1EW02 Enabling Works – Area South

Heritage Agreement Method Statement: Recording and Dismantling of Robert Stephenson Sculpture in Euston Station Forecourt

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REVISION CHANGES, AUTHORISATION & ISSUE RECORD

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C01	12/02/2019		Original version	Catherine Woolfitt Built Heritage Specialist	Caroline Raynor Principal Archaeologist	Paul Snelson S3 Manager	For Acceptance	
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Signature								

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1 Introduction

1.1 Circumstances of the project

1.1.1 High Speed Two (HS2) is a network of new high speed lines across Britain, being planned and built in two phases: Phase One, which will connect London with Birmingham and the West Midlands; and Phase Two, which will extend the route to Manchester, Leeds and beyond. Powers to construct and operate the railway have been secured through the High Speed Rail (London – West Midlands) Act 2017 (the Act), which received Royal Assent on 23 February 2017.

1.1.2 The Secretary of State has appointed High Speed Two (HS2) Ltd as the nominated undertaker responsible for delivering Phase One of HS2. HS2 Ltd is an executive non-departmental public body, sponsored by the Department for Transport.

1.1.3 Schedule 18 'Listed Buildings' to the Act concerns how legislation in respect of listed buildings under the Planning (Listed Buildings and Conservation Areas) Act 1990 ("the 1990 Act") applies to the Phase One works. Paragraph 1 of Schedule 18 disapplies some of this legislation, and in particular the requirement for listed building consent, from the Phase One works in respect of the listed buildings set out in Table 1, or which are listed on or after 30 September 2013.

1.1.4 Following Royal Assent, HS2 Ltd entered into Heritage Agreements with London Borough of Camden (LBC) and with Historic England (HE) concerning the listed buildings identified in Schedule 18 to the Act, which are located within Camden. These agreements require certain details of works concerning the listed buildings to be submitted to the local authority for their approval, in consultation with Historic England where required.

1.1.5 The statue of Robert Stephenson is identified in Table 1 of Schedule 18 to enable the Grade II listed statue to be removed and later re-erected elsewhere. HS2 Ltd entered into a Heritage Agreement with London Borough of Camden and Historic England dated 05/05/2017 that requires HS2 Ltd to submit method statements concerning the relocation of the statue to London Borough of Camden for approval. The Heritage Agreement requires Historic England and the relevant Amenity Societies (Ancient Monuments Society, the Victorian Society, the Council for British Archaeology and the Society for the Protection of Ancient Buildings) to be consulted on these submissions.

1.2 Scope of the Method Statement

1.2.1 This method statement addresses the grade II listed statue of Robert Stephenson, how this heritage asset will be recorded and how it will be dismantled for removal from its current location and transported to storage, for future relocation elsewhere.

1.2.2 Part 2.1 of Schedule 1C of the Heritage Agreement with London Borough of Camden and Historic England requires the method statement to set out a specification for recording the

following elements of the statue of Robert Stephenson in accordance with Historic England guidance for the recording of historic buildings:

- The statue: and
- Its constructional details

1.2.3 Part 2.2 of Schedule 1C requires the method statement to detail the following:

a. How the statue is to be dismantled;

b. How the component parts of the statue will be protected, transported and stored;

c. The process for the identification of an appropriate site for re-erection; and

d. The process for re-assembly of the component parts during re-erection of the statue.

1.2.4 This method statement covers requirements a. and b. in the previous paragraph – how the statue is to be dismantled and transported to store. The remaining items c. and d. – the process of identification of an appropriate site for re-erection and the process or re-assembly will be the subject of a future HAMS submission.

1.2.5 Schedule 2 of the Heritage Agreement sets out the types of information to accompany submissions of works details. A location plan has been included in Appendix A, and photographs of the statue have been included within the body of the method statement.

1.2.6 The recording of the statue of Robert Stephenson will be carried out in accordance with this method statement, as per the requirements of Part 2.1 of Schedule 1C of the Heritage Agreement. A digital copy of the report will be provided to the local authority and made available to the public through the Archaeology Data Service (ADS) and the Greater London Historic Environment Record (GLHER). The report will include the data gathered and outputs created as a result of the recording exercise, which is specified in Section 4 of this method statement.

Table 1 List of abbreviations

Abbreviation	Definition
CSjv	Costain Skanska Joint Venture
HAMS	Heritage Agreement Method Statement
HE	Historic England
HS2	High Speed 2 Ltd
LMA	London Metropolitan Archive
L&BR	London and Birmingham Railway
LNWR	London and North Western Railway (1846-1922)
WP	Work Package

2 Heritage asset description and history

2.1 General information

2.1.1 The statue of Robert Stephenson is located at the western end of Euston forecourt (sometimes referred to as Piazza), adjacent to the western entrance to Euston Station concourse, within the London Borough of Camden.

2.1.2 The national grid reference for the statue is TQ 295826. The statue is positioned so that the figure of Robert Stephenson faces north-east along the Euston piazza past the frontage of Euston Station. For ease of reference the principal elevation of the sculpture bearing the inscription is described as east-facing in this method statement, and the orientation of other elevations referenced accordingly.

2.1.3 The statue is designated as a Grade II listed heritage asset (list entry no.1342041) and was first inscribed on the list on 14 May 1974.

2.2 Description and historic background

2.2.1 The statue depicts Robert Stephenson, son of George Stephenson, an engineer known as the 'Father of the Railways' who had built the world's first inter-city railway line using steam locomotives between Liverpool and Manchester which opened in 1830. Following in his father's footsteps, Robert Stephenson served as the chief engineer of the London and Birmingham Railway (L&BR). He was responsible for the design and execution of the company's line into central London and was notable for advocating that the terminus be located at Euston rather than further north at Chalk Farm. The engineering challenges of bringing the railway into an already developed metropolitan area were considerable, including 112 miles of railway with eight tunnels and three long, deep cuttings.

2.2.2 The London and Birmingham Railway planned the new terminus linking London and the Midlands in the 1830s and Robert Stephenson proposed Euston as its location in August 1834.[1] L&BR named their new terminus after the street, Euston Grove, which extended south from the station to Euston Square. Passenger service began from 1837 with the line to Birmingham completed in 1838. The large new Euston terminus was designed in the classical style by Philip Hardwick. A monumental gateway to the station, subsequently known as the Euston

[1] Sources consulted for the history of the development of the Euston Grove site, from construction of the new L&BR terminus to demolition in the 1960s were: HS2 "Detailed Desk Based Assessment of Euston Square Gardens", doc ref. 1D037-EDP-EV-ASM-SS06__SL10-000001; Professor Joe Cain, 2007, "History of Euston Grove", Department of Science and Technology Studies, University College London, at https://profjoecain.net/euston-grove-history-of-a-london-street-nw1/ ; and 'Euston Station and railway works', in *Survey of London: Volume 21, the Parish of St Pancras Part 3: Tottenham Court Road and Neighbourhood*, ed. J R Howard Roberts and Walter H Godfrey (London, 1949), pp. 107-114. *British History Online* http://www.british-history.ac.uk/survey-london/vol21/pt3/pp107-114 [accessed 21 January 2019].

Arch, also designed by Hardwick, was completed by 1840. Euston Grove was extended south in 1869, bisecting the northern part of Euston Square, to connect with the street now known as Euston Road. At this stage the two grade II listed lodges on Euston Road were built flanking the new entrance to Euston Grove, and the Robert Stephenson sculpture was installed on a central reservation in front of this entrance, creating a grand central axis to the Euston Arch as shown in the map of 1913 in figure 2 below. This axis only lasted until 1883, when a hotel was built across Euston Grove.

2.2.3 Stephenson's career involved many international commissions, as well as his work in England. For his engineering achievements he was made Knight of the Order of Leopold in Belgium, Knight of the Legion of Honour in France, and Knight Grand Cross of the Order of St Olaf in Norway. Within England, he served as President of the Institution of Mechanical Engineers and of the Institution of Civil Engineers from 1855-57. Upon his death in 1859 Stephenson was buried in Westminster Abbey. The statue now located in Euston Station forecourt was commissioned as a testimonial to Robert Stephenson and was paid for by donations from engineers in Great Britain and France, as well as from others who knew him.

2.2.4 The bronze figure depicts Robert Stephenson in contemporary dress holding partly unfurled plans. (Figure 3). The figure is raised on a pinkish-red granite pedestal, which is inscribed with the dates of Stephenson's birth and death. The inscription on the pedestal's principal elevation (currently the north-east face) reads: ROBERT STEPHENSON / BORN / OCTOBER 16TH 1803. / DIED / OCTOBER 12TH 1859. (Figure 15) The figure of Stephenson was designed and executed in bronze in c. 1861 by Baron Carlo Marochetti RA (1805 – 1867), a renowned sculptor favoured by Queen Victoria and elected a full academician of the Royal Academy.

