WP 029 D Historic Environment Works – Digbeth Canal Wall – Enabling Works North Contract

Location Specific Written Scheme of Investigation for Historic Building Recording

Document Number: 1EW04-LMJ-EV-MST-NS08-029009

Revision	Author	Checked by	Approved by	Date	Reason for revision
P01	Jon Gill	Julia Sulikowska	David Turner	5/8/2020	Issued for acceptance
C01	Jon Gill	Julia Sulikowska	David Turner	11/8/2020	Issued for acceptance

DOCUMENT OWNER: JON GILL

SECURITY CLASSIFICATION: OFFICIAL

Handling instructions: Uncontrolled when printed

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1 Executive Summary

1.1.1 This Location Specific Written Scheme of Investigation (LS-WSI) details the means by which a programme of historic building recording will be delivered and resourced for a section of retaining wall adjacent to the Digbeth Branch Canal which will be altered during the enabling works in this area for HS2. The section of canal is located immediately to the south of Curzon Street and to the north of the Grade II listed Curzon Street railway bridge, which dates from 1838 and now carries a road over the canal. The setting of the asset will also be recorded.

1.1.2 It also identifies the timescales and proposed programme for the works. This LS-WSI is based on the Project Plan for Digbeth Canal Wall (Doc No: 1EW04-LMJ_DJV-EV-PLN-NS08-029009; 17 July 2020). The Project Plan designs the works in response to specific HS2 objectives and the LS-WSI is the delivery vehicle, providing details of programme management, cost control, resourcing, health and safety and reporting.

1.1.3 Production of this LS-WSI follows the Guidance as outlined in Technical Standard – Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (Doc No: HS2-HS2-EV-STD-000-000036) and Technical Standard Specification for Historic Environment Investigations (Doc No: HS2-HS2-EV-STD-000-000035). Reference is also made to other guidance as specified in the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (Doc No: HS2-HS2-EV-STR-000-000015). The structure of this LS-WSI follows the Technical Standard – Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (Doc No: HS2-HS2-EV-STD-000-000036, section 3). Other relevant guidance is noted throughout the remainder of this document.

1.1.4 The building recording addresses a canal side retaining wall which may at least partially originate from the construction of the canal in the 1790s, which was either significantly altered or entirely reconstructed in the 1830s as part of the construction of nearby Curzon Street Station. It was also included in the HS2 Phase One Environmental Statement (WCS073) as a non-designated heritage asset.

1.1.5 The historic building recording is required to create a historical record of the section of wall prior to it being reduced in height as part of the enabling works programme for HS2 in the Birmingham area. The canal is set within a deep cutting and the scheme design drawing (No. 1EW04-LMJ_DJV-GTDGA-NS08-053020) shows that towards its southern end the wall will be reduced in height by a maximum of 3 m while most of the rest of the wall will be reduced by c.2m. The objective of the investigation is to gain information about the historic resource in order to support an assessment of its character, extent, knowledge value, preservation and potential to contribute to Specific Objectives set out in the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (Doc No: HS2-HS2-EV-STR-000-000015) (see

below). The outcome of the investigation may be used to inform future decision-making on the requirement for further investigation at the Site, and a strategy for achieving it.

1.1.6 Specifically, and as outlined in the Project Plan for Digbeth Canal Wall, the historic building recording programme aims to assess and record the character, extent and significance of the structure prior to its demolition. The recording programme aims to contribute to the following specific HERDS Knowledge Creation objectives, as outlined in the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (Doc No: HS2-HS2-EV-STR-000-000015), section 6.6:

- KC43: Investigate the link between the development of the railways and broader changes in the historic landscape, such as urban settlement expansion and the decline of the canal network.

1.1.7 The way the historic building recording survey aims to contribute to the aforementioned HERDS is outlined in the Project Plan for Digbeth Canal Wall (Doc No: 1EW04-LMJ_DJV-EV-PLN-NS08_029009; 17 July 2020).

1.1.8 COPA has also recently undertaken several other building recording projects in this area in relation to HS2. These include two public houses, The Fox and Grapes (Doc no: 1EW04-LMJ-EV-REP-NS08-029001) and the Eagle and Tun (report forthcoming), and a nearby screen wall along the southern side of Curzon Street, to the north of the railway line into Birmingham New Street station (Doc No: 1EW04-LMJ-EV-REP-NS08-029014).

2 Site Location, Extent and Condition

2.1.1 ***Location:*** The site comprises a section of retaining wall on the west side of the Digbeth Branch Canal, immediately south of Curzon Street and to the north of a wide railway bridge deck which carried the two original 1830s railway lines over the canal and towards the Curzon Street terminus, c.300 m to the west. This bridge is listed Grade II and its full name in the list entry is The 1838 section of railway bridge into Curzon Street Station over Digbeth Branch Canal.

2.1.2 A public footpath (following the canal towpath) extends along the east side of the canal, continuing beneath the railway bridge to the south and beneath the road bridge to the north. This section of canal is within the Warwick Bar Conservation Area and it also comprises the locally listed Ashtead Bottom Lock. This is one of a series of locks on the Digbeth Branch Canal.

2.1.3 For much of the 19th and 20th centuries this would have been a heavily industrialised area but the canal side structures have been largely demolished and the retaining wall is now substantially obscured by vegetation, particularly towards either end. The central section of the wall is relatively clear and here it can be seen that it is constructed from red and blue bricks. The wall is c.92 m long.

