states in **s.66 (1)**:

*'In considering whether to grant planning permission or permission in principle for development which affects a listed building or its setting, the local planning authority or, as the case may be, 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'.*

### National policy

1.4.7 The National Planning Policy Framework (NPPF, 2021) provides the Government's national planning policy on the conservation of the historic environment, supported by the Planning Practice Guidance (updated July 2019)<sup>1</sup>. This Heritage Statement aims to address relevant policy within the NPPF in relation to Section 16 'Conserving and enhancing the historic

<sup>1</sup> It was published in March 2021 and revised in July 2021.

environment' and includes an assessment of significance of the heritage assets and their setting that may be affected by the proposed works, in compliance with paragraphs 194-208.

1.4.8 The following paragraphs as set out in the NPPF include key provisions considered of particular importance to this application.

- **Paragraph 194** - *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. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance.*
- **Paragraph 199** - *When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss, or less than substantial harm to its significance.*
- **Paragraph 200** - *Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:*
  - a) *grade II listed buildings, or grade II registered parks or gardens, should be exceptional;*
  - b) *assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II\* listed buildings, grade I and II\* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*
- **Paragraph 201** - *Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:*
  - a) *the nature of the heritage asset prevents all reasonable uses of the site; and*
  - b) *no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and*
  - c) *conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and*
  - d) *the harm or loss is outweighed by the benefit of bringing the site back into use.*
- **Paragraph 202** – *Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including, where appropriate, securing its optimum viable use.*
- **Paragraph 203** – *The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgment will be required having regard to the scale of any harm or loss and the significance of the heritage asset.*

1.4.9 The National Planning Practice Guidance (Historic Environment) (PPG, 2014) gives further information on how national policy is to be interpreted and applied locally. The PPG includes particular guidance on matters relating to protecting the historic environment. The PPG for historic environment was significantly updated in 2019 to reflect the changes made in 2018/19 to NPPF policy.

#### Local policy

1.4.10 The Kirklees Local Plan was adopted in February 2019 and is now the statutory development

plan for Kirklees providing a set of planning policies.

- 1.4.11 Kirklees Council recognises that *heritage assets are an irreplaceable resource and should aim to conserve them in a manner appropriate to their significance*<sup>2</sup>. Section 14 Historic Environment of the Local Plan sets out **Policy LP35** relating to the historic environment, which is reproduced below.

#### Policy LP35 Historic Environment

1. Development proposals affecting a designated heritage asset (or an archaeological site of national importance) should preserve or enhance the significance of the asset. In cases likely to result in substantial harm or loss, development will only be permitted where it can be demonstrated that the proposals would bring substantial public benefits that clearly outweigh the harm, or all of the following are met:
  - a) the nature of the heritage asset prevents all reasonable uses of the site;
  - b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation;
  - c) conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and
  - d) the harm or loss is outweighed by the benefit of bringing the site back into use.
  
2. Proposals which would remove, harm or undermine the significance of a non-designated heritage asset, or its contribution to the character of a place will be permitted only where benefits of the development outweigh the harm having regard to the scale of the harm and the significance of the heritage asset. In the case of developments affecting archaeological sites of less than national importance where development affecting such sites is acceptable in principle, mitigation of damage will be ensured through preservation of the remains in situ as a preferred solution. When in situ preservation is not justified, the developer will be required to make adequate provision for excavation and recording before or during development.
  
3. Proposals should retain those elements of the historic environment which contribute to the distinct identity of the Kirklees area and ensure they are appropriately conserved, to the extent warranted by their significance, also having regard to the wider benefits of development. Consideration should be given to the need to:
  - a) ensure that proposals maintain and reinforce local distinctiveness and conserve the significance of designated and non-designated heritage assets;
  - b) ensure that proposals within Conservation Areas conserve those elements which contribute to their significance;
  - c) secure a sustainable future for heritage assets at risk and those associated with the local textile industry, historic farm buildings, places of worship and civic and institutional buildings constructed on the back of the wealth created by the textile industry as expressions of local civic pride and identity;
  - d) identify opportunities, including use of new technologies, to mitigate, and adapt to, the effects of climate change in ways that do not harm the significance of heritage assets and, where conflict is unavoidable, to balance the public benefit of climate change mitigation measures with the harm caused to the heritage assets' significance;
  - e) accommodate innovative design where this does not prejudice the significance of heritage assets;

<sup>2</sup> Kirklees Council, Kirklees Local Plan Strategy and Policies, 2019, 141. <https://www.kirklees.gov.uk/beta/planning-policy/pdf/local-plan-strategy-and-policies.pdf>.

- f) preserve the setting of Castle Hill where appropriate and proposals which detrimentally impact on the setting of Castle Hill will not be permitted

## 1.5 Consultation

- 1.5.1 Historic England and Kirklees Council have been involved in ongoing stakeholder consultation with Network Rail through the development of the Trans-Pennine Route Upgrade between Dewsbury and Leeds.
- 1.5.2 Regular meetings with both these historic environment stakeholders have been held to discuss design development of the Scheme in relation to MDL 1/19 Dewsbury Viaduct. Meetings and key correspondence took place on the following dates:
- 9 June 2020 – W4 Bridges and Structures –Kirklees Council (Conservation) Engagement (1st round- introduction);
  - 12 August 2020 – W4 Bridges and Structures – Historic England (Conservation) Engagement (1st round- introduction);
  - 8 December 2020 - W4 Bridges and Structures – Historic England / Kirklees Council/ Leeds City Council (Conservation) Engagement (2nd round);
  - 6 May 2021 - W4 Bridges and Structures – Historic England / Kirklees Council/ Leeds City Council (Conservation) Engagement (3rd round);
  - 22 July 2021 - W4 Bridges and Structures – Historic England / Kirklees Council (Conservation) Engagement (email correspondence);
- 1.5.3 The meetings on **9 June 2020** and **12 August 2020** introduced the TRU W4 (Dewsbury to Leeds) scheme to Kirklees Council and Historic England. Dewsbury Viaduct (MDL 1/19) was also introduced, and an overview of the structure highlighting its historic background and heritage significance was presented. The stakeholders were also informed of the proposed works at the structure. It was mentioned that Overhead Line Electrification (OLE) would be required at Dewsbury Viaduct (MDL 1/19), and that a structural assessment of the arches would be needed to assess existing loading as well as changes from the proposed TRU works.
- 1.5.4 In the **8 December 2020** meeting, a reminder of anticipated works to Dewsbury Viaduct (MDL 1/19) was presented to the heritage stakeholders. It was noted that despite efforts to fit the proposed OLE within the structure (inside of the parapets on the track side) to minimise visual impacts, it would not be possible due to the viaduct's narrow design. An initial visualisation was shared showing the OLE brackets attached to the outside of the structure. It was agreed that ways of limiting the number of portals on the structure by maximising the spacing between them and also designing them as slender as possible to mitigate visual impacts would be looked at, however it was noted that the structure's curved design might prove to be a challenge. An update on the structure's survey works and assessments was also given. It was stated that a Level 1 structural assessment of the viaduct's masonry arches had begun and would be complete in January 2021. An assessment of TRU track changes would be complete in July 2021, an assessment of the spandrel wall was planned for May 2021 and the overhead electrification gantry survey would be scoped. A discussion around viewpoints and ways of experiencing the structure also took place and it was agreed that different viewpoints towards the viaduct (including any viewpoints mentioned in the Dewsbury Town Centre Conservation Area) would be considered and assessed to capture the structure's dynamic nature and get a better understanding of visual impacts on its setting.
- 1.5.5 The **6 May 2021** meeting reiterated the structure's historic significance and presented more detailed design proposals to the stakeholders. Three viewpoints of the listed viaduct were shared showing an existing view and a visualisation of the proposed OLE. Two of the viewpoints were captured looking out of the Dewsbury Town Centre Conservation Area. In terms of the OLE spacing, it was noted that the structure's curved design required the OLE

portals to be positioned closer to one another and limitations due to the proximity of some buildings were also highlighted. It was also mentioned that the portals would be aligned with the structure's piers to create more pleasing views towards the viaduct. The meeting concluded with stakeholders requesting to see more detailed OLE visualisations showing the cable wires and details of how the fixings would be attached to the structure.

- 1.5.6 On **22 July 2021**, updated OLE visualisations showing the requested clarifications were sent to the heritage stakeholders (Kirklees Council and Historic England) through email. Both stakeholders responded positively and were happy with the design clarifications.

## 2. HERITAGE ASSETS AND THEIR SIGNIFICANCE

### 2.1 Dewsbury Viaduct (MDL1/19) (Grade II Listed, NHLE 1313659)

#### Historic background

##### History of the 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<sup>3</sup>.
- 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 Thame 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 Dewsbury Viaduct (MDL1/19) was constructed by the Leeds, Dewsbury & Manchester Railway between 1845 and 1847. This line was 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 the principal engineer Thomas Grainger. Grainger was one of the leading railway engineers in Scotland at this time, working on Pioneering Age (1825-41) railways such as the Monkland and Kirkintilloch Railway (1824-1826) and the Glasgow and Garnick Railway (1826-1831), which he delivered in conjunction with the engineer John Miller. He is best known in England for his work on lines including the 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<sup>4</sup>.
- 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

<sup>3</sup> Alan Baxter Associates, 2019. TransPennine Route Upgrade Route-wide Statement of Significance. 14.

<sup>4</sup> Alan Baxter Associates, 2017. MDL1/6 & MDL 1/8 Bridges Statement of Significance. 13.

joint-stock concern of its time, capitalised at £29 million<sup>5</sup>.

- 2.1.6 The history and significance of the Trans-Pennine Route is discussed at more length in the Route-Wide Statement of Significance<sup>6</sup>. This was produced to characterise the overall heritage significance of the Trans-Pennine Route as a whole.