2.2.5 The stone of the pedestal is salmon pink in colour and appears to be Peterhead granite from Aberdeenshire, which was widely used in the Victorian period as a monumental and decorative stone. The pedestal is formed of three blocks: a moulded base, a large block bearing the inscription, and a moulded cap upon which the bronze sculpture is mounted. The granite surfaces have been worked to a smooth, polished finish. The masonry joints are very fine and it is unclear how the granite blocks were originally bedded, if lead sheet or lime mortar may have been used. Lead sheet was traditionally used for bedding and levelling large and heavy stones, in ornamental and monumental stone masonry. A fragment of sheet protruding from the bed joint between the lower two stones at the northwest corner of the pedestal appears to be of lead. (Figure 13 below)

2.2.6 Four stainless steel bolts, one at each corner, secure the bronze figure to its pedestal. These bolts project above the bronze base, are clearly modern and were presumably inserted during the most recent move to its current location. Bolts are visible in similar positions in a photograph taken in 2007 (figure 9). It is likely that the sculpture was originally fixed to its stone pedestal with concealed fixings.

2.2.7 It is also likely that metal fixings were used within the bed joints of the stone pedestal to bridge these and stabilise the pedestal structure. Ties of this kind are typically centrally located vertical dowels or rods, concealed within the structure and often set in lead. As discussed further under 'Condition Assessment' at section 2.4, the spalls and chips visible at

the edges of the granite blocks, on mouldings and bed joints, suggest past attempts to lift the blocks by levering. This type of damage, combined with other evidence - the condition of the joints, which are extremely fine, not filled with repair mortar, and in one location at the northwest corner appear to contain lead sheet – points to past attempts to separate the granite blocks, which possibly failed due to the presence of imbedded ties.

2.2.8 It has been suggested that initially the intention was to erect the statue on the Thames Embankment or in the garden of Great George Street, home of the Institution of Civil Engineers. The statue was reportedly stored at the Institution of Civil Engineers for a number of years before a suitable location was found. At the invitation of the LNWR, it was decided to erect it at Euston in c. 1870-1871. The statue was originally installed between the Portland limestone lodges at the southern end of Euston Grove, facing onto Euston Road, as shown in Figure 5 below.

2.2.9 Some online sources confusingly mention a statue of Robert Stephenson which was located inside the Great Hall of Euston Station prior to its demolition in the 1960s. This sculpture, illustrated in figure 13 below, in fact depicted George Stephenson, Robert Stephenson's father, and is now located at the National Railway Museum in York.[2]

[2] For images of the George Stephenson sculpture in the Great Hall see https://www.scienceandsociety.co.uk/results.asp?image=10685069&itemw=4&itemf=0002&itemstep=1&itemx=23 (image number 10685071 view of sculpture in Great Hall of the now demolished Euston Station and image no.10685069 during removal)

Figure 1 Greenwood map of 1824-26 showing the site of Euston Grove prior to construction of the railway

Figure 2 OS map of 1913 with position of Robert Stephenson marked between the lodges on Euston Road and station buildings located to the north of Euston Grove

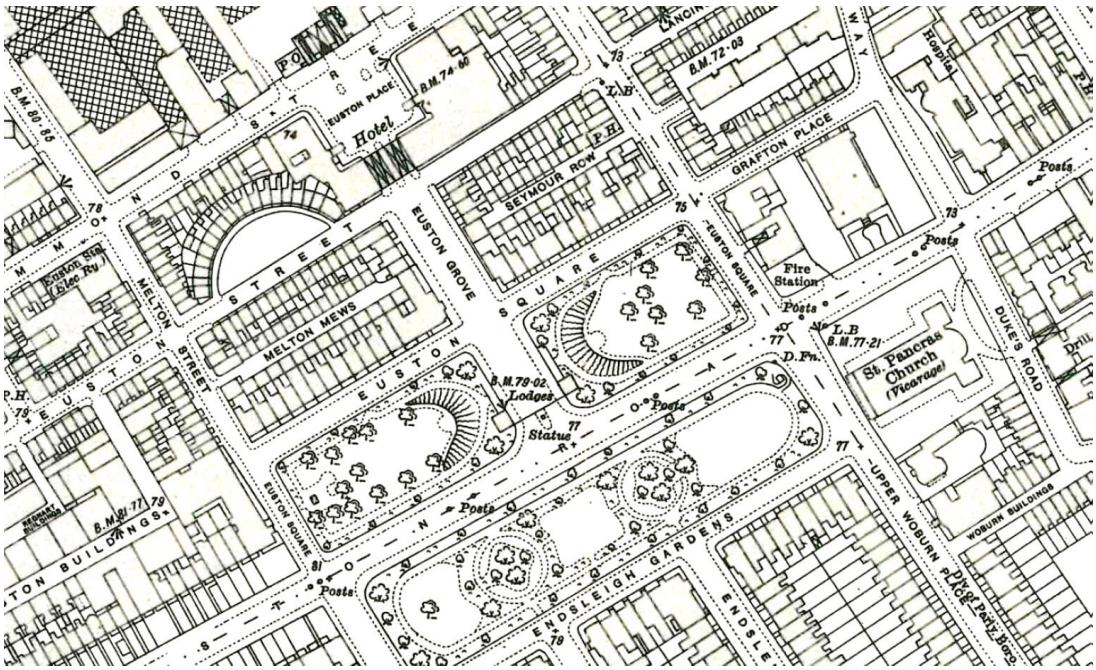


Figure 3 Robert Stephenson sculpture in its current location at west end of Euston Station forecourt, main elevation, from the northeast

Figure 4 Robert Stephenson sculpture pedestal, facing east, with dashed red lines indicating the fine bed joints between the three pedestal blocks

Table 2 Stones comprising granite pedestal by course with estimated weights

Item	Description	Size (mm) – Overall dimensions (length x depth x height)	Approx. Weight Kg*
A	Top, moulded block	1210 x 1210 x 220	594 Kg (1.21 x 1.21 0.22m x 2700 Kg/ m³)
B	Central inscription block	860 x 860 x 1030	1997 Kg (0.86 x 0.86 x 1.03m x 2700 Kg/m³)
C	Moulded base block	1190 x 1190 x 440	1683 Kg 1.19 x 1.19 x 0.44m x 2700 Kg/ m³)
		Total Estimated Weight	approx. 4,274 Kg

*Assuming a density value of approx. 2700kg/m³ for granite

Figure 5 The statue photographed in its original position adjacent to Euston Road. (reproduced by permission of Historic England Archive, image no.CC97/00265, General View of the Robert Stephenson Statue in Euston Square London)

Figure 6 Postcard view looking north up Euston Grove toward former Euston Hotel in 1913 (From reprint of OS map of London Euston, sheet 49, 1913)

Figure 7 View of sculpture looking north up Euston Grove in 1962 just before demolition of station buildings, https://commons.wikimedia.org/wiki/File:Euston_old_Station_entrance_no_arch_geograph-2991077-by-Ben-Brooksbank.jpg, copyright Ben Brooksbank

2.2.10 The sculpture was still in its original position on Euston Road when the photograph above was taken in 1962. This image illustrates changes to the site since the previous photograph of 1913 - removal of the gates and railings and installation of the war memorial. The statue was subsequently moved to at least two other locations, as illustrated in the images on the following pages. It was apparently relocated to Euston Station forecourt as part of the redevelopment which followed demolition of the Victorian station, and was placed at the eastern end of the piazza, next to an ornamental pool (see Figure 8 below). Demolition of the Victorian station and construction of the new one was not completed until the end of the 1960s; the station was formally opened in 1968.[3] The exact date of the first relocation of the Robert Stephenson sculpture is uncertain; it likely coincided with the construction of the new bus station and redevelopment of the forecourt area, in the 1970s.[4] It is uncertain if it formed a forecourt feature as part of the scheme for new office blocks designed by Richard Seifert & Partners and executed between 1974-78.

[3] For an account of the demolition of the historic station and reconstruction of the new, see *The New Euston Station 1968*, an illustrated brochure produced by British Rail. Available online as a pdf at http://www.railwaysarchive.co.uk/docsummary.php?docID=379.

[4] For the proposed bus station see plan drawings by the GLC in the collection of the London Metropolitan Archive, ref. no. ACC3499/EH/02/122/10-18.

2.2.11 The two images of the sculpture at this stage in figures 8 and 9 below appear to be of the same location, with different landscaping. In figure 9 grassed areas surround the sculpture in figure and in figure 8 a u-shaped pool surrounds the sculpture on three sides.

2.2.12 The Robert Stephenson sculpture was subsequently relocated again, to its present position at the west end of the forecourt. This is thought to have occurred c.2008 along with re-ordering of the forecourt.[5] The statue is currently orientated facing east overlooking Euston piazza, located close to the western pedestrian entrance to Euston Station concourse. In this location, the setting of the statue comprises the modern station forecourt which is a heavily trafficked paved space lined with restaurants and cafes. To the west and south are the modern glass and granite-faced office blocks designed by Seifert; these buildings enclose the space, severely limiting views to the wider area including Euston Square Gardens. To the north of the statue is the modern Euston Station concourse building.