2.1.4 ***History:*** The Digbeth Branch Canal is a short canal which was constructed in the 1790s during the period known as the 'Canal Mania' and links the Birmingham and Fazeley Canal with the Grand Union Canal. The canal wall which forms the main focus of the current project was then either significantly altered or entirely reconstructed in the 1830s as part of the construction of the nearby Curzon Street Station

2.1.5 The earliest available map is the Ordnance Survey drawing from 1814 which shows the areas immediately adjacent to the canal are undeveloped and shown apparently largely as fields. This map also pre-dates the construction of the railway in the 1830s but Curzon Street is shown crossing over it.

2.1.6 Curzon Street Station was opened in 1838 forming the terminus for both the London and Birmingham Railway and the Grand Junction Railway. The section of wall in the current project would have formed the north-eastern boundary of the station site. Richard Foster's 1838 map shows the section of canal between Curzon Street and the new railway bridge with a lock and apparently a footbridge over it. A short north-to-south sidings line is shown within the station site immediately west of the canal wall. This line is still shown on the 1887 OS map together with a canal pumping station nearby and a wharf to the east.

2.1.7 Subsequent OS maps suggest that the layout of the area to the west of the wall did not change greatly until the second half of the 20th century although various small structures were demolished on the east side of the canal prior to the 1937-8 map.

3 Overview of Project Plan

3.1.1 This LS-WSI addresses the Project Plan for the Digbeth Branch Canal (Doc No: 1EW04-LMJ_DJV-EV-PLN-NS08-029009; 17 July 2020; Appendix B). As outlined in section 4, the Project Plan defines the scope of the historic building recording, outlines the aims of the surveys and how they will contribute to the specific objectives laid out in the GWSI: HERDS. It sets out in detail the methodology for the historic building recording and describes the proposed deliverables and reporting mechanisms. It should be referred to for detailed information on these matters.

3.1.2 A walkover survey of the site has not been undertaken prior to the production of this LS-WSI although as referred to above many photographs are available online (Google Maps, 2020) and current photographs of the wall were provided by Nick Slack of LM on 20 July 2020. COPA has also recently undertaken other recording projects nearby and are familiar with the area.

4 Scheme Design Elements

4.1.1 The historic building recording survey for the Digbeth Canal will be undertaken in accordance with specific guidance produced by HS2, namely the Technical Standard for the Recording of the

Setting of Heritage Assets (HS2-HS2-EV-STD-000-000037), the Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) and the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS; HS2-HS2-EV-STR-000-000015).

4.1.2 The historic building recording survey of the Digbeth Canal Wall will comprise a Level 2 survey, as agreed within the Project Plan and defined in Historic England's 2016 *Understanding Historic Buildings: A Guide to Good Recording Practice.* This will provide a sufficient level of recording to assess the character of the wall and identify evidence relating to its alteration and use. It will principally comprise a photographic and written record of the wall including the different built elements of the site and its immediate setting, accompanied by sketch plans. It will also enable an identification of any historically and architecturally significant features and will be supported by a detailed level of archive research and map-regression.

4.1.3 The applicable methodologies and standards for these activities will be as follows:

- Project Plan for Digbeth Canal (No: 1EW04-LMJ_DJV-EV-PLN-NS08_029009; 17 July 2020);
- Technical Standard for the Recording of the Setting of Heritage assets (HS2-EV-STD-000-000037);
- Technical Standard: Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035, Section 3);
- Historic England (2016): Understanding Historic Buildings: A Guide to Good Recording Practice; and
- All other Technical Standards as outlined in Technical Standard: Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035, Section 1.2).

4.1.4 Where relevant the historic building recording survey will also reflect other best practice guidance, e.g.:

- Archaeology Data Service/ Digital Antiquity guides to good practice.
- Chartered Institute for Archaeologists (2014) Code of Conduct.
- Chartered Institute for Archaeologists (2014) Standard and Guidance for the Recording of Standing Buildings or Structures.
- Historic England (2006) Management of Research Projects in the Historic Environment.

5 Programme

5.1.1 The proposed programme for undertaking the historic building survey of the Digbeth Branch Canal is given in the table below:

Table 1 Digbeth Canal Programme

Activity	Start date
Commencement of on-line archive Research	August 2020
Commencement of Research at archives	TBC (Archives closed at present)
Commencement of initial on-site survey works (photography, written survey) prior to removal of any vegetation.	w/c 10 August 2020
Completion of interim report	Within 1 week of completion of initial on-site works
Completion of on-site works, following some vegetation clearance	TBC
Completion of Final Report	September/Oct 2020 (within 6 weeks of completion of all works)
Archiving	November/December 2020

5.1.2 Due to the ongoing Covid-19 pandemic, it may be necessary to amend the proposed programme at short notice, to ensure the works are compliant with the government advice and any restrictions imposed. If any of the team members need to self-isolate, substitute staff of comparable experience will be deployed whenever possible. Due to the closure of local archives, this element will be postponed, but resources available online will be consulted prior to site work and the research at record offices will follow later (see 6.2 below).

6 Methodology

6.1.1 The Level 2 historic building recording survey will be conducted according to the detailed methodology laid out in the Project Plan for Digbeth Canal (No: 1EW04-LMJ_DJV-EV-PLN-NS08-029009; 17 July 2020). This document covers the methodology for all parts of the investigation, including archive research, the on-site historic building recording survey and the on-site setting recording. The methodology is outlined within Sections 4.3 – 4.6 of the Project Plan.