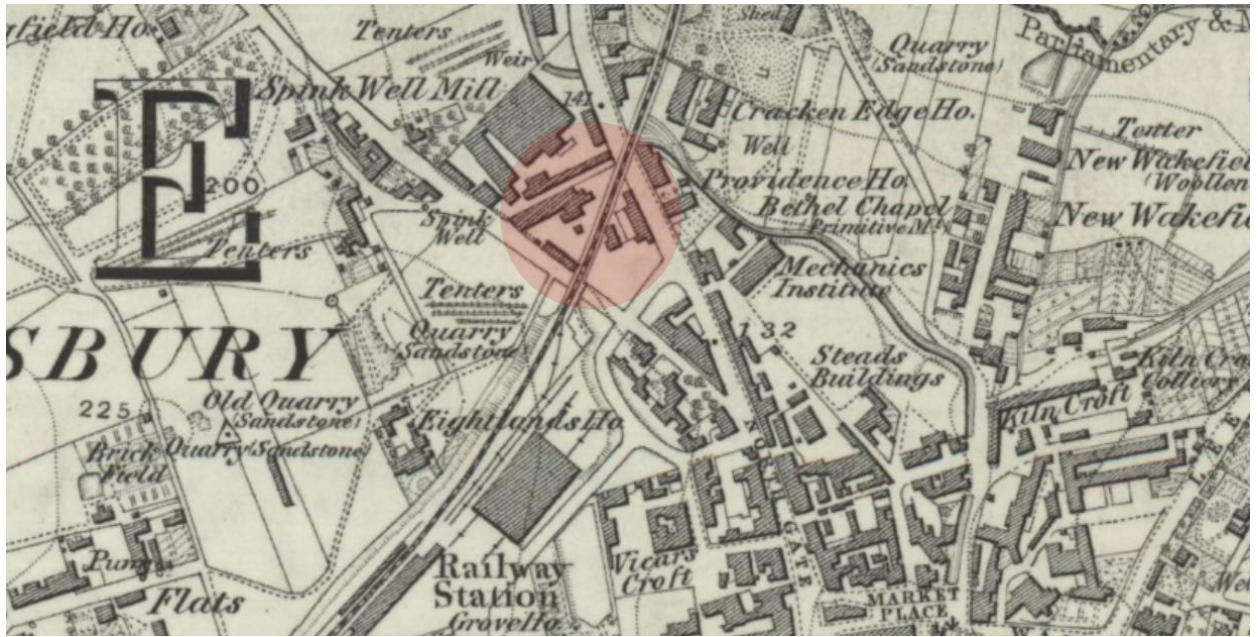
#### Dewsbury Viaduct (MDL 1/19)

- 2.1.7 Dewsbury Viaduct (MDL 1/19) was constructed in 1848, to carry the railway over Halifax and Bradford Roads, across the low valley to the north-west of Dewsbury's town centre. The viaduct was closely linked to the nearby Dewsbury Station and its associated goods sheds, which were constructed on the south-east side of the railway immediately south of the southern end of the viaduct.
- 2.1.8 The railway, station and viaduct formed a combined railway landscape that helped unlock links between Dewsbury's industries and trading opportunities across the Pennines. As with other towns along the route, Dewsbury's industrial sector predated the arrival of the railway, but the new transport infrastructure hugely improved the town's connectivity and enabled its continued expansion<sup>7</sup>. During the mid-late 19<sup>th</sup> century, multiple railway lines developed in Dewsbury by competing companies to capture a share of the market. In addition to the Leeds, Dewsbury and Manchester line, two other railway lines followed: the Lancashire and Yorkshire Railway in 1867 and the Great Northern Railway, relatively close to the northern end of Dewsbury Viaduct (MDL 1/19), in 1874. These lines were served by two other stations within the town: Dewsbury Market Place of the Lancashire and Yorkshire Railway (closed 1930) and Dewsbury Central of the Great Northern Railway (closed 1964). The railways were a particular catalyst for growth and further industrial development within the town as they strengthened Dewsbury's position as one of the centres of the heavy woollen industry; as an industry heavily reliant on both the import and export of materials, the connection to the Trans-Pennine Route provided vital transport links across the north of England. Despite the closure of the other railway lines in the mid-late 20<sup>th</sup> century, the development of these railways and their associated infrastructure shaped the townscape of Dewsbury in a way which can still be appreciated today.
- 2.1.9 This growth and development of Dewsbury during the mid-late 19<sup>th</sup> century shaped the townscape around the viaduct. At time of construction, Bradford Road was already lined with a number of mills and commercial premises. However these expanded considerably during the second half of the 19<sup>th</sup> century. A number of buildings were located immediately adjacent to the viaduct along Bradford Road, while Spinkwell Mill, likely founded around the turn of the 19<sup>th</sup> century and developed mainly in 1840s prior to the railway's construction, was present to the west, albeit of much smaller scale than the mill complex would become later in the century. Development along Halifax Road had not taken hold at the time of the viaduct's construction, aside from the subsidiary settlement of Spinkwell, with larger houses and farmsteads amongst open land characterising the hillside further to the west of the viaduct beyond Spinkwell Mill.

<sup>5</sup> Alan Baxter Associates, 2017. TransPennine Route Statement of History and Significance: West of Leeds. 5.

<sup>6</sup> Alan Baxter Associates, 2019. TransPennine Route Upgrade: Route-wide Statement of Significance.

<sup>7</sup> Alan Baxter Associates, 2019. TransPennine Route Upgrade: Route-wide Statement of Significance. 28.



**Insert 2-1 Ordnance Survey Six-inch map (surveyed 1850-1851, published 1855) showing Dewsbury Viaduct (red circle).**

- 2.1.10 By the end of the 19<sup>th</sup> century, the townscape around the viaduct had increased in volume and density with buildings located in proximity to the structure along the length of both sides between the major roads. This included the Spinkwell Mill complex, considerably larger by the end of the century than when the viaduct was built, to the west, while the eastern elevation was faced by Providence Mills at the structure's northern end (see Insert 2-1), terraces of buildings along both sides of Bradford Road and the Trinity Chapel building on Halifax Road at the southern end of the viaduct. By this date, the prominent warehouses and commercial premises of Dewsbury's town centre to the south-east, a number of which survive today and characterise the townscape around the viaduct, were also developed (see below, 2.2.7).
- 2.1.11 The townscape around the structure remained little changed during the first half of the 20<sup>th</sup> century, though some elements continued to develop, such as the construction of the prominent six-storey spinning block of Spinkwell Mill, today converted to residential use (see below, 2.1.18), in the early 20<sup>th</sup> century. It wasn't until the 1980s that the area around the structure began to be cleared opening up views towards the viaduct and shaping the immediate environs of the structure as experienced today. The major development which drove this was the construction of Dewsbury's ring road which resulted in the demolition of those buildings immediately adjacent to the south-eastern elevation of the structure along Halifax Road and Bradford Road, including the clearance of the late 19<sup>th</sup> century terraces and the former Trinity Chapel (which had been converted to become the Rex Cinema). Similarly, the closure and clearance of much of Spinkwell Mill removed many of the buildings close to the north-western elevation of the viaduct, though the large spinning block survived and was converted to residential use.
- 2.1.12 The setting of Dewsbury Viaduct (MDL 1/19) is characterised by the prominence of the structure within the historic townscape to the north of the town centre of Dewsbury: it should be noted that the viaduct lies outside of the Dewsbury Conservation Area boundary. The viaduct spans across a valley on the edge of the town centre of Dewsbury, with multiple roads passing underneath and adjacent to it, and forms a prominent element of the historic townscape in this part of the settlement. This prominence and the proximity of notable routes of travel means that there are notable views towards and across the structure which characterise how the viaduct is experienced. Two major roads pass under the viaduct – Halifax Road and Bradford Road – while the Dewsbury Ring Road passes adjacent to the structure to the south-east. From these roads, the viaduct is experienced in dynamic views which

evidence the scale and engineering achievement of the structure. The viaduct is also visible in views out of the historic core of Dewsbury along Northgate and Halifax Road; such views are noted as being important to the character of that part of the Dewsbury Town Centre Conservation Area (see below, 2.2.7 and 2.2.8).

- 2.1.13 Those traveling by train over the viaduct are also afforded views of the surrounding townscape, which evidence the historic character of Dewsbury, including, in particular, the appreciation of the industrial and commercial growth of the town around the heavy woollen industry in the 19<sup>th</sup> century through the prominence of surrounding mill buildings and warehousing. Such views characterise the experience of those arriving at or departing from Dewsbury Station, as well as those traveling through the town as part of a longer journey. The proximity of other buildings to the viaduct is also an element of its setting; the structure is very much part of the historic townscape in this part of Dewsbury, with adjacent buildings sitting in proximity to the structure, particularly Spinkwell Mill to the west and the industrial buildings of Providence Mills at its north-eastern edge (see below, paragraph 2.1.18).

### Description

- 2.1.14 Dewsbury Viaduct (MDL1/19) comprises 11 spans in total that stretch c.220m over a broad curved plan with a north east/ south west orientation. The viaduct carries the railway over three public roads: Halifax Road (Spans 1,2), Bradford Road (Span 7) and Greaves Road (Span 11). Both ends of the structure are buried into embankments with masonry wing walls. The wing wall on the north eastern corner of the structure is obscured by buildings on Greaves Road which abut the end of the structure (see below, 2.1.18), while the wing wall on the south eastern corner is faced with different masonry.
- 2.1.15 The topography of the ground level below the viaduct means that the arches are of slightly different heights along the length of the structure. In particular, the ground level at each end of the structure is higher than in the middle, meaning that the arches of Spans 1 and 2 accommodating Halifax Road and Span 11 accommodating Greaves Road are not as tall as those of the other spans.



Insert 2-2 Spans 1 and 2 over Halifax Road (eastern elevation).



**Insert 2-3 Span 7 over Bradford Road (western elevation).**



**Insert 2-4 Span 11 over Greaves Road (western elevation).**

- 2.1.16 The structure is constructed in ashlar coursed quarry-faced Pennine Lower Coal Measures sandstone with rusticated vaults and voussoirs. Both elevations of the viaduct are similar. The viaduct arches are semi-circular with spans that are c.13.6m wide, with the exception of Span 7 which comprises a wider c.24.4m elliptical span to carry the structure over Bradford Road, which passes under the structure at an oblique angle. The arch rings are stepped, rusticated v-jointed ashlar voussoirs which continue as quoins to the soffit of the arch. The soffits of the arches comprise large, tooled blocks of ashlar.
- 2.1.17 The viaduct's substructure comprises large, moulded ashlar bases from which squared and coursed quarry-faced stone piers rise. Projected pilasters are positioned between Spans 2 and 3, on either side of Span 7 and on the northern side end of Span 11, providing a rhythm to the structure proportional to the roads passing underneath. The protruding pilasters rise from a lower base consisting of moulded stone. The spandrel walls are of squared and coursed quarry-faced stone, a cornice of moulded ashlar projects out above the arches and acts as a base for the parapet wall, also of coursed quarry-faced stone and topped with squared copers. At the south-eastern corner of the structure, the parapet wall is angled slightly, from the middle of Span 1 (visible in Insert 2-2); this likely represents start of the historic approach into the sidings that formerly lay to the north-east of Dewsbury Station.