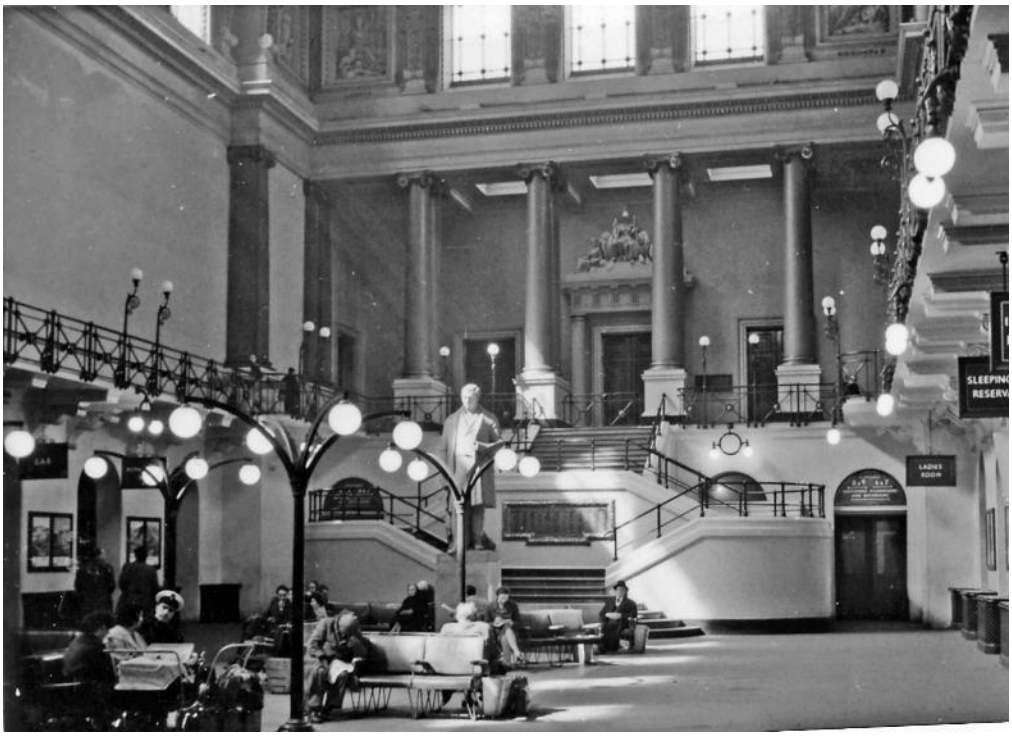
Figure 8 Image of sculpture in previous location at east end of forecourt, surrounded on three sides by a pool

[5] On-line informal sources indicate forecourt redevelopment including moving the statue from the east to west end was carried out c.2008. See, for example https://aircraftbusesandtrainsofthe1970sand1980s.com/2018/04/19/robert-stephenson-statue/ .

Figure 9 image of sculpture taken in 2007, in public domain, available online at https://upload.wikimedia.org/wikipedia/commons/e/e7/Robert_Stephenson_statue_Euston.jpg, taken 7 Dec 2007, copyright Oxyman (photographer), reproduced under license [GFDL (http://www.gnu.org/copyleft/fdl.html), CC-BY-SA-3.0 (http://creativecommons.org/licenses/by-sa/3.0/)

Figure 10 The current location of the statue, at the western end of Euston Plaza.

Figure 11 The Great Hall, Euston Station, taken 10 April 1960 by Ben Brooksbank prior to demolition, with figure sculpture of George Stephenson on pedestal in foreground, in public domain at https://upload.wikimedia.org/wikipedia/commons/d/de/Euston_old_Station_Great_Hall_geograph-2991046-by-Ben-Brooksbank.jpg, copyright Ben Brooksbank [CC BY-SA 2.0 (https://creativecommons.org/licenses/by-sa/2.0)]



2.3 Assessment of significance

2.3.1 The significance of the statue of Robert Stephenson is principally derived from its depiction of, and historic association with, Stephenson himself, as the person responsible for the planning and construction of the L&BR. Stephenson served as Chief Engineer of the L&BR, following in his father's footsteps, and was responsible for achieving the construction of the railway line into Euston, despite many engineering challenges. He was well-known for his bridge designs and his obituary noted him as the 'inventor and first constructor of tubular plate-iron bridges'. Stephenson served as President of the Institution of Civil Engineers. He was widely celebrated for his engineering achievements and pioneering railway works both in England and abroad and the statue has high historical value for its association with him.

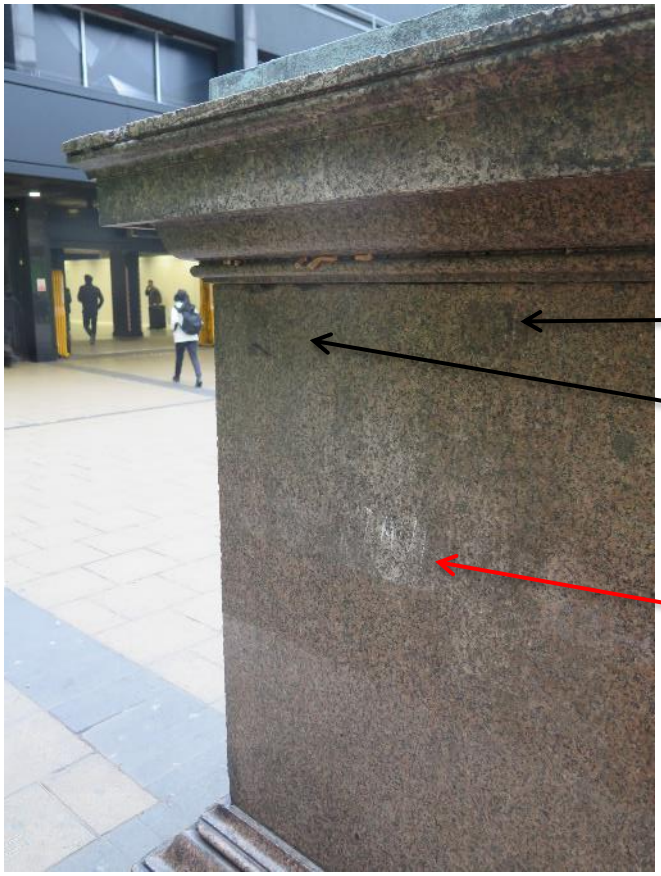
2.3.2 The statue is also of aesthetic interest and artistic value as a work of art by the sculptor Baron Carlo Marochetti RA (1805 – 1867). Marochetti was born in Turin, Italy, but raised partly in France. He studied at the École des Beaux-Arts, Paris under François-Joseph Bosio, where he learned to sculpt. Following the abdication of the French King Louis-Philippe in 1848, he moved permanently to London. Once here, Marochetti lived in Onslow Gardens and had a studio with its own foundry in Sydney Mews. He was a respected sculptor and was responsible for the equestrian statue of Richard Coeur de Lion, which stands outside the Palace of Westminster. He also assisted with the modelling of the lions that sit below Nelson's Column, casting the animals in his own foundry. Reportedly a favoured sculptor of Queen Victoria, he was commissioned to make the seated figure of Prince Albert for the Albert Memorial although his sculpture was rejected by the memorial's architect, Sir George Gilbert Scott. In 1866, he was elected a full academician of the Royal Academy.

2.3.3 The statue exhibits communal value due to its financing by members of the Institute of Civil Engineers, giving evidence of their high esteem of Robert Stephenson. His death was perceived as a great loss for the nation; his funeral cortege was allowed to pass through Hyde Park on its way to Westminster Abbey, where his remains were interred. Over two thousand invitations were issued for his funeral, and it is estimated that perhaps another thousand mourned from outside the official service. As the statue was commissioned as a testimonial to Robert Stephenson and paid for by donations from engineers in Great Britain and France, as well as others who knew him, it provides evidence of historic communal value.

2.3.4 The statue is also considered to be of historic interest within the context and evolution of commemorative structures, as a good example of a typical Victorian 'coat and trouser' civic monument. Public statuary enjoyed a 'golden age' during the reign of Queen Victoria. The Victorian fascination with history and fame, combined with the desire to beautify fast-developing cities, resulted in a proliferation of public monuments and sculpture.

