DESIGN & ACCESS AND HERITAGE STATEMENT IN SUPPORT OF PROPOSED ARCH STRENGTHENING, WATERPROOFING AND ASSOCIATED REPAIR WORK TO ARCH 90, HEWITT STREET, MANCHESTER ON THE MANCHESTER SOUTH JUNCTION AND ALTRINCHAM RAILWAY VIADUCT

February 2021



Introduction

This document is intended to outline the programme of works proposed to be undertaken to Arch 90, Hewitt Street the 'Manchester South Junction and Altrincham Railway Viaduct' ('MSJAR Viaduct'), on the section of railway supporting the platforms of Deansgate Station

The application site forms part of a much larger viaduct, which carries the operational railway line from Ordsall Lane Junction in Salford in a generally south-westerly direction towards Knot Mill and Deansgate Station in Manchester. This elevated section carries the railway over the Manchester Ship Canal before passing over Water Street, to the south of its junction with Liverpool Road (A6143). Continuing south-west it passes over the Castlefield canal basin, after which it passes underneath the Metrolink viaduct and merges with the 'Southern' route from Manchester to Liverpool, running via Trafford Park and Warrington Central (formerly owned by the Cheshire Lines Committee). The viaduct then crosses the Rochdale Canal and Bridgewater Viaduct, to Deansgate Station, from where it continues east to Manchester Piccadilly Station.

In order to address a number of structural defects to the arch, a programme of remedial works, consisting of arch strengthening, waterproof and drainage installation and brickwork repairs. The rationale and detail for these proposals is explained in this Design & Access Statement and the associated submitted documentation.

Site Location, Context and History

Manchester London Road Station (the present day Piccadilly Station) opened in 1842, originally serving as the terminus of the Manchester and Birmingham Railway (M&BR) and later the Sheffield, Ashton-under-Lyne and Manchester Railway (SA&MR). Through a desire to connect its terminus with other lines, the SA&MR proposed to create a linkage with the L&MR. Their original advances to the L&MR were initially not accepted. However, a later proposal – with the additional partner of the M&BR - proved to be acceptable. A new company – the Manchester South Junction and Altrincham Railway (MSJ&AR) – was established to build and operate the railway, and this received royal assent on 21 July 1845. As suggested by the company's name, as well as the 'South Junction' from Castlefied to Ordsall Lane, the (MSJ&AR) also planned to operate services to Altrincham. This would be the first suburban line in Manchester.

The linkage between Piccadilly and the L&MR junction at Ordsall Lane was to be facilitated by the construction of a 1.5 mile long section of elevated railway. The Oxford Road to Altrincham section of line opened on 20 July 1849, with the South Junction portion completed on 1st August 1849.

The viaduct was listed at Grade II on 4th February 1988 and amended in 2013 to include the portion of viaduct between Deansgate and Piccadilly stations within the listing.

Policy Considerations

The key statutory test in the determination of an application for Listed Building Consent is set out in Section 66 of the Planning (Listed Building and Conservation Areas) Act 1990. This states:

In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority…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.

Relevant National and Local planning policy is outlined below:

National Planning Policy Framework

Chapter 16 (Conserving and enhancing the historic environment) of the NPPF sets out the Government Planning Policy in relation to historic assets. The NPPF requires that the nature, extent and importance of the significance of a heritage asset be assessed. Paragraph 185 of the NPPF requires that Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. The strategy should take account of:

- the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution made by the historic environment to the character of a place.

Paragraph 189 of the NPPF states that:

> *"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 195 states that:

> *"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:

- *the nature of the heritage asset prevents all reasonable uses of the site; and*
- *no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and*
- *conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and*
- *the harm or loss is outweighed by the benefit of bringing the site back into use."*

Manchester Core Strategy

When developing the proposals, regarding was had to the policies within the Manchester Core Strategy, including the following:

Policy EN 3 - Heritage
Throughout the City, the Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods, including those of the City Centre

Policy EC 1 - Employment and Economic Growth in Manchester (supporting text)
Ensuring access to job opportunities via sustainable transport such as walking and cycling, and public transport, such as bus routes, Metrolink and heavy rail is vital to improving the quality of life of residents through job opportunities, raising residents' wages and thereby increasing wealth