**Insert 2-5 Projected pilaster, Span 7 (western elevation).**

- 2.1.18 On the western side of Spans 3 to 6 lies a private gated car park serving the spinning block of the former Spinkwell Mill, which has been converted to residential flats. The building itself is located c.3m to the west of the elevation of the viaduct. Spans 8, 9 and 10 historically housed private tenants and this former use can be seen particularly through the red brick infill wall which has been constructed in the western face of Span 9 (see Insert 2-6). Industrial warehouses (formerly part of Providence Mills) abut the north eastern side of Spans 8 to 11, partially covering the faces of the arches of these spans and fully blocking the arches of Spans 9 and 10. Buildings on the north western side of Spans 8 to 11 also lie in proximity to the viaduct, notably 40 Bradford Road which abuts the pier between Spans 7 and 8 (see below, 2-6), while a single-storey later garage building abuts the curved wing wall at the north-western corner of Span 11.



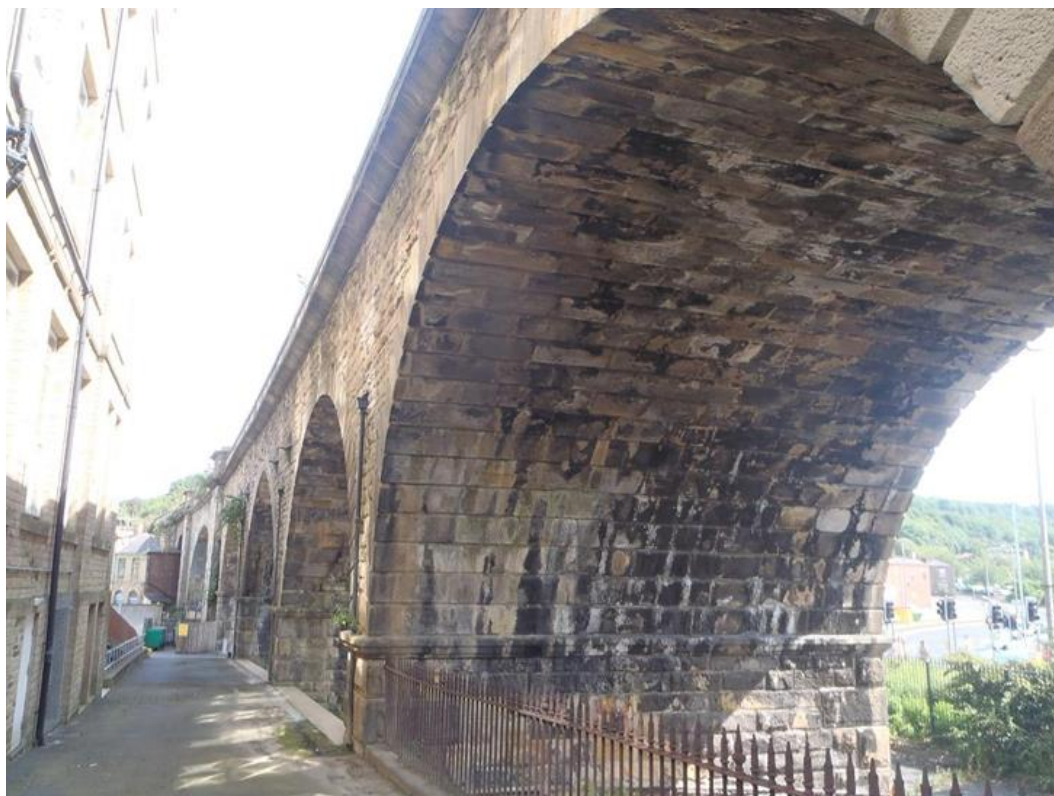
**Insert 2-6 Spans 8,9 (with red brick infill) and 10 (western elevation).**



**Insert 2-7 Proximity of buildings to Spans 8,9 and 10 and pattress plates (eastern elevation).**



Insert 2-8 Span 8 showing abutting buildings (eastern elevation).



Insert 2-9 Proximity of block flats west of the viaduct (western elevation looking north).

- 2.1.19 While the structure is largely unaltered in form from its construction, the viaduct has undergone some smaller later additions and alterations. The development of buildings alongside the viaduct, in some cases abutting the structure, has led to physical attachment of walls to the elevations of the viaduct, however, where historically buildings were located adjacent to the viaduct, the removal of these has not left any physical changes to the structure. As identified above in paragraph 2.1.18 and visible in Insert 2-6, the use of some of the arches by tenants has also led to alterations, most prominently a red brick wall constructed across the western face of Span 9 in which a number of doors and windows have been inserted. Internal alterations and additions including the installation of an internal corrugated iron cladding to the soffit of Span 9 were also carried out. The soffit of Span 7 has also undergone alteration, with the soffit partly clad with strike protection plates (see Insert 2-10). The viaduct has also undergone some localised strengthening works in the form of the installation of tie bars and pattress plates at an unknown date, notably around Spans 5, 8 and 9 (see Inserts 2-7). Safety handrails have also been added along both parapets.



**Insert 2-10 Soffit of Span 7, showing later addition of strike protection cladding plates.**

### Significance

- 2.1.20 Dewsbury Viaduct (MDL 1/19) is of significance as a largely unaltered example of an 1840s viaduct, dating from the Heroic Age (1841-50) of railway building. The viaduct derives significance from: its association with the Leeds, Dewsbury & Manchester Railway; the engineering of Thomas Grainger; the quality of architectural expression in its design; and the scale of its presence within the townscape.
- 2.1.21 The viaduct evidences the great engineering achievement which characterised the period of 'railway mania' during the 1840s and 50s. In this respect, the structure derives historical value in representing one of the numerous large-scale engineering features which characterised the achievement of the original Trans-Pennine Route construction, as well as the wider development of the network during the 1840s. It directly references the skill of those responsible for its design and construction. The fact that the structure is still in use as part of

the operational rail network enhances the structure's historical value, through the continuity of its function and legibility. Dewsbury Viaduct (MDL 1/9) represents one of the group of surviving Grainger-designed structures on the historic railway (see below, 2.1.27) and its historical and continued association with this group of structures strongly contributes to its significance.

- 2.1.22 The viaduct also derives significance from the aesthetic value of its architectural quality, evident in its design detailing and monumental engineering form. Thomas Grainger's approach which incorporated styled elements such as the voussoirs keyed into the coursing and monumental pilasters have the effect of elevating the architectural expression of the structure.
- 2.1.23 Although the viaduct has undergone little alteration since its construction, ensuring the continued legibility of its historic design, there is evidence of change and adaptation. The reuse of some of the arches to incorporate businesses, the building of structures alongside the viaduct and the necessary repair works to ensure the survival of historic fabric, all adds to the story of the viaduct's use. These works and adaptations further understanding of the structural components and engineering interventions, which offer the potential for evidential value as a contributing factor to its significance.
- 2.1.24 The architectural interest of the viaduct is enhanced further by the presence of the structure within the townscape. Spanning the valley across and beside roads which represent major historic and current routes, the monumental scale, architectural quality and engineering achievement of the structure are evidenced in views towards and through the viaduct (see below, 2.1.25). The viaduct forms a recognisable element of Dewsbury's townscape, which is experienced and appreciated on a regular basis by people travelling under and along it, living next to it and working in proximity to it. It is a defining piece of architecture that has been an established landmark within the town for over 170 years.
- 2.1.25 Dewsbury Viaduct derives significance from its setting. The prominence of the structure, evidenced in views towards and across the viaduct, contributes to the appreciation of the engineering achievement and historical interest of the structure and Grainger's design. The viaduct's position over and adjacent to major roads mean that appreciation of its design and function (with the addition of the frequent movement of trains atop it), defines it as an element of the historic industrial and transportation network within Dewsbury, which is experienced daily by local people. Views of and from the structure also evidence the significance of the railway to the 19<sup>th</sup> century growth of Dewsbury, visually connecting the railway with the surviving 19<sup>th</sup> century buildings of the heavy woollen industry which characterise the historic core of the town. The setting of the viaduct enhances appreciation of its place, and the place of the Trans-Pennine Route generally, within the historic development of the settlement.

#### Group value

- 2.1.26 Masonry railway bridges across the Trans-Pennine Route to the west of Leeds have been characterised as being of local or regional interest, depending on their architectural quality, contribution to wider historical interest of the route, and their group value; it has been noted however that, as a group, they are not of substantial national interest due to their dating from a period of railway development when thousands of similar structures were erected<sup>8</sup>.
- 2.1.27 However, the Route is notable for the succession of viaducts, required due to the hilly terrain which it navigates. Though a more prominent feature of the line to the south-west, particularly the historic Huddersfield and Manchester Railway along the Tame and Colne valleys, the Leeds, Dewsbury & Manchester Railway also features a trio of viaducts, with Grainger having also designed Batley (Union Mill) Viaduct (MDL 1/27) (Grade II Listed, NHLE 1134650) and

<sup>8</sup> Alan Baxter Associates, 2019. TransPennine Route Upgrade Route-wide Statement of Significance. 37.

Churwell Viaduct (MDL 1/40) (Grade II Listed, NHLE 1451053)<sup>9</sup>.