Figure 12 Details of sculpture base illustrating condition and bolts inserted through bronze, with chewing gum on bronze and stone surfaces, and graffiti scratched on the bronze base in image at bottom

Figure 13 Details of west side of pedestal with traces of white graffiti visible at centre and cigarette ends pushed into moulding, and northwest corner (at bottom) with spalls and possibly lead sheet in fine joint



Square marks left by adhesive tape or labels – on west face of pedestal

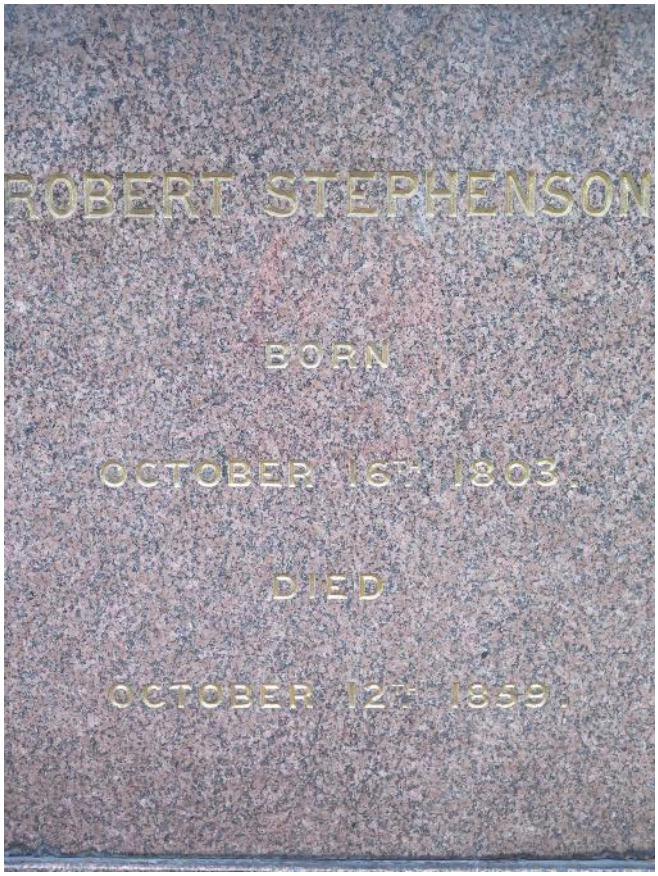
Traces of white graffiti at centre of block indicated by red arrow

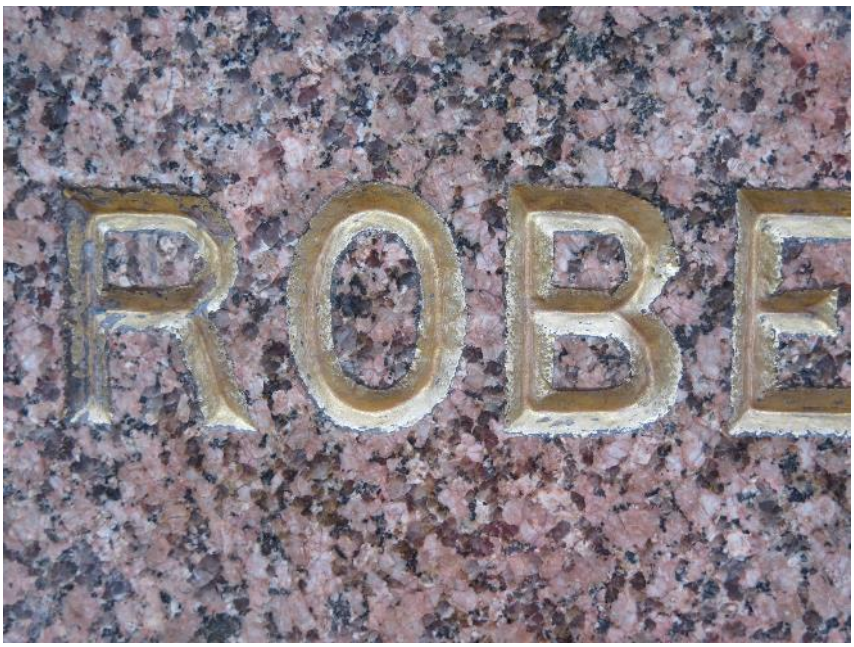
Appears to be fine lead sheet sandwiched within the fine bed joint

Spalls to stone above bed joint possibly caused by past attempts to move stones

Figure 14 Pedestal from northeast, and below detail of north elevation with dark soiling on base (at lower right) and small spalls along the bed joint, which have been filled

Figure 15 Inscription with letters finished in oil gilding, and below a detail where some loss of gold leaf has occurred revealing traces of the underlying preparatory layers





2.4 Condition Assessment

2.4.1 The statue appears to be in sound structural condition; there are no visible defects, such as cracks, in the masonry or in the cast bronze. The statue and its pedestal were moved in the relatively recent past and it seems that it was reinstalled on a sound base, although the nature of this is unknown, concealed under the modern paving which surrounds the granite.

2.4.2 The granite pedestal and bronze statue both present comparatively durable surfaces, which are relatively resistant to weathering and soiling. However, there is dark soiling on the decorative mouldings, on the pedestal base and capping stone. Heavy dark, nearly black soiling obscures the interface between the bronze and the granite capping stone. Chewing gum disfigures the top surface (sky-facing) of the granite pedestal cap, along with cigarette ends. Graffiti has been scratched into the bronze base at the northeast corner. A small section of graffiti – faint white letters – is also visible on the rear (west) face of the granite base. Two square marks on this polished face appear to be adhesive residues from adhesive tape or labels. (Figures 12 and 13).

2.4.3 The bronze sculpture surfaces are stable and appear to be free of active metal corrosion. They exhibit the usual variable green-ish patina that develops by oxidation of bronze exposed in an external environment without the application of surface protection. Based on inspection from ground level, it appears the sculpture has not received surface treatment in the form of waxing, which is often applied to public bronzes, as a protective measure. The surface of the bronze statue appears to be sound and free of defects like cracks, pits or holes. However, the sculpture should be checked for localised corrosion by the specialist subcontractor in conservation of metal sculptures as part of the dismantling work. Assessment of surfaces will be made briefly prior to transport to the long-term store, and a more thorough examination will be carried out at the store, where access and lighting conditions will permit this.

2.4.4 The relatively sound condition of the bronze surfaces is probably due, in large part, to the high standard of work in production of the casts and joining the various parts of the metal sculpture. These joints have been well executed and are not readily visible but are likely to have been made where the detail helps to conceal them, for example at the neck, under the coat where the legs joint the body, and where the arms join the shoulders.

2.4.5 Sheltered areas of the bronze figure sculpture, such as details which are deeply undercut or modelled and consequently not subject to rainwater washing, are at greater risk of corrosion and typically more heavily soiled. These areas may be the sites of joints between cast sections and should be inspected to ensure they remain sound and free of deterioration, cracking and corrosion. Regular rainwater washing removes potentially harmful contaminants, such as soiling, salts and atmospheric pollutants, all of which can promote metal corrosion.

2.4.6 Like the bronze statue, the granite pedestal was also executed to a high standard, with the letters of the inscription cut into the hard stone with a high degree of accuracy and skill. Due to the relative hardness of the granite and the generally sound condition of the gilding, the inscription remains clearly legible. The gold leaf is apparently oil gilding – water gilding would not survive externally. It is unknown if this belongs to a later phase of re-finishing or

constitutes the original gilded finish. In one small area where the gilding is slightly weathered the preparatory layers for gilding are exposed and traces of blue are visible. (Figure 15) This is unusual as preparation layers – bole – for gilding are normally ochre or yellow coloured. As part of their record the specialist subcontractor for dismantling work will examine the gilding at close range and with low magnification, to try to understand the gilding and any intended visual effects of the preparation layers, as well as the potential for further investigation of these.

2.4.7 There is no visible evidence of problems relating to an internal armature, such as corrosion of ferrous (iron) metal which can cause cracking or other defects. In the case of the Robert Stephenson sculpture the internal supports within the casts may be of the same material – bronze.

2.4.8 The statue is fixed to the granite plinth by four stainless steel bolts, one at each corner of its square base. The acorn (cap) nuts used to secure the bolts protrude above the bronze surface. As noted above, it appears that these were inserted in the latest move when the sculpture was re-erected on its current site. Fortunately these appear to be corrosion resistant stainless steel.

2.4.9 The granite plinth exhibits damage to its sharp arrises at bed joints, where small chips and spalls are visible, and along the moulded cap stone. These are typical of impact damage or, at joints, of pressure from past attempts to lever and lift the stone and have probably occurred during re-location. Chips and spalls on the base of the inscribed central granite block, at the bed joint, as shown in figure 14, appear to be due to this kind of damage. These small spalls have been previously filled with a hard mortar. (Figures 12 to 14)

2.4.10 This evidence of past damage to arrises suggests difficulty in separating the stones and that the pedestal had to be moved as a single unit. It would be typical for large blocks of monumental masonry to be joined by concealed dowels or pins, positioned centrally within the bed joints, beyond the detection limit of surface metal detectors. This was found, for example, in the grade II listed Christie Memorial in St James's Garden which has been dismantled according to a separate, previously approved HAMS submission. In the case of the Christie Monument the top two blocks could not be separated and were dismantled as a single unit. Metal detection of the central pedestal block (see Figure 4 for photograph with bed joints and blocks labelled) produced signals at the four corners in locations corresponding with the positions of the four bolts into the base. There were other more random signals along the upper and lower bed joints – possibly indicating lead sheet, a fragment of which appears to project from the joint at one corner. (Figure 13)

2.4.11 The sculpture is located in an area of heavy foot traffic, on a main pedestrian route into Euston Station. The stone pedestal cap and bronze base is consequently often used as a convenient ledge for coffee cups, and for disposal of cigarette ends and chewing gum. (see figure 5 above)

2.4.12 Cleaning should be carried out , as part of the dismantling work, to ensure any potentially harmful surface deposits that might cause surface corrosion are removed prior to long term storage. Traces of pigeon guano are visible on the sculpture notably on the head. Guano is

acidic and also a source of potentially damaging salts and should be removed along with other soiling deposits, which include chewing gum, pushed into the surface of the base, and dark soiling derived from atmospheric pollution which have accumulated in areas not subject to thorough rainwater washing. Cleaning work will be done at the project's long-term store by the specialist subcontractor for dismantling work, as set out in Section 4.2 below.