Policy T 1 -Sustainable Transport
To deliver a sustainable, high quality, integrated transport system…the Council will support proposals that: -Contribute to improvements to the extent and reliability of the public transport network

Policy EN 1 -Design Principles and Strategic Character Areas
Developers will be expected to consider the City's heritage and continue the rich pattern of activity in the core area

Significance of Heritage Asset

In order to assess the heritage significance of the application site, in accordance with the provisions of the NPPF, it is important to make reference to heritage values as defined in the Historic England document Conservation Principles, Policies and Guidelines, which can be summarised as follows:

- Evidential value – the potential of a place to yield evidence about past human activity (i.e. archaeological interest)

- Historical value – the ways in which past people, events and aspects of life are connected through a place.

- Aesthetic value – the ways in which people draw sensory and intellectual stimulation from a place (i.e. architectural and artistic interest)

- Communal value – the meanings of a place for the people that relate to it.

Nature of Significance

Having regard to the above, the section of viaduct to which this application relates can be said to provide significance due to its historical value, aesthetic value and also group value due to its proximity to the Grade II listed Deansgate Station:

o Historic Value

Having regard to the site's historic value, the Historic England document 'Designation Listing Selection Guide: Transport Buildings' (2017) is of particular importance when assessing the historic value associated with railway infrastructure. This sets out four 'ages' of railway construction which, in descending importance, is as below:

- The pioneering first phase, 1825–41;

- The heroic age, 1841–50;

- The third phase 1850s–1870s, the consolidation of the network; and

- The fourth period, up to 1914, the completion of the network.

Given the construction date of 1846-9, it is apparent that the viaduct stems from the 'heroic age' of railway construction, often referred to as the 'railway mania' era of rail development. Therefore, by virtue of the viaduct's age there is strong historic significance attributable to it.

The elevated railway lines in the city centre are important visual representations of a significant era in the development of Manchester's transport infrastructure. Following the introduction of the railways to Manchester, the explosive rise in numbers of passengers and freight carried by the railways of the railways soon made the canals redundant and obsolete. Here the railway allowed goods to be transported at much greater efficiencies than ever before. This introduction of a new technology (railways) replacing old (canals) was symptomatic of the association the railways have with the increased mechanisation stemming from the industrial revolution and the rise of Manchester as an economic powerhouse throughout the nineteenth century.

o Aesthetic Value

The viaduct should be regarded as a key component in a collective of distinct structures (i.e. the other viaducts and canals in close proximity) which collectively present a unique visual landscape that is dominated by transportation infrastructure.

Proposals and Assessment of Impact upon Heritage Significance

The intervention to COL/90 is required due to severe existing defects to the internal brickwork arch (longitudinal and transverse fractures; hollow, bulged brickwork; missing and wedged bricks) identified during the last detailed examination (from September 2017). In addition to the existing defects to the brickwork arch, there are also brickwork defects to the external façade (Hewitt Street) that will be repaired during the proposed works.

The proposed works comprise two main components that affect the heritage aspects of the structure differently:

- Works within the interior of COL/90 arch;
- Works in the exterior façade (Hewitt Street).

Works within the interior of the COL/90 arch

The proposed works within the interior of COL/90 arch are summarised as follows:

- Removal of internal existing infrastructure and debris within the unti;
- Brickwork surfaces to be jet washed to allow accurate inspection of existing condition;
- Brickwork repairs to the identified defects;
- Installation of waterproofing system at intrados of existing brickwork arch barrel;
- Installation of drainage system along springing level of arch, embedded into new proposed concrete elements (springer beam);
- Installation of reinforced concrete springer beam and steel shear keys along springing level of arch barrel;
- • Installation of sprayed reinforced concrete arch under existing brickwork arch barrel.

The list of works summarised above are confined to the internal unit within COL/90, which is tenanted for private use. These works do not affect the external appearance or layout of the structure and therefore do not affect its heritage nature.