- 2.1.28 The viaducts at Batley (MDL 1/27) and Churwell (MDL 1/40) have similar design language to that at Dewsbury Viaduct (MDL1/19), albeit Churwell is smaller in scale, crossing a shorter and shallower valley than the other two. In each case, Grainger employs stylistic motifs such as voussoirs and impost bands which add architectural quality to the functional structures, while each viaduct also forms a prominent element of its surrounding landscape or townscape. The three structures form a legible group, evidencing Grainger's common approach to the engineering of the structures across the three locations; that all three have been little altered adds to their group value. Though the similar aesthetics and scale of the viaducts place them in close relationship with one another, Dewsbury Viaduct (MDL 1/19) is also part of a wider group of Grainger structures constructed for the Leeds, Dewsbury & Manchester Railway, which also includes underbridges and overbridges of both cast iron and masonry construction, including Wood Lane Overbridge (MDL 1/23) (Grade II Listed, NHLE 1449980)<sup>10</sup>, located approximately 400m north of the viaduct, which demonstrate material and stylistic similarities to elements of Grainger's larger viaducts.
- 2.1.29 As noted above in paragraph 2.1.4, Grainger was also responsible for the design and engineering of structures on other railway lines during the Heroic Age (1825-41) of railway development, notably the nearby East and West Yorkshire Junction Railway (1846) and the Leeds & Thirsk Railway (1845-1852). Further examples of masonry structures designed by Grainger survive on these routes, which share common characteristics and design language with those on the Leeds, Dewsbury & Manchester Railway, including with Dewsbury Viaduct (MDL 1/19). These include examples of large-scale viaducts, some also designated as Listed Buildings, for example the Wharfedale Viaduct over the River Wharfe on the Leeds & Thirsk Railway (Grade II Listed, NHLEs 1150036, 1253368)<sup>11</sup>. Such examples also share group value with Grainger's Leeds, Dewsbury & Manchester Railway bridges, as part of the wider group of surviving historic railway engineering structures he designed.
- 2.1.30 The largely contemporary construction of a number of individual railways which combined to form the wider Trans-Pennine Route mean that historic structures derive significance as part of wider groups across these various historic lines. As noted above, large-scale viaducts are a feature of those constituent historic railways which make up the Trans-Pennine Route today. In particular, a number of the viaducts engineered by A. S. Jee for the Huddersfield and Manchester Railway demonstrate similarities in scale and architectural detailing to Grainger's viaducts on the Leeds, Dewsbury & Manchester Railway, including Dewsbury Viaduct (MDL 1/19). Four examples from A.S. Jee in particular demonstrate these similarities and form a legible group alongside Grainger's viaducts:
- Uppermill Viaduct (MVL3/31) (Grade II Listed, NHLE 1068120);
  - Slaithwaite Viaduct (MVL3/61) (Grade II Listed, NHLE 1224049);
  - Crimble Viaduct (MVL3/64) (Grade II Listed, NHLE 1233737); and
  - Milne (Lockwood) Viaduct (MVL3/76) (Grade II Listed, NHLE 1220121)
- 2.1.31 The group value which Dewsbury Viaduct (MDL 1/19) derives from the relationship with such contemporary structures from the wider Trans-Pennine Route provides understanding of the wider trends and engineering achievement which characterise both the constituent railways of the Route and the Heroic Age (1825-41) of railway building more generally. The group value

<sup>9</sup> Listed Building Consent is also being sought for both these structures as part of works relating to the W4 Scheme (see paragraph 4.1.6)

<sup>10</sup> Listed Building Consent is also being sought for this structure as part of works relating to the W4 Scheme.

<sup>11</sup> Wharfedale Viaduct is Listed by Historic England under two different NHLE list entry numbers, due to the structure lying across the boundary of two parishes, on either side of the River Wharfe. The six southernmost spans are in the parish of Arthington (NHLE 1253368), the other 14 spans lie within the parish of Castley (NHLE 1150036).

is enhanced by all such structures continuing to form part of the operational railway; as a collective group of assets, they are experienced by those following the rail line (traveling on it, or near it) as coherent features of a single historic route.

- 2.1.32 The group value of Dewsbury Viaduct (MDL 1/19) makes a strong contribution to its overall significance. The viaduct comprises one element of the wider surviving group of structures associated with Grainger on the railway between Leeds and Ravensthorpe, and also represents one of the group of contemporary viaducts which characterise the engineering of the multiple historic railways which today make up the Trans-Pennine Route.

## 2.2 Other heritage assets

- 2.2.1 The location of the designated and non-designated heritage assets discussed below are shown in Appendix A.

### Listed Buildings

- 2.2.2 There are a number of historic buildings adjacent to Dewsbury Viaduct (MDL 1/19); (see below 2.2.10), although none of these are nationally designated.
- 2.2.3 The majority of Grade II Listed Buildings within 250m of the viaduct are located within the Dewsbury Town Centre Conservation Area. In the case of six of these, these Listed Buildings are afforded a visual relationship with the viaduct. The Former Co-Operative Society Building (Pioneer House) (NHLE 1300442), located within 50m south-east of the viaduct and the Salem Methodist Church (NHLE 1134709) both form prominent elements of the historic streetscape of Halifax Road, views from and across the principal elevations of both of which feature the viaduct. The Former Co-Operative Society Building (Pioneer House) is also prominent in views afforded to those traveling over the viaduct, though it is partly screened by intervening buildings. Similarly, further to the south, 3 and 5 Wellington Road East (NHLE 1261861) and 7 Wellington Road East (NHLE 1253261) also share intervisibility with the viaduct, with oblique views towards the viaduct still present from 24 and 26 Bond Street (NHLEs 1253262 and 1261862), 130m south of the southern end of the structure. All these Grade II Listed Buildings were constructed during the mid-late 19<sup>th</sup> century and form part of the historic townscape which characterises the core of Dewsbury from the period, of which the viaduct also forms a part. The relationship with the viaduct, evidenced in views between the assets, contributes to the significance of this group of assets within and around the Conservation Area.
- 2.2.4 Two further Grade II Listed Buildings are located 120m north-west of the viaduct up Bradford Road, outside the extent of the Conservation Area; these comprise two industrial mill buildings associated with the heavy woollen industry at 23 and 25 Bradford Road (NHLEs 1253263 and 1261863). These have intervisibility with the viaduct, though only through oblique views along Bradford Road past their frontages, with the historic side windows of the southern 23 Bradford Road (NHLE 1253263) now bricked up and no longer affording views towards the viaduct from the building itself. These aren't as prominent in views from the viaduct as those Listed Buildings within Dewsbury town centre south-east of the viaduct, though nevertheless do still have limited association with the viaduct as elements of the wider historic townscape around the structure.
- 2.2.5 Other elements of surviving historic railway infrastructure located along the railway line either side of Dewsbury Viaduct (MDL 1/19) are also Grade II Listed. The most prominent example of this is Dewsbury Station (NHLE 1300394), located approximately 150m south-west of the southern end of the viaduct. Dewsbury Station was constructed by the Leeds, Dewsbury and Manchester Railway in the late 1840s and is significant for the survival both of elements of its original 1840s station building and those parts of the station which date from its expansion by LNWR during the 1880s, such as the station booking office, porte-cochere and passenger

footbridge<sup>12</sup>. The Station and viaduct share a historic relationship both as surviving elements of the original Leeds, Dewsbury and Manchester Railway, and also through the limited intervisibility between the two, afforded in views north from the northern end of Dewsbury Station's platforms. The experience of those arriving at and departing Dewsbury Station is also shaped by the views afforded of the wider town from the viaduct, enhancing the relationship between the two Grade II Listed Buildings. Two other buildings to the north of the Station are also Grade II Listed: the County Court Building (NHLE 1300536) and the former Eightlands Well Public House (NHLE 1134734). Though these are both located within 150m of the southern end of the viaduct, neither of these buildings have particular relationships with the viaduct from which either asset derives significance. The next Grade II Listed structure along the railway itself to the north is Wood Lane Overbridge (MDL 1/23), located 400m north of the viaduct. Though this demonstrates material and stylistic similarities to the viaduct and is a contemporary element of Thomas Grainger's railway engineering, there are no visibility of the viaduct from the overbridge due to the curvature of the intervening track.

### Conservation Areas

- 2.2.6 There are two Conservation Areas located within 250m of Dewsbury Viaduct (MDL 1/19):
- Dewsbury Town Centre Conservation Area, the northern edge of which is within 50m of the viaduct; and
  - Northfields Conservation Area, located approximately 200m west of the viaduct.
- 2.2.7 The Dewsbury Town Centre Conservation Area designates an area of Dewsbury's historic townscape which is characterised by fine Victorian and Edwardian municipal and commercial buildings left as a legacy of the immense wealth generated in the town during the 19<sup>th</sup> century. The area designated covers the historic core of Dewsbury, an area of approximately 11ha comprising the majority of the townscape within the Dewsbury Ring Road. The special interest of the Conservation Area is identified as providing a particularly important example of a Victorian town centre with fine examples of its commercial, civic and industrial heritage within an area that has suffered less from redevelopment than many other towns<sup>13</sup>. The Conservation Area forms the historic core of the town and is still the principal civic, retail and commercial focus for the area<sup>14</sup>. Containing over 280 buildings which pre-date the Second World War<sup>15</sup>, the area is exceptional in the continuity and integrity of the streetscape, which form a series of attractively scaled streets and urban spaces. One of the significant characteristics of the Conservation Area is the degree of unity and integration of the built form in respect of the building materials, detailing, scale and overall form, in spite of later development. The arrival of multiple railways to Dewsbury from the 1840s onwards is considered as one of the developments which drove the growth and defining character of the Conservation Area.
- 2.2.8 Dewsbury Viaduct (MDL 1/19) is not located within the Conservation Area boundary and is not specifically identified within the Conservation Area Appraisal as contributing to its setting. However, important views into and out of the Conservation Area are identified along Halifax Road and Northgate / Bradford Road, towards and through the viaduct<sup>16</sup>, while the presence of the structure at the end of these streets is identified as adding to the historic character of

<sup>12</sup> Atkins, 2020. *Transpennine Route Upgrade: Dewsbury Station Statement of Significance*.

<sup>13</sup> Kirklees Council, c.2008, *Dewsbury Town Centre Conservation Area Appraisal*. 1.

<sup>14</sup> Ibid, 14.

<sup>15</sup> Ibid, 2.

<sup>16</sup> Ibid, 23.

containment within these spaces<sup>17</sup>. As a contemporary element of the 19<sup>th</sup> century townscape of Dewsbury forming a prominent feature beyond the edge of the Conservation Area, Dewsbury Viaduct (MDL 1/19) does have a relationship with the built environment of the Conservation Area and forms part of the setting of the north-western part of the Conservation Area. The viaduct is a notable element of the wider historic townscape defining the experience of those entering and leaving the Conservation Area, while those passengers traveling by train over the viaduct are afforded elevated views from which they can appreciate the historic and special interest of the Conservation Area's built environment.