Figure 16 View of site setting of Robert Stephenson Sculpture at west end of station forecourt

2.5 Survival of significant features, fabric and setting

2.5.1 The statue derives some significance from its current setting within the Euston Station forecourt. Robert Stephenson played an integral part in the construction of the London and Birmingham Railway, the first inter-city railway line into London and in the location of the L&BR terminus at Euston. However, the sculpture is much less prominent in its current location, relative to its original position on the station site, when it sat in front of the entrance gates facing onto Euston Road, flanked by the Portland stone lodges. The current orientation of the sculpture, with Stephenson facing past the station rather than to or from it, slightly detracts from its significance.

2.5.2 In its c.1870 location on Euston Road the figure sculpture stood slightly taller than at present. Comparison of archival black and white photographs (see figures 5 and 6 above) with current

views shows that the stone pedestal has lost a stone from its base, which appears in the photos as a simple squared block without a decorative moulding.[6]

2.5.3 The sculpture was initially moved from its Euston Road location to the eastern end of Euston Station's piazza, adjacent to an ornamental pool. It was subsequently moved to its current location, in the western end of the piazza. However, its original setting does survive (without the statue), to an extent: the lodges are still extant along the axis of Euston Grove (now the bus station access road), as are the 19th century railings around Euston Square, although the railings were altered and repositioned when the new station was built and the Square reordered.

2.5.4 In its original location, the sculpture formed part of the formal axial arrangement set out by the LNWR company engineer JB Stansby c.1870 along Euston Grove, which was extended through Euston Square, with the two Portland stone lodges erected to flank the entrance on Euston Road. The statue's relationship with the lodges and war memorial has been lost during the movement of the statue to the east and subsequently the west end of Euston Station piazza.

[6] The best image of the Robert Stephenson sculpture in its original position complete with simple squared base is in the Getty collection see online at https://www.gettyimages.co.uk/detail/news-photo/robert-stephenson-was-a-prominent-engineer-in-the-early-news-photo/90763646. In this photograph taken in 1925 the missing base appears to be a different stone from the rest of the pedestal. It is clearly not granite being more fine grained than the blocks above it.

3 Specification for recording

3.1 General standards

The recording methodology is subject to a Heritage Agreement with London Borough of Camden and Historic England. This section sets out general standards for recording the heritage asset. Sections 3.2 and 3.3 specify the recording methodology for the asset and its constructional details.

3.1.2 Recording shall be undertaken in accordance with Historic England guidance for the recording of historic buildings as per the requirements of the Heritage Agreement. HS2 Technical Standards will also be adhered to during the recording exercise. The HS2 Technical Standards informed the development of this method statement but are not material to or required by the Heritage Agreement.

3.1.3 The Contractor shall archive resulting reports and supporting data and information in accordance with HS2 Ltd's standard procedures. A digital copy of the report will be provided to the local authority and made available to the public through the Archaeology Data Service (ADS) and the Greater London Historic Environment Record (GLHER). The report will include the data gathered and outputs created as a result of the recording exercise.

3.1.4 Historic environment investigations involving the production of maps shall adhere to a standard approach to GIS deliverables as set out in the relevant HS2 Ltd GIS Specifications. HS2 Ltd's standard templates for maps will be used. Mapping and spatial data deliverables will conform to a standard approach to ensure consistency across all the contracts.

3.1.5 For written accounts, HS2 Ltd's standard templates for reports will be used. A final copy will be saved in PDF format for maximum readability.

3.1.6 In accordance with Historic England's 'Understanding Buildings: A Guide to Good Recording Practice' (2016), the standards for drawings are as follows:

- Drawings should include the following basic information: the name and address of the building, the civil parish and county, London Borough or unitary authority, and the National Grid Reference; the name of the individual(s) responsible for the drawing, and for the survey, if different; the date of the survey; and the name of the originating body or institution;
- A drawn metric scale, in addition to a stated scale (for example 1:50) should be included on the drawing. A drawn scale will remain accurate if the drawing is reproduced at a smaller scale;
- Drawings derived from a measured survey should be produced by Computer-Aided Design (CAD) and saved in PDF file format;
- Drawings should follow the standard conventions identified by HE guidance in 'Understanding Buildings: A Guide to Good Recording Practice'; and

- Dimensioned site sketches of constructional details should be scanned and saved in digital format, preferably as TIFF files, to prevent compression of the image and resultant loss of data.

3.1.7 In accordance with Historic England's 'Understanding Buildings: A Guide to Good Recording Practice', the standards for photographic records are as follows:

- Photography should be carried out in digital format, using a high-resolution camera with sensors exceeding 10 mega pixels;
- Images should be shot in RAW format on a DSLR camera and converted to an uncompressed file format (TIFF);
- Where no alternative is available, a compact digital camera may be used which allows the override of automatic features and production of high-resolution JPEG files;
- Where possible, a tripod and shift lens should be used to help minimise distortions in elevational photography. The camera angle should be levelled to avoid distortions;
- A lens causing the least distortion should be used, usually a standard or telephoto lens. Wide-angle lenses should be avoided except where required by site and building constraints (for example, interiors will usually require wide angle lenses);
- Use of a tripod will minimise the risk of blurring from camera shake and will aid with image composition and framing;
- All photographs should be in focus, with an appropriate use of depth of field;
- Photographs should be adequately exposed in natural light or by adequate artificial light where required. Care should be taken as to the time of day and direction of lighting. Often a bright but overcast day can provide suitable lighting to avoid over- or under-exposure;
- For interior photographs, electronic flash may be used. An off-camera source will give greater relief and a better result, and a bounced light from a reflector or white ceiling will produce a more even light than a direct source. Natural light may also provide a suitable source. Camera-mounted electronic flashes should be avoided where possible;
- The white balance setting of the camera should be checked to ensure colour distortions are not introduced in the record;
- When photographing details, a clearly marked and suitably sized scale should be positioned parallel to one edge of the photograph;
- Standard colour cards may be included in the frame when photographing details to ensure an accurate record of the colour balance is made;
- When recording the general appearance of constructional details, photographs should be taken at close proximity and further afield to relate constructional details to

locations;

- Any metadata saved (including date) should be accurate to the record taken; and
- When creating prints from digital files, photographic printing paper, preferably a silver halide paper, should be used, and a resolution of 300dpi should be maintained.

3.2 Recording the heritage asset

3.2.1 Recording of the heritage asset will be carried out in accordance with guidance provided by Historic England in 'Understanding Historic Buildings: A Guide to Good Recording Practice', 2016.

3.2.2 The Contractor will produce a report, which will constitute the record alongside archive material and will include:

- **The rationale for the recording;**
- **An outline of the methodology** and techniques employed;
- **Details of engagement** and any external parties involved;
- **A written description** containing the required information as specified in Table 1;
- **A brief summary of elements of the heritage asset to be affected;**
- **Historic and recent maps**, as specified in Table 1;
- **Photographic material**, within the body of the report and in appendices, as specified in Table 1;
- **Maps, plans and figures** to illustrate key points, as specified in Table 1; and
- **The specialist metal sculpture conservation sub-contractor's condition and work record report** - to be included in the final record (as an appendix)
- **Any other material or outputs** that may have be required and collated.

3.2.3 Historic England ('Understanding Historic Buildings: A guide to good recording practice'; 2016) has defined an approach to historic building recording identifying a range of techniques and providing guidance on when these may be applicable. Descriptions of the 4 levels of recording, plus photographic study, and their specifications, are set out in section 5 of the Historic England document.

3.2.4 A **Level 3 analytical record** will be required for the statue of Robert Stephenson. This has been specified in accordance with guidance in the Historic England document, which identifies that assets requiring dismantling prior to re-erection will require either a Level 3 or Level 4 record. In this instance, Level 3 has been selected because the statue of Robert Stephenson is a Grade II listed asset, which requires detailed understanding of its history, fabric, setting and significance, in order to select an appropriate location for its re-erection. In

addition, the Level 3 record will provide the requisite details to inform the process of sensitively dismantling and reassembling the statue.