Works in the exterior façade (Hewitt Street)

The proposed works to the external façade of COL/90 are summarised as follows:

- Brickwork surfaces to be jet washed to allow accurate inspection of existing condition. The chemicals used for jet washing are to be fully biodegradable, non-hazardous and completely neutralised by water. The pressure used for jet washing must be controlled so that it does not damage the masonry and mortar bed and does not leave stains to the existing brickwork;
- All vegetation to be treated with glyphosate (or similar approved herbicide) and allowed to die in accordance with RT/CE/C/008/255. Root systems to be removed as far as practicably possible and structural elements made good;
- Replacement/installation of brickwork to areas of missing and loose bricks in accordance with NR/CIV/SD/111. Brickwork replacement shall be kept to a minimum and new bricks shall match the existing surrounding original / historic brickwork in all respects, including cursing pattern, brick type, size, colour and texture. Samples to be taken in advance of works and bricks sourced to match;
- Rake out and repoint brickwork to areas of open joints in accordance with NR/CIV/SD/101. All new mortar shall be lime based that matches the existing original / historic mortar by
- way of chemical composition, colour, texture and finished appearance of application. Samples to be taken in advance of works and mortar sourced to match;
- Existing graffiti to be removed and façade surface's appearance to be restored to original as far as reasonably practicable;
- Existing outlet pipe and downpipes (damaged) are to be replaced with similar pipes in appearance, to make part of the new proposed drainage system;
- Elements fixed to the Downside façade (Hewitt Street) and that are no longer required (timber and metallic brackets) shall be removed and brickwork surface to be made good.
- The current status of the Downside elevation façade (Hewitt Street) shows a level of neglect for its overall appearance. The works proposed to the external façade (Hewitt Street) are deemed as positively benefiting the appearance and historical character of the structure. Special care shall be taken when choosing materials for the brickwork repairs (brick and mortar), to match the existing surrounding original materials.

Turning to an assessment of the scheme, it is clear that the proposals set out in this LBC application are essential to the appropriate ongoing sensitive maintenance of this historic viaduct. All of the interventions proposed in this application are benign and intended to safeguard the future of the heritage asset as an important piece of the central Manchester rail infrastructure.

Appropriate and sensitive methodologies will be employed throughout the works. From a Historic Environment perspective, it has been demonstrated in the analysis above that detailed consideration has been given to the interface between the scheme proposals and the historic context of the viaduct. It is considered that this proposed solution represents a good balance between respecting the viaduct's heritage and delivering a scheme that will bring benefits to the travelling public. The fabric repair works will be undertaken using methodologies suitable and appropriate for a Grade II building. There will be no adverse impact to the setting of the viaduct, including the adjacent Deansgate Station. The scheme's design proposals will conform with the design and heritage requirements set out in both the NPPF and the Manchester Core Strategy.

Conclusion

In summary, it is considered that the works proposed are respectful to the special character and appearance of the Manchester South Junction and Altrincham Railway Viaduct and other heritage assets within its environs. The proposal will not result in any unacceptable impact upon the viaduct's significance. In light of the above, the proposals are considered to be in accordance with the policy thrust stipulated by the NPPF and the Manchester Core Strategy. Consequently, it is considered that Listed Building Consent should be granted for the proposals.

APPENDIX 1: LIST DESCRIPTION

Summary of Building

Railway viaduct for the Manchester South Junction & Altrincham Railway Company, 1846-9, constructed by David Bellhouse Jnr. Red brick with some small sections of blue brick, sandstone dressings and cast-iron bridges.

Reasons for Designation

The Manchester South Junction & Altrincham Viaduct is designated at Grade II for the following principal reasons:

* Design interest: it is an impressive 1 3/4 mile long urban viaduct incorporating a series of well-detailed bridges; some with highly decorative Gothic-style ironwork;

* Date: it is an early example of a railway viaduct dating from the second phase of railway development - the period from 1841-50 often referred to as 'railway mania' - in which commercial speculation and competition for routes led to the rapid construction of lines and expansion of the railway network;

* Historic interest: the viaduct forms an important and integral component of the Manchester South Junction & Altrincham Railway, which was one of the country's earliest suburban railways, and Manchester's first; helping to bring this form of transport to the hinterlands;

* Group value: the viaduct has strong group value with neighbouring railway structures (both contemporary and later), including two other railway bridges crossing the River Irwell (the 1830 Grade I listed stone bridge and the 1869 Grade II listed girder bridge) and their associated viaducts, the Grade II listed Castlefield Viaduct (c1880), the Grade II listed stations of Manchester Oxford Road (1958-60) and Deansgate (1896), and the Grade II listed former goods offices (c1850-60) and train shed (c1881) at Manchester Piccadilly Station.