- 2.2.9 The south-eastern edge of the Northfields Conservation Area is located approximately 200m north-west of the viaduct. The Northfields Conservation Area extends to the north-west, designating an area characterised as suburban development of larger villas and semi-detached houses, largely dating to the expansion of this area of Dewsbury during the later 19<sup>th</sup> century. One of the features of the Conservation Area is the extent of tree cover and vegetation around the residential streets, which serves to reduce long-distance views from the hillside towards the town centre of Dewsbury. However, there are some longer-distance partly-screened views out of the Conservation Area which do feature the viaduct as one element of the historic townscape, for example down Halifax Road. Nevertheless, the viaduct does not make a particular contribution to the setting of the Conservation Area, nor does it contribute to the special interest or character of the Area.

#### Non-designated heritage assets

- 2.2.10 The West Yorkshire HER records six non-designated heritage assets located within the immediate vicinity of Dewsbury Viaduct (MDL 1/19), including a number which lie immediately alongside the structure. On the north-western side of the viaduct, a number of historic buildings lie along Bradford Road; these comprise three mid-late 19<sup>th</sup> century warehouses between 40-46 Bradford Road (HERs 17761, 17762 and 17765) and the site of Klein's Warehouse (HER 9486); the southernmost of these buildings, 40 Bradford Road (HER 17765) abuts the masonry of the viaduct. On the eastern side of the northern end of the viaduct, the structure is abutted by Providence Mills (HER 17777) which dates to the late 19<sup>th</sup> century, though has had a number of additions and alterations. The most visually prominent adjacent non-designated asset comprises the remaining extant building of Spinkwell Mill (HER 3615), a six-storey spinning block dating from the mid-19<sup>th</sup> century now converted to residential use. This is located close to the western elevation of the viaduct on the north side of Halifax Road. The original mill site was much larger, occupying land to the north between Halifax Road and Bradford Road, but the majority of the rest of the complex has been demolished. The viaduct has a historic relationship with these adjacent assets, given they all form part of the immediate historic townscape around the structure; this is particularly so in the case of Spinkwell Mill, given the prominence of the surviving spinning block in views towards and from the viaduct. The Listed viaduct and these non-designated assets derive some limited significance from their historic relationship and associations.
- 2.2.11 There are a number of non-designated heritage assets recorded by the West Yorkshire HER to the south-east of the viaduct, in the area of the Dewsbury Town Centre Conservation Area which is prominent in views afforded to those traveling over the viaduct by train. The most prominent of these is the five-storey Machells' Cloth Hall Mills (HERs 17778 and 17779), which forms a key feature of Dewsbury's historic townscape on the opposite side of the Dewsbury ring road to the viaduct, notable for its large painted/tiled sign "Machell Bros Limited Shoddy & Mungo Manfrs Estd 1856". Further into the Conservation Area, the Wood Street Market Hall (HER 7077) is also visible from the viaduct in such vistas across the townscape, though it is partly screened by the Machells' Warehouse. These buildings have a visual relationship with the viaduct, in particular through defining the nature of views of the centre of Dewsbury

---

<sup>17</sup> Ibid, 21.

experienced by those traveling over the viaduct by train. Together with the viaduct and other surrounding historic buildings (including Listed Buildings, see above 2.2.3), these define the character of Dewsbury's historic townscape and its industrial heritage on the edge of the Conservation Area.

### 3. PROPOSALS

#### 3.1 Background to proposals

3.1.1 To achieve the TRU Programme objectives of improving the reliability and resilience of the railway and to contribute to the sustainability agenda of a carbon neutral Britain by 2050, the Scheme would involve the electrification of the railway, achieved through the construction of Overhead Line Electrification (OLE) along the line.

3.1.2 In order to provide overhead electrification to the section of track over Dewsbury Viaduct (MDL 1/19), OLE portal structures are required on the viaduct. The distances required between the portals necessitates the placing of five OLE portals on the structure itself, as the length of the viaduct is too great for the OLE wires to span across the structure with portals placed at either end alone. The main heritage consideration for this structure is how the OLE portals would physically interact with the fabric of the viaduct, as well as the impact of their visual presence on the structure's setting.

#### 3.2 Design development and justification

3.2.1 The design development process included optioneering to determine the position of the OLE portals on the structure. Three design options were considered in an order of preference to try to limit changes to the historic fabric and impact on the appearance and setting of the structure. The design development process has also involved engagement with Historic England and Kirklees Council (as detailed above in Section 1.5).

3.2.2 The options considered comprised:

- Option 1: To locate the OLE portal masts and foundations on the deck of the existing structure, in board of the parapets. This would be possible if sufficient clearance is available from the tracks to the parapet. This option requires no modifications to be made to the deck structure, or the parapet structure;
- Option 2: To locally reduce the parapet thickness on the inside of the viaduct to accommodate the OLE mast and foundation within the parapet thickness. This option would be pursued if there was insufficient clearance for the portals foundations to be located in board of the existing parapets (i.e. if Option 1 was not possible); and
- Option 3: To fix the OLE portal masts to the exterior of the viaduct at pier locations. This option would be pursued if there was insufficient clearance for the portals and their foundations to be located either in board of the existing parapets, or within the existing parapet thickness (i.e. if neither Option 1 nor Option 2 were possible).

3.2.3 A fourth option, comprising installation of the OLE portals with pad foundations at road level was looked at but immediately discounted due to its highly intrusive visual impact. This would have involved constructing new piers attached to the viaduct down to ground level on which the OLE portals would be sited. This was considered the worst-case scenario as, although these new piers could be clad in stone, they would be attached to the viaduct covering the length of its piers, therefore making the intervention more prominent and concealing elements of the structure's historic fabric.

3.2.4 An assessment of the clearances on the viaduct determined that it was not possible to site the OLE portals and foundations in board of the parapets on the deck of the viaduct (Option 1) or within the existing parapet thickness (Option 2). The minimum distance required to install the OLE portals with pad foundations across the structure would be 1800mm on the western side of the structure and 2300mm on the eastern side. However, the clearance assessment determined that the maximum clearances possible on the viaduct were no more than 1500mm. Therefore, it was established that the viaduct deck at Dewsbury Viaduct (MDL 1/19) is not sufficiently wide to accommodate the OLE portals and foundations as well as providing

adequate clearance from the structures to the track alignment. Consequently, Options 1 and 2 were discounted.

3.2.5 Although it was acknowledged that Option 3 would have a greater visual impact on the structure than Options 1 and 2, efforts to fit the proposed OLE within the viaduct were not possible due to the structure's narrow design, as outlined above. It was therefore decided that due to the clearance constraints, Option 3 would be progressed, requiring the attachment of the OLE portals to the exterior of the viaduct.

3.2.6 The design of the OLE portals was further developed to minimise visual impacts where possible, taking into account the setting of the historic structure and other associated heritage assets. Attempts to minimise the number of portals on the structure and sensitively position them at certain pier locations were considered to mitigate the resulting visual impacts. The structure's curved design and the close positioning of surrounding buildings, particularly the converted spinning block of Spinkwell Mill (Span 3-4) and the warehouses and industrial buildings north of it (Spans 8-11), influenced the distances between the portals. Designers looked at achieving the maximum spacing between the OLE portals to reduce their presence on the structure; however its curved design and the proximity of abutting buildings required the portals to be spaced closer to one another at certain locations. To further reduce the visual impact and to create a less intrusive intervention, the portals were positioned to align over the viaduct's piers and were designed to be as slender as possible to reduce their prominence. The optimum solution was devised given the constraints regarding the Viaduct's curved form and the proximity of surrounding buildings that abut the structure.

3.2.7 The proposed OLE brackets were also carefully designed to minimise physical impacts to the viaduct's historic fabric. They were positioned at certain locations to avoid clashing with the viaduct's architectural details such as the moulded string course along the base of the parapet, which would occur if the OLE brackets were attached higher on the face of the structure. Similarly, the width of the brackets was designed to ensure the OLE portal arm would not clash with the string course or be located in such proximity to it as to completely mask it from view.

### 3.3 Description of proposals

3.3.1 It is proposed to install five OLE portals on Dewsbury Viaduct (MDL 1/19), to carry the OLE wires along this section of the railway. Construction of the proposed OLE would involve attaching the portals to the exterior of the viaduct with V-shaped brackets.

3.3.2 The proposed works relating to the installation of the OLE portals over the length of the viaduct will involve the following main elements:

- The OLE portals will be placed over piers 1,4,6,7 and 9. Each portal will be supported by wall brackets that will be attached to piers on either side of the viaduct.
- The bracket anchors will be installed into the masonry piers, the construction of which will involve drilling holes to insert the anchors and attach the bracket steelwork on to them.
- Any stonework that will be concealed by wall brackets will be repointed prior to being covered by the brackets. Any repairs will be sympathetic and match the strength, bond, and colour of the existing masonry, reusing existing stonework where possible.
- Where the wall face surface is steeply inclined an inclined wall bracket mount will be proposed to suit the inclination of the wall surface. These assumptions shall be verified and validated by site testing and proof loading.
- OLE equipment finishes and materials will comprise stainless steel anchor bars and proprietary anchors, vinylester resin or similar approved non-shrink cementitious / resinous grout, and galvanised steel OLE brackets.