6.1.2 The following sections address wider issues of methodology and project delivery.

6.2 Archive Research

6.2.1 Prior to and during the on-site historic building recording survey, a number of archive sources will be consulted relating to the Digbeth Canal and the retaining wall. The type of documents to be consulted will include historic maps, photographs and contemporary publications. A detailed map regression will be undertaken using publicly accessible Ordnance Survey maps from the First edition to the present day. This will allow for the identification of any major changes to the structure and its setting. As referred to above the setting of the wall has been substantially altered and this will be highlighted through the analysis of historic maps. Desk-based and archival research will principally be undertaken at the Birmingham City Archives.

6.2.2 Birmingham City Archives is currently closed due to current restrictions resulting from the Covid-19 pandemic. Therefore on-line sources will be consulted prior to the start of the investigation and then further archival sources identified as being relevant to this assessment will be viewed and consulted in person at the Record Office when it re-opens.

6.3 Details of Site Access and general approach to project

6.3.1 All the recording work will be undertaken remotely from the public footpath on the east side of the canal (the towpath; c.15-20 m from the wall itself). The staff undertaking the recording will use the nearby HS2 compound accessible from Fazeley Street.

6.3.2 The on-site recording is to be undertaken in two stages, partially due to the vegetation which covers much of the wall but also due to the fact that the dismantling works are also due to be undertaken in two stages. The initial phase of recording will be prior to the removal of any vegetation and therefore it will largely focus on the northern section of the wall (c.50m in length, from Curzon Street to the lock). Large parts of this section are relatively visible, although there is some vegetation cover (especially in the north and centre) which would cause some limitations.

6.3.3 Further recording will then be undertaken on the remainder of the wall to the south, once vegetation is removed and immediately prior to the dismantling works. An interim report will be produced following the initial phase of recording, with the final report following completion of all on site works.

6.4 Photographic Record

6.4.1 The photographic record for the site will be undertaken in colour digital using a DSLR camera to a minimum 10 megapixel resolution in both JPEG and RAW format. A tripod will be used as appropriate, particularly due to the need to take photographs from a distance. Also due to the need to take photographs remotely it will not be possible to use a ranging rod or photographic scale against the wall.

6.4.2 General views of the wall will be taken which will comprise both oblique views and head-on elevation views (as far as is possible within the constraints of the site and the limitations of vegetation cover). This will be accompanied by a detailed photographic record of specific features pertinent to the historic record.

6.4.3 A running register of photographs will be made on site, which will be included in the final report as an appendix.

6.5 Written Record

6.5.1 The photographic record will be accompanied by a written record of the wall using appropriate pro forma recording sheets. Comment will be made on condition, construction and materials, architectural style and character, evidence for phasing, modern interventions/adaptations and anything else pertinent to the historic record. Any limitations (i.e. due to vegetation cover) will also be noted.

6.6 Drawn Record

6.6.1 The drawn survey will comprise sketched elevations highlighting features such as structural breaks, differences in construction, evidence of former features or alterations and secondary bracing.

6.6.2 Due to the fact that the survey will have to be undertaken remotely the drawn survey will not be metrically accurate although it will be roughly measured.

6.7 Setting recording

6.7.1 The current investigation will include a programme of setting recording at a *simple* level, in accordance with the Technical Standard for the Recording of the Setting of Designated Heritage Assets (HS2-HS2-EV-STD-000-000037). It will be undertaken in accordance with the specification for setting recording set out within the Project Plan. This recording will aim to place the structure within its wider urban landscape context, identifying the historic relationship between the wall, the canal, the lock and the tunnels to north and south. It will principally be photographic in nature but it will also include written analysis and map analysis.

6.8 Reporting

6.8.1 An interim report will be produced within five working days of the completion of the initial stage of fieldwork (the recording of the northern section of the wall). The report will very briefly summarise the findings of the building recording.

6.8.2 Upon completion of all the on-site recording works a single historic building survey report will be produced. The report will include a historical background of the site which will be expanded from

the content within the Project Plan, a description of the structures, conclusions regarding its development and alteration and accompanying plans and photographs.

6.8.3 The report will include:

- Executive Summary;
- Introduction;
- Summary of project background (including Specific Objectives addressed);
- Description and illustration of the site location, including of its setting;
- An overview of previous work relevant to the recording;
- The topography of the Site;
- Specific Objectives and aims;
- Methodology for site work, reporting and recording of setting;
- Results and Observations including a quantitative report with accompanying illustrations;
- Assessment and interpretation of results against expectations and Specific Objectives;
- Consideration of the results and conclusions within the wider context;
- Evaluation of employed methodology and obtained results (confidence rating);
- Publication and dissemination proposals;
- Archive deposition;
- Bibliography;
- Appendices – including illustrations, location plans with scale and grid co-ordinates and a photographic record of the buildings and their setting and an OASIS form.

6.8.4 As a minimum the report will include the following figures:

- General location plan;
- Engineering design;
- Cartographic, pictorial and image data;
- Sketched drawings of the wall;

6.9 Dissemination and Archiving

6.9.1 In accordance with the Project Plan digital and hard copies of the report will be submitted to Birmingham Historic Environment Record as the appropriate local archive. The project archive will be deposited according to the Historic Environment Physical Archiving Strategy (HS2-HS2-EV-STR-000-000018) and the Historic Environment Physical Archiving Procedure (HS2-HS2-STD-000-000039). An Online Access to the Index of Archaeological Investigations (OASIS) record will be completed and submitted to the Historic Environment Record and the Archaeological Data Service.

6.10 Main Work Packages

6.10.1 The historic building recording survey for the site will commence in August 2020. Due to the ongoing Covid-19 pandemic, changes may be necessary to ensure the works are compliant with the government advice and any restrictions imposed.