History

The Manchester South Junction & Altrincham Railway viaduct was constructed in 1846-9 by David Bellhouse junior for the Manchester South Junction & Altrincham Railway (MSJ&AR) Company; Bellhouse was also responsible for laying the track. Several of the cast-iron bridges situated along the viaduct were built by his son, the engineer and iron-founder, Edward Taylor Bellhouse, along with others by the line's Chief Engineer, William Baker, and William Cubitt.

The MSJ&AR line is one of the country's earliest suburban railways and was the first in Manchester. It was started as a joint venture between the Manchester & Birmingham

Railway (later the London & North Western Railway, LNWR) and the Sheffield, Ashton-under-Lyne & Manchester Railway (later the Manchester, Sheffield & Lincolnshire Railway, MS&LR) which operated London Road Station (known as Manchester Piccadilly Station since 1960). The aim was to create an extension of their lines, known as the South Junction line, that would be carried along the southern boundary of the city centre on a viaduct and then join the Liverpool and Manchester Railway at Ordsall Lane in Salford, providing access to the lucrative port and city of Liverpool. A branch line, leaving the South Junction line at Castlefield, would also follow the Bridgewater Canal to Altrincham. The Manchester South Junction & Altrincham Railway Act received Royal Assent on 21 July 1845.

300,000 cubic feet of stone (91,440 cubic metres), 50 million bricks and 3000 tons (3048 tonnes) of cast iron were used in the viaduct's construction. The MSJ&AR line opened on 20 July 1849, although sections of the viaduct were not opened until 1 August 1849. The line ran for 8 1/2 miles from London Road Station via Oxford Road and Deansgate Stations to Altrincham, with the viaduct forming a 1 ¾ mile (2 ¾ km) long stretch: the northern branch terminating at the north-west bank of the River Irwell, and the southern branch terminating at the east side of Dawson Street.

Details

LOCATION: The viaduct runs from Manchester Piccadilly Station via Oxford Road and Deansgate, following approximately the route of the River Medlock (crossing it at a number of points), and then branches into two at Castlefield, with the northern branch terminating on the north-west side of the River Irwell, and the southern branch terminating at the east side of Dawson Street.

ARCHITECTURE: The viaduct is approximately 1 ¾ mile (2 ¾ km) long and incorporates 224 brick arches that average a span and height of approximately 30ft, and a width of 28ft; many of the arches, particularly those near to Manchester Oxford Road Station and Deansgate Station, have been in-filled and converted into commercial premises. The tallest arches can be found in the section between Manchester Piccadilly and Oxford Road stations where the ground level is lower. A brick parapet has been altered and rebuilt in places and later repairs have been carried out to some of the arches.

The viaduct incorporates a series of predominantly arched, cast-iron bridges by Edward Taylor Bellhouse, William Baker and William Cubitt that cross various streets, the Rochdale Canal, and the Bridgewater Canal. The bridges have an average span of 70ft, although one of Baker's bridges, which spans the Rochdale Canal has a span of 105ft. A number of the bridges incorporate highly decorative Gothic-style ironwork and detailing and castellated towers (referencing the location of a Roman fort at Castlefield), whilst others, such as a bridge over Gloucester Street are more classically detailed. A bridge over

Egerton Street by William Baker was replaced in steel in 1976. Some of the viaduct's brick arches and bridges are skewed. The Irwell Bridge at the north-west end of the viaduct is of brick with two segmental arches, each of approximately 65ft span, with a central pier and cut-water. Rusticated stone voussoirs and pilaster strips exist to the central pier and abutments, and the parapet above the western arch incorporates cast-iron panelling.

Following electrification of the line in the C20 the viaduct now incorporates a series of C20 and early-C21 gantries along its course. Also along the viaduct's course are a number of attached or abutting buildings, most of which are later in date and are un-related to the viaduct's use; all are excluded from the listing, which relates solely to the viaduct. Manchester Piccadilly Station, Deansgate Station and Manchester Oxford Road Station (the two latter stations being constructed on top of and to the side of the viaduct) are all separately listed at Grade II.

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