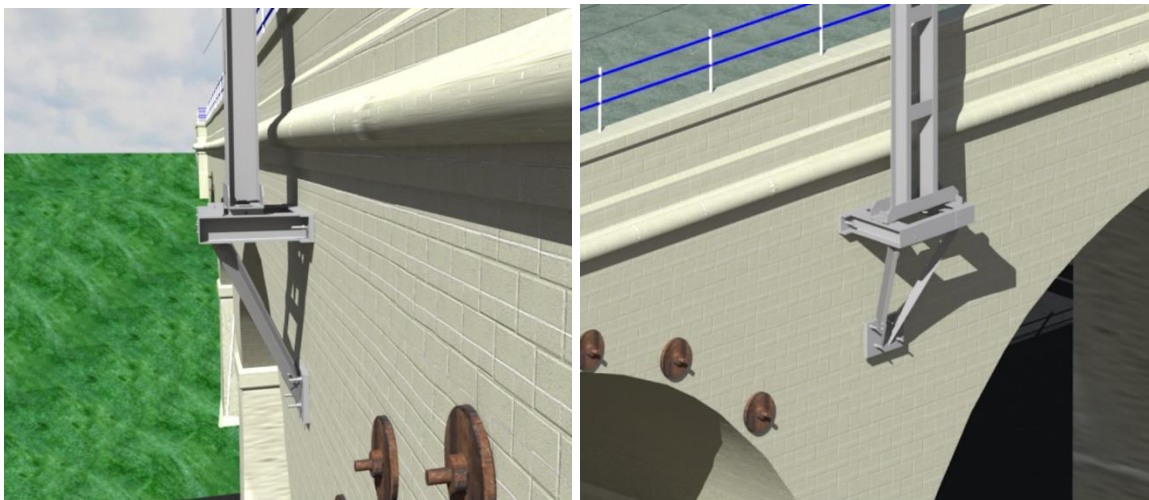
- Vegetation will be removed at the vicinity of the bracket locations and will be treated to prevent regrowth.
- 3.3.3 Bespoke V-shaped OLE bracket detail has been proposed to avoid any clash with the viaduct's existing pattress plates and drainage downpipes on the face of the walls. The drainage pipe on the western elevation of Pier 1 will have to be sensitively diverted around the OLE bracket to avoid clashing with it. Detailed design of the OLE brackets would be agreed by condition attached to the Listed Building Consent.
- 3.3.4 The proposed works will be carried out as sympathetically as possible. As previously mentioned, the OLE portals and brackets will align with the piers to minimise the OLE visual impact, and their positioning on the piers will be designed to avoid clashing with the viaduct's architectural details such as the moulded string course along the base of the parapet (see Insert 3-3). This will ensure retaining elements of historic fabric contributing to the structure's significance.



**Insert 3-1 Aerial view showing locations of OLE portals (represented by the red lines across the structure). The yellow numbers and arrows indicate the locations of viewpoints from the edge of the Dewsbury Town Centre Conservation Area (see Insert 3-2 below).**



**Insert 3-2** Indicative visualisation showing the OLE portals along the viaduct. Note the position of this visualisation is represented by viewpoint 3 indicated by the map in Insert 3-1 above.



**Insert 3-3** Indicative visualisation showing an OLE bracket attached to the viaduct pier, avoiding physical impacts on the string course.

3.3.5 The proposed works to Dewsbury Viaduct (MDL1/19) are shown in the following drawings which accompany this application:

- Existing General Arrangement (151667-TSA-40-MDL1-DRG-T-LP-160051)
- Proposed OLE Support Brackets General arrangement (151667-TSA-40-MDL1-DRG-T-LP-160052)
- Existing and proposed Sections & Details (151667-TSA-40-MDL1-DRG-T-LP-160053, 151667-TSA-40-MDL1-DRG-T-LP-160054, 151667-TSA-40-MDL1-DRG-T-LP-160055)

## 4. IMPACT OF PROPOSALS

### 4.1 Impact on heritage assets

#### Impact on Dewsbury Viaduct (MDL1/19)

- 4.1.1 The proposed works would involve permanent alterations to the historic fabric of the Grade II Listed Dewsbury Viaduct (MDL 1/19), comprising the permanent installation of five OLE portals onto the Listed structure. This would alter the appearance of the structure, although the positioning of the OLE has been designed sympathetically to respond to the character of the viaduct and limit the impact of the proposals on its appearance as much as is reasonably practicable.
- 4.1.2 The Listed structure derives significance from its aesthetic value, due to both the architectural quality of Grainger's design and its presence within the surrounding townscape. The installation of the OLE portals on the viaduct would permanently alter the appearance of the structure, while also entailing localised permanent changes to the fabric of the structure to facilitate attaching the portals to the external face of the Viaduct. This would slightly reduce the significance which the Listed viaduct derives from its aesthetic value, and this impact would be limited. The architectural detail of its engineering would still be able to be appreciated, albeit the structure would incorporate more modern elements such as the OLE. Though the OLE portals would be attached to the external face of the structure, the design of the OLE brackets have avoided physical alterations to the string course which is a key decorative feature of the viaduct's original design, thus the notable detailing of Grainger's design would remain legible and the overall design language of the scale and form of the viaduct would still be understood. The majority of the historic fabric of the viaduct would remain unaltered.
- 4.1.3 The viaduct's architectural interest is further enhanced by its monumental presence which forms a recognisable element of Dewsbury's townscape. The viaduct symbolises the economic prosperity of the town that occurred with the coming of the railway as well as evidencing the engineering achievement of the construction of the railway. The presence of the structure within the townscape retains its current and historic monumentality, experienced through movement along, past and under it (see below, 4.1.5), and though the nature of its prominence would change with the addition of OLE portals, the understanding of the historic and architectural interest of the structure derived from this would be maintained.
- 4.1.4 As detailed above in paragraph 2.1.21, Dewsbury Viaduct (MDL 1/19) also derives considerable significance from its association with the historic railway, its development during the Heroic Age (1841-50) and the engineering of Thomas Grainger. The permanent changes to the historic fabric and appearance of the viaduct required for the proposed works would have a small impact on the extent to which the structure derives significance from its historical value. The alteration to its historic fabric and character is limited due to the sensitive placement of the OLE portals which aim to minimise impact on the structure's rhythm and the legibility of its historic form. It is recognised that the proposals to install OLE on the structure would represent one of the few alterations which the structure has undergone since its construction. However, the historical associative value that the structure derives from its associations with the Heroic Age (1841-50) of railway building, the engineering design of Thomas Grainger and the Leeds, Dewsbury & Manchester Railway route itself would all still be able to be understood.
- 4.1.5 As discussed above in paragraph 2.1.25, Dewsbury Viaduct (MDL 1/19) derives significance from its setting, both in terms of its prominence within the townscape, evidenced in views towards and across it, and those views of the town afforded passengers traveling by train over it. The proposals would have some impact on this setting, with the changes in the appearance

of the structure altering how it is experienced in such views. The OLE, in particular, would form a new element of such views; however, this would also enhance the structure's prominence and the understanding of it as an operational element of the historic railway. Views from atop the structure offered to rail passengers would continue to define the experience of the structure and surrounding townscape, while the permeability of the structure would also not be altered. The historic connections between the viaduct and the surrounding historic townscape, including adjacent Conservation Area (see below 4.1.12), would remain legible, in spite of the visibility of the proposed OLE on the structure. Though the proposals would result in notable alterations to elements of the viaduct's setting, these would only slightly affect appreciation of it and its significance, and the extent to which the structure derives significance from its setting only slightly reduced.

- 4.1.6 The proposals would have only a slight impact on the significance that Dewsbury Viaduct (MDL 1/19) draws from its group value shared with other Grainger-designed structures along the historic Leeds, Dewsbury & Manchester Railway, as well as other contemporary viaducts along the wider Trans-Pennine Route. Though the proposed changes to the structure will alter its appearance, the similarities between the design language of those other viaducts designed by Thomas Grainger for the Leeds, Dewsbury & Manchester Railway (see above, paragraphs 2.1.26 to 2.1.28) would still be legible, and these would still be able to be understood as a group of structures originating from the same phase of railway development. It is noted that Listed Building Consent is also being sought for similar proposals to install OLE on Batley (Union Mill) Viaduct (MDL 1/27) (Grade II Listed, NHLE 1134650) and Churwell Viaduct (MDL 1/40) (Grade II Listed, NHLE 1451053); the design of these works has been developed to match that proposed for Dewsbury Viaduct (MDL 1/19), thereby ensuring the retention of similarities between the structure in spite of the proposed changes. Additionally, the architectural detailing which places Dewsbury Viaduct (MDL 1/19) in a wider group of Grainger-designed structures on the railway would be unchanged by the proposals and its contribution to this group of structures would also be able to be understood. Similarly, the commonalities between Dewsbury Viaduct (MDL 1/19) and other contemporary viaducts along the wider Trans-Pennine Route (such as those identified above in paragraphs 2.1.30 and 2.1.31) would also remain legible in spite of the proposed alterations<sup>18</sup>. The collective experience of the assets through their continued operational use would not be altered by the proposals. The extent to which Dewsbury Viaduct (MDL 1/19) derives its overall significance from the group value it draws from such relationships would be little reduced by the proposals.

### Impact on other heritage assets

#### Listed Buildings

- 4.1.7 The proposals would not result in physical impacts to any other Listed Buildings.
- 4.1.8 The proposed alterations to Dewsbury Viaduct (MDL 1/19) would represent a change in the setting of six Grade II Listed Buildings located within Dewsbury Town Centre Conservation Area which have a visual interrelationship with the viaduct (see above, paragraph 2.2.3). The OLE on the structure would be clearly visible in views from these buildings towards the viaduct, particularly from the Former Co-Operative Society Building (Pioneer House) (NHLE 1300442) and Salem Methodist Church (NHLE 1134709). Though the proposals would alter the appearance of the viaduct in such views, the legibility of the structure as part of the wider contemporary historic townscape alongside these Listed Buildings would not be appreciably diminished. None of those Grade II Listed Buildings within the Conservation Area which are afforded views of the viaduct would have their settings appreciably degraded by the proposals. Similarly, the views afforded to train passengers from the viaduct of these buildings and the wider townscape would not be degraded, in spite of the OLE portals passing on the structure

<sup>18</sup> A number of these viaducts will also be subject to change due to OLE as part of the wider TRU programme. The programme will aim to realise a common design approach to such proposals to ensure minimal impact on group value.

being present in the views. The overall significance of these Listed Buildings would not be impacted by the proposals.

- 4.1.9 The proposals would result in a very small-scale change to the setting of the two further Grade II Listed Buildings at 23 and 25 Bradford Road (NHLEs 1253263 and 1261863), approximately 120m north-west of the viaduct, outside the Conservation Area (see above, paragraph 2.2.4). The proposals would alter the appearance of the viaduct in oblique views past their frontages, however this would not appreciably alter the extent to which the Listed warehouses derive significance from their setting. There would be no impact on the significance of these Listed Buildings as a result of the proposals.
- 4.1.10 The proposals would not result in an appreciable impact on the significance of any of the other Grade II Listed assets located along the railway either side of Dewsbury Viaduct (MDL 1/19) (see above, paragraph 2.2.5). The OLE on the structure may be visible in partially screened views from Dewsbury Station (NHLE 1300394), however this would not alter the understanding or legibility of the historic relationship between the two assets. The proposed works would not change the relationship between the viaduct and Wood Lane Overbridge (MDL 1/23), with no intervisibility between the two assets; though the OLE would alter the appearance of Dewsbury Viaduct (MDL 1/19), the architectural detailing common to Grainger's designs across the two structures would be unchanged and still be able to be understood.