7 Delivery Interfaces

7.1.1 The Archaeological Contractor will have direct communication either with the Employer or with the Project Manager appointed by the Employer. The historic building recording survey will be overseen and quality-assured by the Archaeological Contractor's senior management and will be project managed by the Archaeological Contractor's Project Manager. The historic building survey will be supervised by a suitably qualified and experienced Project Officer appointed by the Archaeological Contractor. All parties will follow the Employer's protocols for Intra- and Inter-project communication.

8 Health, Safety and Environmental

8.1.1 The Archaeological Contractor will undertake the works in accordance with the Employer's route wide health and safety requirements, and if applicable, the Contractor's health and safety requirements for specific locations.

8.1.2 The Archaeological Contractor will be solely responsible for Health and Safety during the historic building recording survey, and a Risk Assessment and Method Statement (RAMS) for the historic building recording survey has been produced (see Appendix A). All work will also be undertaken in accordance with the Archaeological Contractor's Site Safety Policy and Procedures (COPA 2018). Details of the Contractor's design, programme and Health and Safety policy has been received.

8.1.3 All site staff will be fully inducted and will read and sign the RAMS before commencing work on site.

8.2 Site Access

8.2.1 Specific risks have been identified with regard to this project, particularly the fact that the recording will be undertaken within the vicinity of the canal, albeit from a public footpath (see the RAMS, Appendix A). As a result at least two people will be on site at all times and working alongside each other.

8.3 Site Safety and security

8.3.1 The site is situated in an urban, city-centre site close to numerous shops, offices, businesses and residential areas. The recording will be undertaken from a public footpath on the east side of the canal and outside the land owned by HS2.

8.4 Local community, general public, neighbouring properties and businesses

8.4.1 It is not anticipated that the historic buildings survey will cause any disruption to the local community or neighbouring businesses.

8.4.2 Health and safety procedures will be in place to minimise the risk to any member of the public during the historic building recording survey (see the RAMS, Appendix A).

9 Information Management

9.1.1 GIS deliverables will be provided in accordance with the Employer's Cultural Heritage GIS Specification (Doc No: HS2-HS2-GI-SPE-000-000004). CAD files will be GIS compatible and follow standards set out in the same Specification. Figures may be produced using CAD, but final deliverables must be supplied in GIS format.

9.1.2 Mapping and spatial data deliverables will conform to the Employer's Cultural Heritage GIS Standard (Doc No: HS2-HS2-GI-STD-000-000010) and other associated referenced documents.

9.1.3 The Employer's standard template for reporting as set out in the Technical Standard: Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035, Section 4.4) will be followed.

10 Site Monitoring and Engagement

10.1.1 The Archaeological Contractor will provide weekly written progress reports to the Employer or the Employer's Project Manager.

10.1.2 If appropriate, the Employer's Project Manager will arrange and convene monitoring site visits by external consultees, as appropriate. These may include:

- Historic England;
- County Council Archaeologist at Birmingham City Council;
- Relevant local interest groups; and
- Relevant and acknowledge specialists in such fields as historic building recording survey.

10.1.3 Communication and engagement with third parties will use the Employer's communication protocols set out in the Employer's Community Relations Strategy.

11 Quality Assurance Process

11.1.1 The three parent companies of COPA all have Chartered Institute for Archaeologists (CIfA) accreditation as a Registered Organisation and their supervisory staff have an appropriate and relevant level of demonstrable experience for the specific task in questions, i.e. full or associate members of the CIfA, or an equivalent demonstrable professional standing.

11.1.2 All project staff employed by the Archaeological Contractor will be suitably qualified, experienced and trained to undertake the work in hand.

11.1.3 Fieldwork will be monitored by the Archaeological Contractor's Project Manager responsible for the project, under the general supervision of the Archaeological Contractor's senior management.

11.1.4 The historic building recording survey report will be checked and reviewed by a suitably qualified and experienced Project Manager or a member of the Senior Management Team before it is issued to the Employer. On receipt of comments, the final report will be checked and reviewed again prior to its re-issue.

12 Fieldwork Sign-off Sheet

Historic Environment Fieldwork Sign-off Sheet			
Work Package Reference			
Historic Environment Investigation Type			
Contractor			
Fieldwork Conducted by (site Director)		Dates	
Summary of Results			
Document References			
1.			
2.			
3.			
4.			

Compiled by	Name	Date	Signature
Checked by	Name	Date	Signature
Approved by	Name	Date	Signature

13 References and Glossary of Terms

13.1.1 The following terms have been used in this report:

- Archaeological Contractor – the organisation undertaking the historic building recording survey
- Contractor- the early works contractor (EWC) or main works construction contractor (MWCC) responsible for the location within which historic environment works are undertaken. The historic environment/archaeological contractor is part of the Contractor's supply chain.
- Employer – the body responsible for the terms and conditions, policies, procedures and payments.
- Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) – the framework for delivering all historic environment investigations undertaken as part of the HS2 Phase 1 programme.
- Location – a specific HS2 worksite or group of worksites that are being addressed as a combined historic environment investigation programme of assessment, evaluation and investigation.
- Project Manager – acts as administrator of the contract, handling certification, compensation events etc, with an obligation to act fairly and impartially as an agent of the Employer.
- Project Plans – specification document for each specific package of activity (e.g. a survey, desk based assessment, excavation, recording project). The plans would respond to the Specific Objectives set out in the GWSI: HERDS and be delivered within an agreed budget.
- Works – the specific historic environment assessment, evaluation or investigation works at each location.