3.2.5 The Level 3 record will be comprised of the following elements set out in the Table below:

Table 3 Specification for recording

Type of record	Specification for record
Drawing	A site plan at a scale of 1:1,250 relating the statue to the adjacent buildings and structures in the existing Euston Station forecourt, to record the statue's existing location prior to its removal and relocation. The site plan should also note the two previous locations of the statue (one in the eastern half of the forecourt, as far as this can be determined, and one within Euston Square Gardens, facing onto Euston Road). A measured and dimensioned plan drawing at a scale of 1:20, as existing. A measured plan drawing at a scale of 1:20 identifying the location and direction of accompanying photographs, to be used for re-assembly of constituent parts of the statue. Measured elevation drawings of the statue's elevations at a scale of 1:20, to be used for recording constituent parts of the statue for reconstruction. A site plan at a scale of 1:1,250 identifying the location and direction of accompanying photographs.
Photography	Photographs of the statue's external appearance at close range, including four oblique views and four individual elevation views straight on. These photographs should contain all elements of the statue within the frame, with minimal background space shown. Photographs showing principal views of the statue within Euston Station forecourt. Photographs showing principal views from the statue. Further views of the two previous locations of the statue, one within the eastern end of Euston Station forecourt and one within Euston Square Gardens, to reflect the original design intentions for Euston Square Gardens. Detail photograph showing the inscription on the base of the statue. The text should be clearly legible.
Written account	The precise location of the statue as an address and in the form of a National Grid reference, as well as a short description of the location; also a note of the previous two locations of the statue, giving a National Grid reference or description of location if the grid reference is unknown. Short description of the history of the statue's location in Euston Station forecourt. This should give a brief description of the changes to the statue's location, including descriptions of the two previous locations and descriptions of the reasons why the statue was moved. A note of any statutory designations (that is, Grade II listing). The date when the record was made, the name(s) of the recorder(s) and the location of any archive material. A summary statement, summarising the statue's form, function, date and sequence of development. The names of the designer, craftsman and commissioner should be given if known. An introduction briefly setting out the circumstances in which the record was made, its objectives, methods, scope and limitations and any constraints. The introduction will explain that the record is a Level 3 record of the statue. The introduction will include acknowledgements to all those who have made a significant contribution to the making of the record, or who have given permission for copyright

	items to be reproduced. There will be a discussion of the published sources relating to the statue. There will be a historical summary. This will include an account of its history as given in published sources, an analysis of historic map evidence (map regression) and a critical evaluation of previous records of the statue, where they exist. This will be illustrated, where appropriate, with cross references to any maps, photographs and other material included in, or appended to, the report and other material consulted. Key historic maps illustrating the main changes over time will be included in the record. A detailed description of the statue's form including structure, materials and decoration (the gilded finish to the inscription), together with the evidence supporting this analysis. An analysis of the statue's past and present purpose, with the evidence for these interpretations and any evidence for the former existence of demolished structures associated with the statue. This will include, where available, information on the two previous locations of the statue, as well as the present location. An analysis of the significance of the statue. This will seek to identify both the significance of the statue and its features, its setting and the latter's contribution to its significance (how it contributes) and level of contribution to its significance (the degree to which it contributes) and can also set important aspects of the statue in a regional or national context. This will include a discussion of the statue's art historical influences and role. A conclusion setting out the findings of the assessment. Full bibliographic and other references, or a list of the sources consulted.

3.3 Recording constructional details

3.3.1 It is presumed that no historic below ground elements exist as the sculpture has been previously moved. However, any elements and details found below ground or revealed during the dismantling will be recorded as part of the recording of the asset, as set out in this Heritage Agreement Method Statement.

3.3.2 The level of recording of the constructional details of the statue should be sufficient to enable reinstatement. The recording of constructional details should also aim to identify any defects in the masonry which may require attention prior to reinstatement.

3.3.8 For the record of the statue's masonry pedestal, written descriptions will accompany any visual records, where the visual record provides incomplete data. For example, all details of jointing and fixing methods and materials will require a written description in the form of notes, hand-written annotations on photographs or drawings. This information is then to be summarised and incorporated into the final report.

3.3.3 The Contractor shall produce an addendum to the Level 3 report, which will constitute the record alongside archive material and shall include, depending on the nature of the record:

- **Copies of elevation, section and plan drawings** with corresponding reference numbers of parts of the statue, to aid in reconstruction;
- **A written description** containing the construction details as specified in Table 4;
- **Photographs of constructional details**, as specified in Table 4;
- **sketches of constructional details**, as specified in Table 4; and

- **Identification of any constructional details requiring remedial action before reassembly**, as specified in the following table.
- **Specialist sculpture conservation subcontractors records** – to be incorporated as an appendix to the final record, with principal findings and key information included in the main body of text.

Table 4 Specification for constructional details record

Type of record	Specification for record
Drawings	Where the statue is exposed beneath the ground, the level of the ground will be recorded and the exposed masonry will be drawn at a scale of 1:20, or, if appropriate, 1:10 in plan and elevation. If masonry is dismantled, then elevation, section or plan drawings (created as part of heritage asset recording requirements above) should be used to record the location of joints, ties, mason's marks and other features. Where elements (e.g. pedestal blocks) are dismantled and numbered and the numbers annotated on the drawings, to aid in reassembly, the reference numbers indicated on the drawings will be marked appropriately on the corresponding element, on an unseen face (e.g. on the bed joint face). Elevation, section or plan drawings (created as part of heritage asset recording requirements above) should be used to note the location of any detail photographs or sketches. 3D scanning may be used as part of the measured survey, to capture surface details of the bronze sculpture and granite base.
Sketches	A sketched diagram and/or photographs of any internal joint details should be created when the statue is disassembled, to aid in reconstruction. A sketch of joint types and any joint fill material (including that used in the recent re-assembly and evidence of any original, historic jointing methods and materials) will be required where sections of stone are separated during the disassembly process.
Photographs	A photograph of joint details and any concealed details (including metal ties, all jointing methods and materials, e.g. lime or other mortar, or lead in sheet or poured form) will be required where sections of stone are separated during the dismantling process. A photograph of joint width (and depth, if bedding mortar differs from pointing mortar) with a suitable scale included in the frame will be required where sections of stone are separated during the disassembly process. A photograph of the colour of mortar and aggregate, as well aggregate size, shape and type, will be required where dismantling is carried out. Colour cards and scales should be included in the frame, where appropriate. A photograph of fixing types and details should be made, particularly noting relative age and materials of fixings. A sketch may be required if constructional details are complex and not adequately illustrated by photography. A photograph should be made of any visible deterioration caused by existing fixtures, which would require remedial action prior to reinstatement. For example, if ferrous fixings have been used internally, these will require assessment by the specialist conservation subcontractor, and possible removal prior to re-erection of the statue. A photograph and accompanying sketch of the foundations should be made, to aid in reconstruction.
Written account	Written descriptions should accompany any visual records, where the visual record specified above provides incomplete data.

4 Specification for dismantling and storage

4.1 Introduction

4.1.1 The statue of Robert Stephenson will be removed from the piazza south of Euston Station during the construction of HS2 Phase One, and transported to the project's long-term store, until required for future re-erection in a new location. These works, which entail dismantling, transport and storage will take place in accordance with this method statement.

4.1.2 Detailed recording and condition assessment will be carried out before dismantling commences and during the dismantling process, to ensure information is captured, including the constructional details of the sculpture, as set out in the 'Recording' section (3) of this method statement.

4.1.9 Dismantling, including all stages of work from condition assessment and lift planning to dismantling, recording, labelling, and transport to store, will be carried out by a specialist sub-contractor, suitably skilled and experienced in the dismantling and salvage of historic monuments and sculpture, as well as their repair and conservation. The specialist sub-contractor will be selected on the basis of relevant skills and experience in the conservation of sculpture and monuments composed of metal and stone, supported by evidence of similar projects that have been carried out successfully.

4.1.3 Access to the sculpture for dismantling is very limited due to its location in a heavily used part of Euston Station forecourt. This site is managed by Network Rail Limited and liaison with them will be required to arrange access for dismantling, probably outside normal working hours, avoiding busy periods of peak time travel.

4.1.4 The methodology for dismantling and associated work is set out in the following sections:

- Initial detailed condition survey and recording, as set out in section 3 above on recording. This includes: photographic record and visual inspection (especially of inaccessible areas and undercut detail in areas sheltered from rainwater washing which are most vulnerable to corrosion); recording of condition and constructional details, that may be revealed during the dismantling, if the asset is to be dismantled, cleaning and close-range examination of all surfaces, to be carried out once the sculpture has been moved to the project's secure store. It is anticipated these details may include (but not be limited to): evidence for an armature in the core of the sculpture; evidence for any joints between component casts; surface finishes (applied or artificial patina – as opposed to the patina that develops gradually and naturally with exposure in an external environment); and remains of surface coatings that may have been applied previously);
- Cleaning, as set out below at 4.2. Some localised cleaning may be required prior to dismantling, especially at the interface between the bronze figure and the granite base, where soiling is heavier and dark. In general, however, more thorough cleaning will be carried out immediately after transport to the long-term storage facility.

- Protection measures and creation of temporary work area for dismantling, as set out in section 4.3;
- Method for dismantling and removal, set out in section 4.4 below. The sculpture is to be released, by loosening the acorn (cap) nuts which secure the bolts at the corners of the base into the supporting stone pedestal. The bronze figure sculpture will then be lifted independently of the stone base.
- Transport and storage methods, set out in section 4.5; and
- Preparation and submission of a record of the work carried out, including the condition survey, and of any constructional details revealed during dismantling, as set out in the previous section 3 'Recording' and at item 4.6. The specialist subcontractor for the work will maintain all records (drawn, written, photographic) throughout the dismantling process and will provide a final report for inclusion as an appendix to the complete, final record for the sculpture.