#### Conservation Areas

- 4.1.11 The proposals would not result in any physical changes to any buildings located within a Conservation Area.
- 4.1.12 The proposals would alter the appearance of Dewsbury Viaduct (MDL 1/19) in views from and towards the Dewsbury Town Centre Conservation Area. As discussed above in paragraphs 2.2.7 and 2.2.8, though the viaduct is located outside the boundary of the Conservation Area, and is not identified specifically within the Conservation Area Appraisal as contributing to the setting of the Conservation Area, important views into and out of the Conservation Area are identified along Halifax Road and Northgate / Bradford Road, towards and through the viaduct. The proposed OLE on the viaduct will be visible in such views, constituting a small change within the setting of the Conservation Area. The OLE portals between Spans 1 and 2 would be visible in the view along Halifax Road, with the two portals either side of Northgate / Bradford Road (Span 7) would frame the view north-west along that street out of the Conservation Area. Though the appearance of the viaduct will be altered, the legibility of the structure as a prominent element of the contemporary 19<sup>th</sup> century townscape extending beyond the Conservation Area will be retained and the contribution of the viaduct to the character of the townscape will still be able to be understood and appreciated. The overall special interest, character and appearance of the Conservation Area will not be appreciably impacted by the proposals and the change within its setting as a result.
- 4.1.13 The proposals will not impact on the setting of the Northfields Conservation Area, nor will the change in appearance of the viaduct alter the character or special interest of the Conservation Area.

#### Non-Designated Heritage Assets

- 4.1.14 Though there are a number of non-designated heritage assets located in the immediate vicinity of Dewsbury Viaduct (MDL 1/19), including immediately adjacent to the structure, the proposals would not result in any physical impacts to any of these non-designated assets.
- 4.1.15 The alteration of the appearance of the viaduct as a result of the proposals would constitute a change to the setting of a number of those non-designated heritage assets located around the viaduct. In the case of the majority of such assets, this would not alter the contribution their

setting makes to their overall significance with respect to the relationship between them and the viaduct; the legibility of the viaduct as a contemporary element of the wider mid-later 19<sup>th</sup> century townscape of this part of Dewsbury would be retained. The visual connection between the viaduct and two of these non-designated assets is more prominent: the converted spinning block of Spinkwell Mill (HER 3615) to the west of the viaduct and the Machells' Cloth Hall Mills (HERs 17778 and 17779) to the east. In both these cases the prominence of the historic buildings within the setting of the viaduct, and vice versa, mean that the visibility between the viaduct and these non-designated historic buildings forms a notable element of their setting. The proposed OLE structures on the viaduct would alter the character of such views and, whilst the historic connections between these elements of the historic townscape would still be legible, this would constitute a small degradation to the character of their setting. This is more the case in relation to views of the viaduct from these buildings, as the visibility of the OLE in those kinetic views afforded train passengers of Spinkwell Mill (HER 3615) and Machells' Cloth Hall Mills (HERs 17778 and 17779) as they travel along the viaduct would be only fleeting. Though the setting of these non-designated assets would be altered by the proposals, however, the overall significance of these two assets would not be diminished.

## 4.2 Mitigation and compensation

- 4.2.1 Mitigation has been used in three separate ways: embedded mitigation; additional mitigation measures and compensation. These are briefly described below and have their basis in the hierarchy of mitigation as detailed in the Design Manual for Roads and Bridges, LA 104 Environmental Assessment and Monitoring<sup>19</sup>.
- 4.2.2 Embedded mitigation occurs within the design stage and is intended to include elements within the design that avoid or substantially reduce negative change to the significance of a historic asset. It can also include elements where loss of historic significance is compensated through high quality new design and use of materials. There may also be changes that enhance or improve the historic asset. Embedded mitigation is discussed as part of the design development (see above, Section 3.2).
- 4.2.3 Additional mitigation measures are applied post-design stage and are intended to include processes and activities that will reduce the level of negative change to the significance of an historic asset.
- 4.2.4 Compensation measures are applied post-design stage and recognise that the impacts cannot be removed or reduced. These measures are intended as a means of recording the negative change to the significance of an historic asset and enabling future dissemination of information about this change.

### Mitigation

- 4.2.5 The design of the proposals has been shaped to incorporate elements which mitigate potential impacts to the Listed structure as far as possible. These elements have been developed in discussions with Kirklees Council and Historic England. Additional information with respect to these elements of design development is included above in Section 3.2.
- 4.2.6 The design development process has resulted in mitigation being embedded within the design proposals regarding a number of elements of the historic structure. The following design considerations have been taken into account in response to the proposed alterations to the Listed structure:
- The siting of OLE portals over piers of the viaduct and maximising the distance between portals to ensure the minimum number of portals on the structure;

<sup>19</sup> Design Manual for Roads and Bridges, LA 104, Sustainability & Environmental Appraisal, Environmental assessment and monitoring. Revision 1 (August 2020).

- The minimising of the size of the portals themselves, to provide as lightweight a portal structure as practicable; and
- The design of the brackets to provide spacing between the portal arm and the string course of the viaduct, to avoid physical impacts on this architectural detail.

4.2.7 The design development process for the Scheme has identified further mitigation measures which aim to reduce potential impacts on the significance of heritage assets arising as a result of the Scheme. Network Rail commits to undertaking such additional mitigation measures as part of the implementation of the construction of the Scheme. In the case of Dewsbury Viaduct (MDL 1/19), the additional mitigation measures would comprise:

- Measures to minimise the visibility of construction activity, plant and hoardings, and to reduce dust and noise; and
- Toolbox talks to disseminate best practice for reducing potential impacts in relation to construction activity associated with Dewsbury Viaduct (MDL 1/19), for example to help avoid accidental damage.

#### Recommended compensation

4.2.8 Requirements to undertake compensation in relation to historic buildings, including Listed Buildings, where the proposals of the Scheme would result in physical impacts to them, have been identified. These compensation measures would be secured as conditions of the Listed Building Consent and aim to offset some of the harm which may occur to the assets' significance as a result of the Scheme.

4.2.9 **Historic building recording:** A historic building recording of Dewsbury Viaduct (MDL 1/19) would be required prior to, or during, the construction phase of the Scheme, as agreed with the appropriate historic environment stakeholders. This would help to compensate the harm to significance resulting from the installation of OLE portals by providing opportunity for recording of the structure and furthering understanding of its development and value. The historic building recording would be undertaken to Level 1 in accordance with Historic England guidance<sup>20</sup>, and would include a photographic record, focusing on the sections of the structure which require alteration as a result of the proposals.

### 4.3 Public benefit

4.3.1 The proposed alterations to install OLE over Dewsbury Viaduct (MDL 1/19) are required to realise the public benefits of the W4 Scheme between Dewsbury and Leeds.

4.3.2 The Scheme, as part of the wider TRU Programme, would play a critical role in improving connectivity through journey time, capacity and reliability improvements, enhancing some of Britain's busiest rail network. The purpose of the Scheme is to increase capacity and improve journey time and performance reliability of rail services on the Trans-Pennine Route between both Dewsbury and Leeds and Manchester, Leeds and York.

4.3.3 The Trans-Pennine Route is identified as a key transport corridor for providing connections between cities in the North of England so to support the delivery of economic growth and "levelling up" opportunities across the North of England. The Scheme is vital in supporting the North of England's long-term, low-carbon economic growth, and better-connecting people to jobs, services, education and leisure. The vital connection between effective transport systems and local business productivity and district prosperity as well as the full support of the Trans-Pennine upgrade is recognised in the Kirklees Local Plan 2019 Policy LP19 and the Local Plan Allocations and Designations document (TS7 Public Transport Infrastructure

<sup>20</sup> Historic England, 2016. Understanding Historic Buildings: A Guide to Good Recording Practice.

Schemes).

- 4.3.4 The proposals at Dewsbury Viaduct (MDL 1/19) are essential to achieving the overall benefits of the Scheme and wider TRU Programme, and without these changes the Scheme would be unable to go ahead.
- 4.3.5 There are economic and social benefits to be had from the improved Trans-Pennine Route proposals. These include reduction in journey times along this part of the Scheme with the aim of achieving 43-44 minutes between Manchester Victoria and Leeds. This will be partially facilitated by enabling line speeds of between 70 -100mph along the Scheme as well as through other projects on the Route. Electrification also assists with journey time and performance by allowing trains to accelerate faster, and brake more efficiently. The increase in capacity through more train services and longer trains will reduce congestion, increase passenger comfort and improve journey quality. Future passenger modelling has indicated that the numbers of people using the Trans-Pennine Route will increase considerably by the early 2040s. This would be partially achieved through the creation or enhancement of four tracking along other sections of the Route, allowing for express trains to by-pass slower trains and freight services. The Scheme helps to deliver capacity improvements to provide the capability to operate eight 'express services' and two 'local services' an hour, plus a freight path, on the Route. The increased movement of people and goods along this key part of the railway network that connects major cities, towns and transport hubs supports a more economic and socially viable transport solution. It forms part of the West Yorkshire Transport Strategy for harnessing economic prosperity through a better-connected transport network.
- 4.3.6 Though rail travel has been impacted by the COVID-19 pandemic, rail use in the north of England seems to have been sustained better than elsewhere in the UK. Over the longer term, once the immediate crisis has subsided, there is uncertainty regarding any impact on long-term travel demand, and within that, the demand for rail services. The latest Department for Transport (DfT) analysis of post-COVID rail usage scenarios suggests that even in a lower-demand case, demand is likely to have come back to at least the levels seen in 2018/19 by the end of this decade (and may have grown further). Moreover, it is known that, even at static 2018/19 levels of demand, the Scheme route has real and chronic problems that need early investment to rectify existing issues and secure the required improvements in services and performance.
- 4.3.7 As part of the Scheme, there are environmental and sustainable benefits that arise from the improvements to public transport services and the introduction of more environmentally viable energy solutions. The electrification of the line (through this part of the Scheme) is an investment in 'greener' energy technology meeting Network Rail's Decarbonisation Strategy and bolstering national targets for reducing harmful emissions that cause climate change, which are set out in Government legislation for achieving net zero carbon by 2050.