13.1.2 The following documents are referred to:

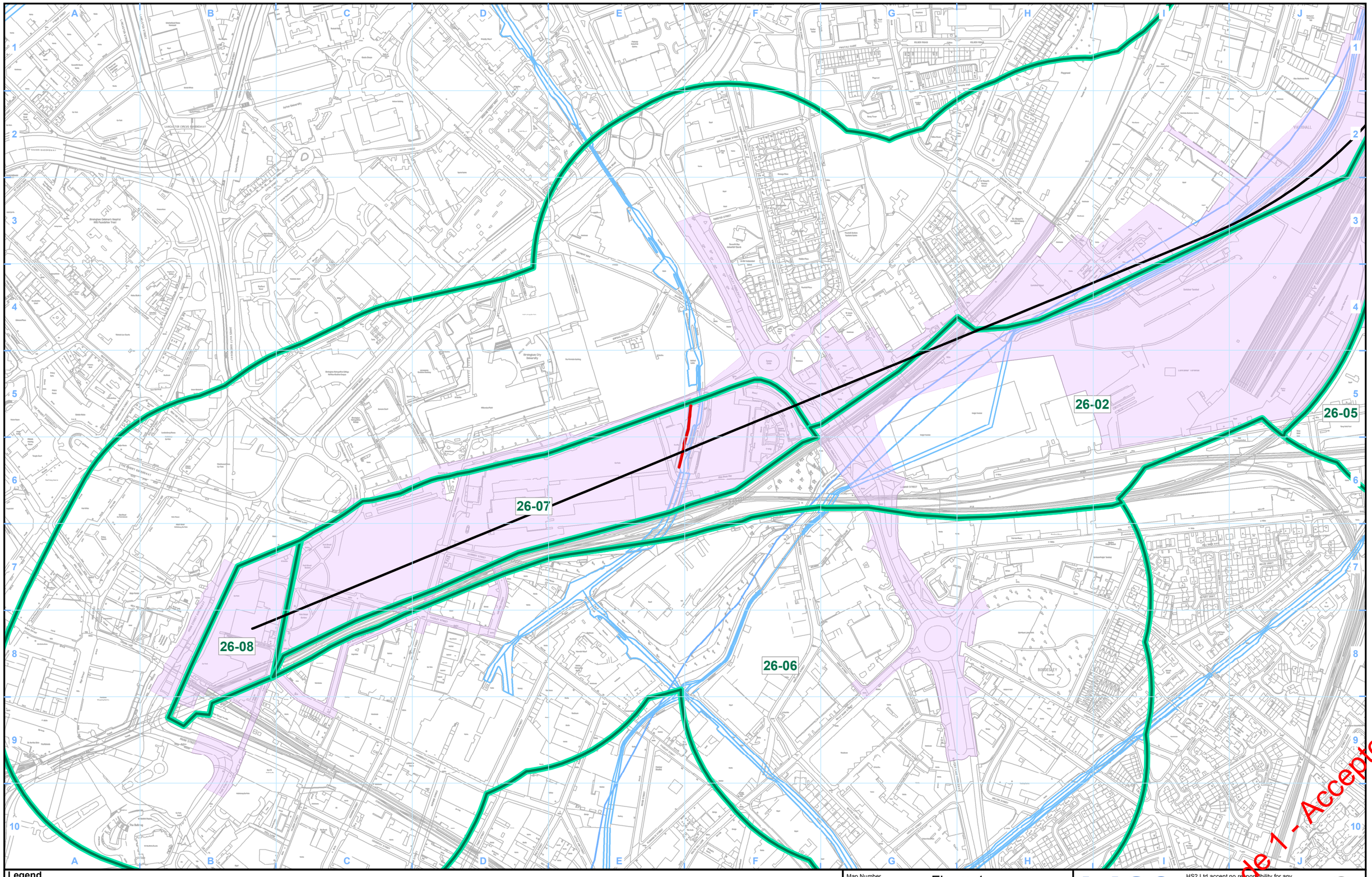
Title	Reference
Cultural Heritage GIS Specification	HS2-HS2-GI-SPE-000-000004
Cultural Heritage GIS Standard	HS2-HS2-GI-STF-000-00010
Technical Standard – Temporary Works	HS2-HS2-CV-STD-000-000005

Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy	HS2-HS2-EV-STD-000-000015
Technical Standard – Specification for historic environment investigations	HS2-HS2-EV-STD-000-000035
Technical Standard – Historic Environment Physical Active Procedure	HS2-HS2-EV-STD-000-00039
Technical Standard: Historic Environment Digital Data Management and Archiving Procedure.	HS2-HS2-EV-STD-000-000040
HS2 Technical Standard: Specification for Project Plans and Location Specific Written Scheme of Investigations	HS2-HS2-EV-STD-000-000036
Technical Standard for the Recording of the Setting of Heritage assets	HS2-EV-STD-000-000037
Heritage Consents Strategy	HS2-HS2-EV-STR-000-000008
Project Plan for Digbeth Canal, July 2020	EW04-LMJ_DJV-EV-PLN-NS08_029009; 17 July 2020;
Contractor's Environmental Management Plan	IMS 15.3.1
Contractor's or Employers Community Relations Strategy	IMS 11.1.1
Employer's protocols for Intra- and Inter- project Communication	IMS 12.1.1
Contractor's Health and Safety Policy	IMS 15.1.1
HS2 Phase 1 Enabling Works Site Safety Policy and Procedures COPA 2018	COPA 2018
Historic England 2016 Understanding Historic Buildings: A Guide to Good Recording Practice.	Historic England 2016
Chartered Institute for Archaeologists 2014 Code of Conduct	CIfA 2014
Chartered Institute for Archaeologists 2014 Standard and Guidance for the Recording of Standing Buildings or Structures	CIfA 2014
Historic England 2015 Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide	Historic England 2015
Historic England 2015 Management of research projects in the historic environment (and associated guides and planning notes)	Historic England 2015