4.2 Cleaning

4.2.1 Cleaning is to be carried out as part of the dismantling work, to remove potentially damaging soiling deposits that may promote corrosion of the bronze sculpture whilst stored in an internal environment. Ideally the sculpture would be stored outside in a similar environment to its existing site, where particulates and other surface contaminants that can contribute to metal corrosion are washed from exposed surfaces by rain.

4.2.2 Apart from localised cleaning where necessary prior to dismantling, for example at the interface between the bronze figure and the granite pedestal, where soiling is heavier and may be impede the dismantling process, it is anticipated that cleaning will be carried out in the project's store. The severe restrictions to working on the Euston forecourt, in terms of access and working hours, mean that thorough cleaning *in situ* will probably not be possible.

4.2.3 Cleaning is to be carried out carefully, to remove surface soiling deposits without removing the natural green patina that has developed over time, is stable and poses no risk to the condition of the sculpture.[7] Care will also be taken in cleaning the granite pedestal. The face bearing the gilded inscription (east, principal, face of Block B) will not be cleaned; soiling is barely visible on this face – the gilding remains bright and legible and the granite face retains its polished finish. (Figures 14 and 15)

4.2.4 The cleaning method to be used will be determined by site trials in limited areas to identify the safest and most effective method. The following optional methods may be tried, subject

[7] For guidance on the conservation of bronze statuary see English Heritage, *Practical Building Conservation: Metals,* Ashgate Publishing Limited, 2012, pp.361-378

to assessment and condition survey by the specialist metal sculpture conservation subcontractor, and to agreement with the project's Built Heritage Advisor:

- For bronze figure sculpture – the following optional cleaning methods may be tried, assessed, and used: warm water washing accompanied by agitation of surfaces using sponges and soft natural bristle brushes; if necessary and subject to trial a dilute (c.1% in water) non-ionic neutral pH detergent may be used in areas of heavier soiling, followed by thorough rinsing to remove detergent residues, using hot water or steam applied with sponging; steam cleaning using a small unit such as the Derotor steam cleaner; a hot water pressure washer such as the Thermatech (manufactured and supplied by Restorative Techniques Ltd), used at the lowest possible settings (in pressure, water volume, and working distance of nozzle to sculpture surface)
- In all cases surfaces should be rinsed thoroughly with clean water and then checked for active corrosion (which typically appears as bright green blisters or pitting). In this case the specialist conservation subcontractor is to provide an assessment of this condition, recommendations on any remedial work to stabilise surfaces with options, where relevant.
- For the granite stonemasonry surfaces – the following optional methods may be tried, assessed, and used: Derotor steam cleaner; hot water pressure washing at low to medium pressure, accompanied by agitation with medium-stiff natural bristle brushes, if needed, using specialist equipment such as the Thermatech. As noted above the gilded inscription will not be cleaned. It is anticipated that the darker, heavier soiling on the moulded granite blocks may not be soluble, even in hot water, and that cleaning may result in reduction of soiling, rather than complete removal.
- Removal of chewing gum. Chewing gum pushed onto stone and bronze surfaces will be removed manually using small timber and plastic hand tools, prior to trials using the methods outlined in the previous paragraphs.

4.2.5 Prior to use of any cleaning method over a larger area, each method will be tried in a small inconspicuous area and the result recorded and assessed, and will require the approval of the project's Built Heritage Advisor, before proceeding.

4.3 Temporary work site and protection

4.3.1 A temporary work site will be established around the sculpture in consultation with Network Rail, the organisation responsible for managing Euston Station. The temporary work enclosure will be formed using suitable barriers (the exact type and design to be agreed with Network Rail), will be secure, and of sufficient size to accommodate the necessary access, equipment and materials required to safely dismantle the sculpture, including packing cases.

4.3.2 It is anticipated that all dismantling work will need to take place within a single working shift, outside of normal working (commuting) hours, due to access restrictions which will apply when working in the Euston Station forecourt. This includes packing the sculpture and base

into separate purpose-made storage cases, and moving the cases off the forecourt site onto a flat bed lorry for transport directly to the project's store.

4.4 Method for dismantling and removal

4.4.1 The proposed method is to release the bronze figure sculpture from its granite base, pack and transport the statue and masonry base separately, and un-pack and re-assemble them on delivery to the project's store. It is anticipated that it should be possible to loosen the acorn (cap) nuts which were installed relatively recently. It appears that threaded bolts have been fixed into the top of the stone base through holes formed (probably drilled?) through the bronze base. The bolts were then capped with the nuts which project from the bronze base, one at each of the four corners.

4.4.2 Prior to releasing the figure (unfastening the bolts) a free-standing scaffold tower will be erected adjacent to the sculpture, to provide access and lifting slings will be positioned with cushioning material, to support it. The bronze figure sculpture will then be lifted independently of the stone base, directly into its packing case.

4.4.3 Lifting the bronze figure will be done using polyester fabric slings, an aluminium A-frame gantry, and block and tackle. All lifting equipment and accessories will be of appropriate capacity for the weights to be lifted, and certified and tested. The specialist subcontractor will be required to produce a Lift Plan, setting out details of the exact equipment to be used, for approval by the Built Heritage Advisor and project engineer, prior to commencement of dismantling. The slings will be positioned to minimise stress on surfaces and to distribute the weight as evenly as possible. Protective cushioning material, composed of flexible polyethylene or similar foam, will be used at the interface between slings and the bronze and stone.

4.4.4 Following lifting of the bronze figure and placement into its purpose-made packing case (see 4.5.3 below), the granite pedestal will be lifted. An attempt will be made to separate the three blocks which form the pedestal, as far as safely and practically possible. However, as noted above it is anticipated this may not be possible due to the original construction detail, which would traditionally have entailed the use of imbedded metal fixings, often set in lead, to bridge the bed joints and stabilise the structure. The bed joint between the top two blocks (A and B in figure 4) will be investigated using diamond wire of suitable diameter and fine hand tools, to attempt to locate concealed fixings. This will be done manually without damaging the arrises at the joints.

4.4.5 Subject to what this investigation reveals, lifting equipment may be used, with slings around the perimeter moulding, to gently and gradually attempt lifting of the top stone, and check for fixings and if these are loose or secure. Fine slips and shims will be inserted in the joints, if it proves possible to lift the blocks, until there is sufficient space to insert lifting slings. However, if dismantling the pedestal block by block proves not to be possible, due to the factors outlined above – the extremely fine joints, construction details such as concealed and imbedded metal fixings within the bed joints – it will be necessary to lift the pedestal as a single unit.

4.4.6 The paving at the base of the pedestal will be lifted to permit access to the bed joint of the base block (C in figure 4) so that this can be exposed for insertion of lifting slings. This bed joint, which is currently concealed below paving level, will be opened up by hand using various diamond cutting tools, depending on the nature and thickness of this joint and of any underlying base. It is anticipated that the concealed base will consist of a modern material such as concrete or cement bedding mortar, which can be cut through using diamond drilling and disc cutting to release the base block of the pedestal (block C) and insert lifting slings.

4.4.7 Paving which matches the existing will be installed after lifting of the monument, to fill the gap left by its removal. This new paving will be bedded on and pointed in ordinary Portland cement based mortar.

4.5 Method of transport and storage

4.5.1 The component parts of the sculpture – the bronze figure and the stone pedestal – will be packed separately in purpose-made cases to be produced in advance ready for immediate transport to storage. The bronze sculpture and its pedestal will then be removed from their crates inside the store and the bronze remounted and re-fixed in position on its pedestal, where it will remain for the duration of the storage period. Due to the vulnerability of the metal to corrosion, the sculpture will not be set on the concrete floor of the store.

4.5.2 The bronze is in stable condition, free of active corrosion, and it is therefore considered best to store it in an open environment during long-term storage, not in a case where a micro-climate might develop which could promote corrosion of the metal surfaces. Timber cases produce corrosive gases in the long term which accumulate and contribute to metal surface corrosion. Cases can be manufactured from other materials which present less risk in terms of 'off-gassing' and can be sealed to exclude airborne atmospheric contaminants. However, such cases present the problem of greater fluctuations in temperature and relative humidity and the related risk of corrosion.

4.5.3 The transport crates will be designed and made specifically to fit the sculpture and pedestal by specialists in the transport and handling of finely detailed, heavy objects of this kind (heritage fabric, artifacts, sculpture). Boxes will be constructed of timber frames, with timber or marine grade plywood base, sides and cover, with cross bracing and reinforcement as required to support the weight of salvaged blocks. Boxes will be ventilated and lined with structural polystyrene, cut to fit and secure the bronze figure sculpture and pedestal in position during transit, depending on its shape, dimensions, and weight. Additional support will be provided by polyethylene foam rods and wedges. (See figure 17 below)

4.5.4 Transport crates will be designed with provision for ventilation on at least two vertical faces, to permit air movement and prevent condensation and a damp micro climate within the case during transport. Crates will be marked – to indicate the correct orientation during transport with the top labelled as 'TOP', along with the instruction 'DO NOT STACK'. (see Figure 17 below)

4.5.5 Bespoke cases made for transport of the sculpture should be retained in store, available for re-use when the sculpture needs to be moved again, either to its new site (once this has been agreed), or to a new storage location, should this eventuality arise.