#### 4.4 Assessment on Level of Harm

- 4.4.1 As discussed in section 4.1, there will be changes to the setting of the viaduct and small-scale physical alterations from the installation of OLE portals. In examining the level of harm from the W4 Scheme on the significance of Dewsbury Viaduct (MDL 1/19) it is considered that this would amount to less than substantial harm under NPPF (para 202). It is demonstrated that the impacts to significance of the viaduct is limited and that the installation of the OLE would enable the viaduct to continue in its optimum viable use as a railway structure carrying the Trans-Pennine Route. The retention of the overall significance of the viaduct, has, in part, been achieved through the embedded mitigation through design process, which has developed solutions that minimise impacts on the viaduct.

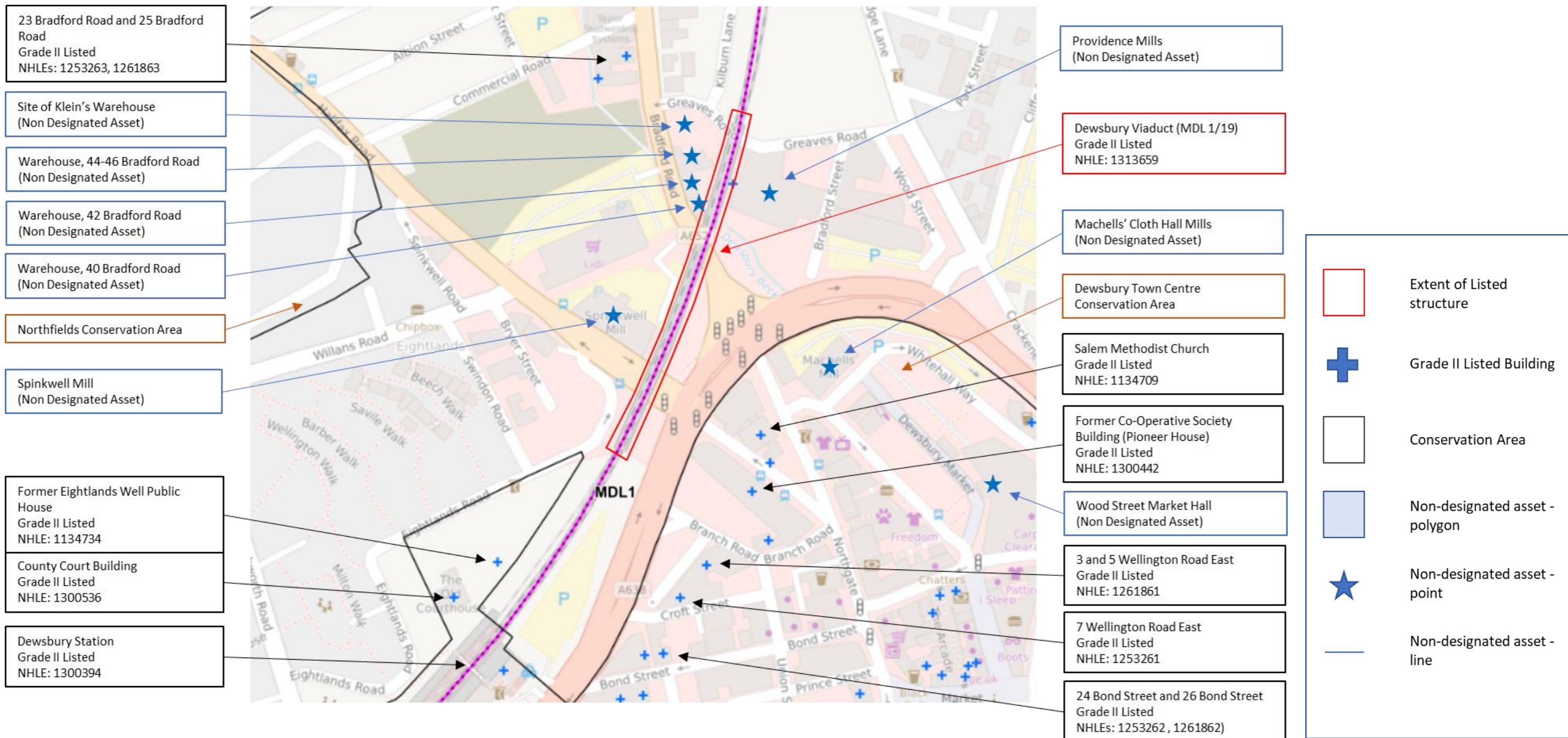
- 4.4.2 Section 4.3 summarises the economic, social and environmental benefits through delivering an improved rail network to meet public demand and better services, along with the transformation to electrified trains to meet decarbonisation strategies. These public benefits are extremely significant and when applied to the NPPF balance test, outweighing the less than substantial harm identified.
- 4.4.3 The Scheme proposals would preserve the significance of the viaduct, securing its future use as an historic component of the Trans-Pennine Route and appreciation of it as a nationally important listed historic structure. This accords with less than substantial harm in Kirklees Local Plan Policy LP35 (policy 1). It would also meet policy 3d in using new technology to combat the effects of climate change, which brings public benefits that, on balance, mitigate any harm to heritage assets.
- 4.4.4 It is concluded that the proposal would result in less than substantial harm in line with the NPPF (para 202) and meet the test of achieving public benefits which outweigh the harm to the significance of the viaduct, in line with Kirklees Council Local Plan Policy LP35.

## 5. CONCLUSION

- 5.1.1 Dewsbury Viaduct (MDL 1/19) is an element of the historic railway infrastructure of the Trans-Pennine Route, still forming part of the operational railway today. The Grade II Listed structure is significant as a largely unaltered example of a masonry viaduct, dating to the Heroic Age (1841-50) of railway building. The viaduct derives its significance from its historical association with this period of railway development and the engineering design of Thomas Grainger, as well as from the aesthetic value of its architectural quality as a large-scale piece of engineering which incorporates design elements lifting its aesthetic above the purely functional. It shares group value with other viaducts designed by Grainger along the historic Leeds, Dewsbury & Manchester Railway and other routes, as well as contemporary structures along the wider Trans-Pennine Route. Dewsbury Viaduct (MDL 1/19) also derives some significance from its setting, notably from the prominence of the structure within the surrounding historic townscape, evidenced in views towards, through and from the viaduct.
- 5.1.2 The proposed installation of OLE portals would have a limited effect on the significance of the Grade II Listed viaduct. Attaching the OLE portals to the external face of the viaduct would impact the significance derived from its aesthetic value, however the impact would be minor due to the sympathetic design and positioning of the OLE brackets and portals which would align with the piers and avoid key decorative features. This would result in the retention of the legibility of Grainger's design language as well as the viaduct's scale and form. Although the permanent changes to the, largely unaltered, viaduct would have a small impact on the significance derived from its historic value, the historical value which the listed structure derives from its associations with the Heroic Age (1841-50) of railway building, the engineering design of Thomas Grainger and with the Trans-Pennine Route itself would all still be understood. Though the proposals would result in notable alterations to elements of the viaduct's setting, these would only slightly affect appreciation of it and its significance. The historic connections between the viaduct and the surrounding historic townscape, including the adjacent Conservation Area, would remain legible even with the introduction of OLE on the structure. The proposals would only have a slight impact on the significance derived from the structure's group value due to its continued legibility as a Grainger bridge and the retention of the elements that contribute to its group value with other Grainger bridges on the route. Similarly, the group value from which other similar structures on the railway derive significance will not be degraded by the proposals. Overall, it is considered that the impacts to significance would constitute less than substantial harm in respect of NPPF and Kirklees Local Plan Policy LP35.
- 5.1.3 The proposals would result in no appreciable impacts on the significance of any other designated or non-designated heritage assets. Although the proposals would result in small-scale changes to the setting of nearby Listed Buildings, the Dewsbury Town Centre Conservation Area and a number of non-designated heritage assets, none would have their setting appreciably degraded and their overall significance would not be affected.
- 5.1.4 Though the installation of OLE on Dewsbury Viaduct (MDL 1/19) would impact on its appearance, the proposals would result in only limited impact on the structure's overall significance. As such, the proposals would constitute less than substantial harm to the significance of the Listed structure, as defined under NPPF and Kirklees Local Plan Policy LP35. As an element of the wider Scheme of interventions, which will bring significant economic, environmental and social benefits across the north of England through the improvements to the rail line between Leeds and Manchester, the required work to the Grade II Listed viaduct is integral to the major public benefit realised by the overall TRU project, in line with the Kirklees Local Plan Policy LP19. These public benefits delivered by the fulfilment of the objectives of the Scheme would outweigh the level of harm to the significance of the Listed Building.
- 5.1.5 The proposals therefore satisfy both national and local planning policy regarding the balance

test of the impact of development on significance of heritage assets and their setting, and the public benefits to be realised.

APPENDIX A – LOCATION PLAN



## APPENDIX B – HISTORIC ENGLAND LIST DESCRIPTION

### Overview

Heritage Category: Listed Building

Grade: II

List Entry Number: 1313659

Date first listed: 03-Jul-1985

Statutory Address: RAILWAY VIADUCT (DEWSBURY-BATLEY LINE), HALIFAX ROAD / RAILWAY VIADUCT (DEWSBURY-BATLEY), BRADFORD ROAD

### Location

The building or site itself may lie within the boundary of more than one authority.

District: Kirklees (Metropolitan Authority)

Parish: Non Civil Parish

National Grid Reference: SE 24489 22109

### Details

DEWSBURY CB HALIFAX ROAD SE 22 SW (Dewsbury) SE 2421 NW SE 244 219 SE 244 220  
Railway Viaduct (Dewsbury-Batley 2/46 line) 7/46 G.V. II Railway viaduct. Circa 1848 for L. & N.W.R.  
Co. Rock-faced deeply coursed stone with ashlar dressings. Deep moulded cornice and parapet. 12  
segmental arches on curving plan, with rusticated vaults, and voussoirs. Massive moulded ashlar  
bases to piers.

Listing NGR: SE2448922109



**Network Rail**  
Infrastructure Projects – Northern Programmes

Square One  
4 Travis Street  
Manchester  
M1 2NY

[www.networkrail.co.uk](http://www.networkrail.co.uk)

This document is the property of Network Rail Infrastructure Limited. It shall not be reproduced in whole or part nor disclosed to a third party without the written permission of Network Rail Infrastructure Limited, Kings Place, 90 York Way, London, N1 9AG.  
Copyright 2017 Network Rail Infrastructure Limited. All rights reserved.