14 Figures

Table 2 Figures

Figure Title	Drawing no.
Figure 1 Digbeth Canal Location Plan	TBC
Figure 2 Digbeth Canal site Outline	TBC



Legend

- Route
- Site
- Consolidated Construction Boundary
- Local Authority Boundary
- Watercourse
- Archaeological Character Sub Zones

Map Number: Figure 1

Map Name: Digbeth Canal Wall Location Plan

Community Forum Area 26

Washwood Heath to Curzon Street

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: 1EW04-LMJ-EV-MST-NS08-029009

Date: 04/08/20

Legend

- Site
- Building Outlines

Map Number: Figure 2

Map Name: Digbeth Canal Wall Building Outline

Community Forum Area 26

Washwood Heath to Curzon Street

Scale at A3: 1:500

Metres: 0, 5, 10, 15, 20

Doc Number: 1EW04-LMJ-EV-MST-NS08-029009

Date: 04/08/20

15 Appendix

15.1 Appendix A - RAMS

RISK ASSESSMENT / METHOD STATEMENT / TASK SHEET APPROVAL or ACCEPTANCE

Project:	**EWC North**		
Section:	**N4**		
Work Element:	**North Digbeth Canal Wall, Birmingham HBR**		
Reference:	1EW04-LMJ-EV-MST-NS08-029009	**Date:**	**11/08/2020**
Originator:			
Company:	Cotswold Archaeology	**Name:**	John Gill

Rev.	Date:	Reviewed by:	Comments:	Date of Return:	Returned To:
1	11/08/2020	NS	Accepted	11/08/2020	JS

'I am reasonably satisfied, to the best of my knowledge, the proposals in the above method statement are adequate'

1. METHOD STATEMENT APPROVED (LM MS) or ACCEPTED (SUBCONTRACTOR MS) FOR USE:			
Signed:		**On Behalf of:**	**LM**
Name:	**Nick Slack**	**Date:**	**11/08/2020**
2. ACCEPTED BY TEMPORARY WORKS COORDINATOR: AS PC (OR SIGNED OFF AS NOT APPLICABLE)			
Signed:		**As PC:**	
Name:	**N/A**	**Date:**	
3. ACCEPTED BY APPOINTED PERSON FOR LIFTING: AS PRINCIPAL CONTRACTOR			
Signed:		**As PC:**	
Name:	**N/A**	**Date:**	
4. METHOD STATEMENT ACCEPTED BY LM PACKAGE / RESPONSIBLE MANAGER:			
Signed:		**As PC:**	**LM**
Name:	**Nick Slack**	**Date:**	**11/08/2020**

IMPLEMENTATION OF METHOD STATEMENT:

I have witnessed the work within 24 hrs of its commencement and am reasonably satisfied, to the best of my knowledge, that the proposals in the above method statement are being implemented.

Signed:		**On Behalf of:**	**LM**
Name:	**Nick Slack**	**Date:**	

Code 1 - Accepted

GENERAL METHOD STATEMENT CHECKLIST

Done (√), Not Done (x), or (N/A)

GENERAL DOCUMENT DETAILS	**Identifier Pages** Method Statement No., Status, Revision/Version & Title	❑
	Table of Contents	❑
	Client	❑
	Principal Contractor	❑
	Designers / Engineers	❑
	Principal Designer	❑
	Project Name & Address	❑
	Name of Person Writing MS	❑
1. INTRODUCTION	Brief Description of Project.	❑
	Section of Works/Reference Element/Task	❑
	Client Details.	❑
	Subcontractor Details.	❑
	Supplier Details	❑
2. SCOPE OF WORKS	Description of Works and what it is covered by the MS.	❑
	Specific Location	❑
	Reference List incl. Drgs, ITPs, Other relevant MS, H&S Plan, Fire Plan)	❑
3 SEQUENCE & METHOD	Sequence of works	❑
	Method of Works (Detailed description of all activities)	❑
	Consider: Temporary Works, Services (Existing, Temporary & Permanent)	❑
	Reference to / inclusion of associated Lifting Plans or Method Statements	❑
	Hold points including permits, inspections and tests	❑
	Public interface	❑
	Communication	❑
4 PROGRAMME	Start / Finish Dates.	❑
	Interfaces	❑
	Working Hours / Night Work	❑
	Access	❑
5 COMPETENCY OF THOSE INVOLVED	Induction	❑
	Key appointments; eg TWC, Appointed Person, Fire Marshall	❑
	Training	❑
	Qualifications	❑
6 TECHNICAL COMPLIANCE	Specification requirements	❑
	Method to achieve compliance	❑
	Inspection & Test Plan requirements	❑
7. RESOURCES & EQUIPMENT	Type of plant/ suitability/ accessibility to work area	❑
	Inspection of plant and certification	❑
	Labour	❑
	Materials	❑