4.5.6 Transport cases will be designed to be transportable by forklift or pallet truck, with bases suitable for this type of lifting equipment. Once blocks have been lifted into their intended storage crate, the crate will be closed, the tops or lids secured in place using bolts.

4.5.7 Cases will be handled and transported only by suitably qualified and experienced operators of lifting and handling equipment, including gantries and forklifts. Packed crates will be lifted onto a flatbed truck of appropriate loading capacity, following the orientation indicated by labelling, covered with waterproof tarpaulin, and secured in place using ratchet straps, in preparation for transport. The specialist sub-contractor for dismantling work will coordinate and supervise the transport of storage boxes, liaising with any suitably qualified transport provider, as required.

4.5.8 The location of the secure store will be Units 2 & 25 Victoria Industrial Estate, Victoria Road, Acton, W3 6UU. If for any unforeseen reason, the location of the secure store needs to change, Historic England and London Borough of Camden will be informed of this in writing. The process will be monitored and safe delivery of storage boxes to secure storage checked by the project's Built Heritage Advisor, to ensure the accuracy of the sub-Contractor's records.

4.5.9 The secure store and the sculpture will be inspected annually by the project's Built Heritage Advisor. Any changes in the condition of the bronze surfaces, evidence of active corrosion or other defects, will be reported with recommendations for remedial measures, where appropriate. Based on the subcontractor's report and recommendations this may include recommendations for other measures, such as periodic water cleaning of the bronze during prolonged storage to remove surface contaminants likely to promote surface corrosion, if not removed.

4.5.10 If the sculpture needs to be moved within the store or to an alternative storage location, this will only be done by conservation specialists experienced in the handling of large works of art, with the agreement of the Built Heritage Advisor.

4.6 Record of work and recommendations

4.6.1 The specialist sub-contractor's record including an account of the dismantling and other information as set out above, all photographic, drawn and written records, will form part of the permanent project archive. This documentation will also form the basis of proposals for relocation and reconstruction, which are to be submitted in a separate Method Statement document.

4.6.2 The specialist subcontractor's report is to include the following, as well as any other relevant information of historic, architectural or artistic interest that may be obtained:

a. All constructional details and other information revealed during dismantling set out in table 4 of the previous section 3 on recording;

b. All photographic, drawn and written records, including annotation of drawings and photographs produced by others in advance of dismantling

c. An account of the dismantling process, illustrated where relevant with photographs, drawings and sketches, including stages, methods used, any information relevant for the future reinstatement of the sculpture in another, yet to be determined, location.

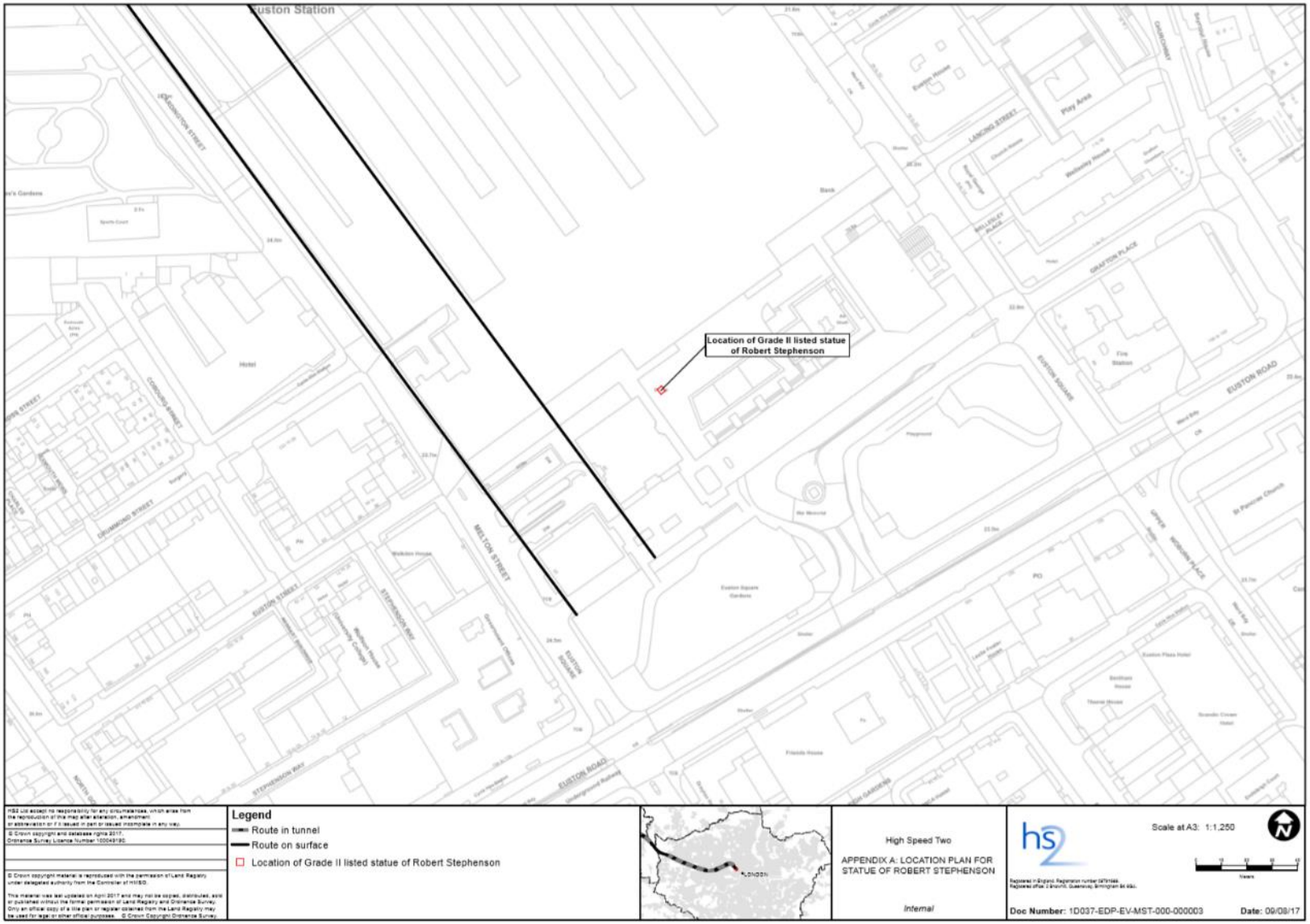
d. The record will include observations on condition and any recommendations for future remedial work based on their condition assessment, including: evidence for original and later patination, other surface finishes; any details of joints between cast sections; evidence of internal armatures; presence of surface corrosion or other defects; advisability of remedial work for any surface corrosion (e.g. removal of corrosion products, and application of surface coatings – hot / cold waxing that might protect the sculpture whilst in storage and subsequently when re-erected in its new (external) setting; any details of gilding and preparatory layers and potential for analysis of this decorative finish.

Figure 17 Transport case illustrating construction and appropriate labelling

Appendix 1

Location Plan of Robert Stephenson Sculpture in Euston Station Forecourt

Plan at 1:1250 scale.


Euston Station
Location of Grade II listed statue of Robert Stephenson
Legend
Route in tunnel
Route on surface
Location of Grade II listed statue of Robert Stephenson
High Speed Two
APPENDIX A: LOCATION PLAN FOR STATUE OF ROBERT STEPHENSON
Internal
Scale at A3: 1:1,250
Doc Number: 1D037-EDP-EV-MST-000-000003
Date: 09/08/17

Appendix 2

List Entry (National Heritage List for England)

STATUE OF ROBERT STEPHENSON IN EUSTON STATION FORECOURT

Overview

Heritage Category: Listed Building

Grade: II

List Entry Number: 1342041

Date first listed: 14-May-1974

Statutory Address: STATUE OF ROBERT STEPHENSON IN EUSTON STATION FORECOURT, EUSTON SQUARE

Location

Statutory Address: STATUE OF ROBERT STEPHENSON IN EUSTON STATION FORECOURT, EUSTON SQUARE

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

County: Greater London Authority

District: Camden (London Borough)

National Grid Reference: TQ 29638 82647

Summary

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

Legacy Record - This information may be included in the List Entry Details.

History

Legacy Record - This information may be included in the List Entry Details.

Details

CAMDEN

TQ2982NE EUSTON SQUARE 798-1/89/423 (East side) 14/05/74 Statue of Robert Stephenson in Euston Station Forecourt

GV II

Statue. 1870. By Baron Carlo Marochetti and presented to the London & North Western Railway by the Institute of Civil Engineers. Bronze statue of Robert Louis Stephenson in contemporary dress and holding partly unfurled plans. Red granite pedestal with inscription recording his dates of birth and death. HISTORICAL NOTE: the statue formerly stood between the two entrance lodges in Euston Square (qv), and with them is the only survivor of the formal 1870 layout which, with the Doric Arch, was destroyed in 1969.

Listing NGR: TQ2963882647

Legacy

The contents of this record have been generated from a legacy data system.

Legacy System number: 477261

Legacy System: LBS

Legal

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.