8. EMERGENCY PROCEDURES	Relevant Project Emergency Procedures & Fire Plan	❑
	Detail of Emergency Procedures & Evacuation for tasks described in MS	❑
	List of numbers for First Aid Personnel & Emergency Contact	❑
	Spillage and pollution prevention, spill kits etc	❑
9 SUPERVISION	Organisation	❑
	Key personnel	❑
	Security arrangements	❑
10 MONITORING OF WORK	Health and Safety inspections	❑
	Temporary works inspections	❑
	Inspection and Tests	❑
11 QUALITY	Recognises working documents/drawings are regularly checked for validity	❑
	Confirms equipment to be checked for operation/calibration prior to use	❑
	Details adequate material handling, storage and traceability	❑
	States location of the agreed sample/benchmark/mock up and explains how this is demonstrated to operatives	❑
	Details progressive checks during works	❑
	Protection of completed works detailed	❑
	Details non-conformance control & action	❑
	Operative briefing sheet to be used clearly identifies MS title/reference/revision	❑
12 ENVIRONMENTAL	Storage of fuels and chemicals	❑
	Noise, dust and vibration	❑
	Protection of water courses and drains	❑
	Protection of wildlife (Biodiversity)	❑
	Waste including COSHH materials (Issue, segregation, disposal etc)	❑
13 APPROVAL, REVIEW AND BRIEFING	Review by appropriate staff; technical, H&S, Environmental	❑
	Approver	❑
	Tool box talks, task sheet briefings	❑
	Daily Activity Briefings	❑
14 APPENDICES	Risk assessments – hazards and control measures	❑
	COSHH assessments and controls	❑
	Additional or enhanced PPE	❑
	Temporary works drawings	❑
	References to Lifting Plan, Lifting Method Statement (as applicable)	❑
	Reference to associated Documents such as Visual Task Sheets, Task sheets, CoSHH Assessments etc	❑
	Reference to other supporting documents or data sheets	❑

COPA

Method Statement/Risk Assessment

Method Statement Title	**Digbeth Canal Wall Historic Building Recording**
Contract Title	**WP 029 D Historic Environment Works – Digbeth Canal Wall – Enabling works contract**
Contractor	**COPA**
MS No.	**DCW_HBR-MS01**

1.0 Scope & Objectives of Works

Full description of the scope of works to be outlined, including a basic programme of works

Scope

The historic building recording is required to create a historical record of a section of canal wall prior to commencement of its partial dismantling. The top of the southern end of the wall is to be lowered by c.3m while the top of the rest is to be lowered by c.2m. The objective of the investigation is to gain information about the historical resource in order to support an assessment of its character, extent, knowledge value, preservation and potential to contribute to Specific Objectives set out in the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (Doc No:HS2-HS2-EV-STR-000-00015).

The works will be in accordance with the Location Specific Written Scheme of Investigation for historic building recording survey (Doc. No.: 1EW04-LMJ-EV-MST-NS08-029009). Monitoring of the project will be undertaken by LMJV to ensure compliance with the Project Plan (Doc No: 1EW04-LMJ_DJV-EV-PLN-NS08_029009; 17 July 2020). All works will be carried out in accordance with this Risk Assessment/Method Statement. The Site Emergency Plan, detailing muster point(s), procedures, emergency contact details and directions to the nearest A&E, will be provided to the staff undertaking the works.

All works will be supervised by Jon Gill (COPA).

2.0 Location of Works

The building recording addresses a section of retaining wall on the west side of the Digbeth Branch Canal which will be altered during the enabling works for HS2.The section of canal is located immediately to the south of Curzon Street and to the north of the Grade II listed Curzon Street railway bridge which carries the railway lines over the canal. There is a public footpath on the east side of the canal (opposite the wall and outside HS2 land) and all the recording will be undertaken from here.

The canal was constructed in the 1790s and the retaining wall may also date from this phase.

The wall was included in the HS2 Phase One Environmental Statement (WCS073) as a non-designated heritage asset.

The national grid reference for the northern end of this section of wall is SP 08129 87209 while that of the southern end is SP 08111 87113.

3.0 Task Methodology

Pre- Commencement

All COPA staff will attend a Site-Specific induction, including Site Rules, Emergency Arrangements and in addition will be briefed on Site Specific Risk Assessments, Method Statements and Procedures.

The fieldwork will be undertaken in two phases, each one of no more than one day duration. The initial recording will be prior to the removal of any vegetation and will particularly focus on the northern half of the wall which is to be lowered initially. The second phase will be after the partial dismantling of the northern section of wall and the removal of some vegetation from the rest of the wall. A meeting on site with LM Construction Manager is to be undertaken ahead of the initial recording to clearly identify the section that will be affected in the first instance and ensure it is sufficiently clear of vegetation to facilitate recording.

The recording work will all be undertaken remotely from the footpath on the east side of the canal, outside HS2 land. This footpath remains open to the public. The footpath is wide and the recording will be undertaken at least 2m away from the canal edge.

Although the recording will be undertaken from publicly accessible areas it will be arranged through the LM Construction Manager for this area. Barry Flutter, the LM CM for the area will be notified at least a day in advance of the work. The team is aware full PPE will be required.

The team will use the facilities at the HS2 compound on Fazeley Street which is a five minute walk from the site. The team will not use local facilities (i.e. local shops or supermarkets).

All works will be supervised by Jon Gill (COPA).

COPA staff will be on site between 08.00 and 16.00.

Proposed timetable

Activity	**Date/duration**
Induction (at LMJV)	The team undertaking the work has already had the general LMJV induction.
Initial on-site works (photographic, drawn and written survey) of northern part of wall.	August 2020 (1 day, w/c 10 Aug - tbc)
Archival research	TBC (Archives closed at present)
Completion of interim report	Within 5 days of completion of initial on-site work
Second phase of on-site recording (after lowering of northern section of wall)	TBC (depending on vegetation clearance)
Final reporting	TBC
Archiving	TBC

Task

Archive Research
Birmingham City Archives is currently closed due to current restrictions associated with coronavirus outbreak lockdown measures. The archival research will be undertaken once archives and record offices have been reopened. A number of archive sources will be consulted relating to the design, construction, use and alteration of the wall over time. Documents to be consulted may include architectural designs, historic maps, photographs, and contemporary publications including newspaper reports. A detailed map regression will be undertaken using publicly accessible Ordnance Survey maps from the First edition to the present day.

Photographic Record
The photographic record for the site will be undertaken in colour digital using a digital SLR to a minimum 10 megapixel resolution in both JPEG and RAW format. A tripod will be used in most photographs, particularly due to the requirement to take photographs from a distance. As the recording will be undertaken remotely it will not be possible to place a ranging pole against the wall.

General views of the wall will be taken including both oblique views and head on elevation views (as is possible within the constraints of the site and level of vegetation). This will be accompanied by a detailed photographic record of specific elements such as structural breaks, secondary braces, areas of repair and changes in construction.

A photographic record will also be taken of the setting including the canal, the lock and the bridges to the north and south.

A running register of photographs will be made on site, which will be included in the final report as an appendix.

Written Record
The photographic record will be accompanied by a written record of the wall using pro forma recording sheets. Comment will be made on condition, construction and materials, architectural style and character, evidence for phasing, evidence for past industrial practices, modern interventions and anything else pertinent to the historic record.

Drawn Record
The drawn survey will comprise sketched elevations highlighting features such as structural breaks, differences in construction, evidence of former features or alterations and secondary bracing.

Due to the fact that the survey will have to be undertaken remotely the drawn survey will not be metrically accurate although it will be roughly measured.

Reporting
An interim report will be produced within five working days of the completion of initial stage of fieldwork (the recording of the northern section of the wall). The report will very briefly summarise findings of the building recording. Following completion of all the site works a full report will be prepared detailing the full recording. This will include a historical background of the site which will be expanded from the content within the Project Plan, a description of the structures, conclusions regarding its construction and accompanying plans and photographs.

The report will include:

- Introduction;
- Summary of project background (including Specific Objectives addressed);
- Description and illustration of the structure including its setting;
- An overview of previous work relevant to the building recording;
- The topography of the Site;
- Specific Objectives and aims;
- Methodology for site work, reporting and recording of setting;
- Results and Observations including a quantitative report with accompanying illustrations;
- Assessment and interpretation of results against expectations and Specific Objectives;
- Consideration of the results and conclusions within the wider context;

- Evaluation of employed methodology and obtained results (confidence rating);
- Publication and dissemination proposals;
- Archive deposition;
- Bibliography;
- Appendices – including illustrations, location plans with scale and grid co-ordinates and a photographic record of the buildings and their setting.

4.0 Parties Affected by Works

Client's Employees	**Yes**	√	**No**		**Employees**	**Yes**	√	**No**	
Visitors	**Yes**	√	**No**		**Contractors**	**Yes**	√	**No**	
Members of the Public	**Yes**	√	**No**			**Yes**		**No**	

5.0 Specific Hazards

Principal hazards are:

- Close proximity to canal – recording work to be undertaken from canal footpath
- Manual handling – carrying equipment to and from site and the operation
- Movement around site – uneven terrain presenting a risk of trips and falls
- Contamination from wildlife
- Sharps e.g. needles and broken glass
- Working in public areas - confrontation
- Adverse weather conditions
- Infectious diseases.
- Risk of coronavirus infection.

6.0 Foreseeable Hazards & Risks Associated with Works

Item	Hazards Identified	Who is at Risk	Risk Rating at Initial Assessment	Residual Risk after Control measures applied.
1	Close proximity to canal. Drowning, hypothermia, infectious disease.	Employees Visitors	Medium	Low
2	Manual Handling: Over exertion, dropping, failure to assess the lift,	Employees	Medium	Low

	incorrect lifting, cuts, strains, back injuries.			
3	Movement around Site Slipping and tripping/uneven ground Movement around site Poor Light	Employees Visitors	Medium	Low
4	Contamination from wildlife	Employees	Medium	Low
5	Sharps e.g. needles, broken glass	Employees	Medium	Low
6	Adverse weather conditions – Exposure to the elements and extreme temperatures	Employees Visitors	Medium	Low
7	Working in public area and confrontation with members of the public	Employees Visitors	Medium	Low
8	Infectious diseases Weils Disease Ticks and Lymes Disease Tetanus	Employees	Medium	Low
9	Risk of coronavirus infection	Employees	Medium	Low

Item	Control Measures
1	Close proximity to canal (recording from public footpath on opposite side of canal from wall) • All photography and other recording to be undertaken at least 2m from canal edge • Prior to starting work the full section of footpath will be inspected to identify any trip hazards • Never walk backwards • All works to be undertaken in teams of two • When a tripod is used ensure that it never blocks the footpath
2	Manual Handling • No weights requiring mechanical methods will be lifted • Seek help from others when lifting heavy equipment. • Wear PPE including supportive/protective boots and gloves (full PPE is required). Assess weight to be lifted. No lifting issue is anticipated with the equipment used.
3	Movement around Site: • All works will be supervised by Jon Gill (COPA). • Two persons minimum to carry out the recording • Staff to be aware of potential dangers involved in moving around site e.g. uneven ground, presence of unauthorised personnel • The site will be inspected for slip and trip hazards prior to work commencing. • Suitable safety footwear will be worn by all staff. • Tools will be stored neatly in designated areas • The project officer will assess the site for hazards and update the risk assessment as necessary.
4	Contamination from Wildlife • Keep a watch for pigeon guano, which can have ticks and cause rashes. Do not go into areas which have a heavy infestation of pigeons or pigeon guano. • Wear latex gloves, or other protective gloves and have face masks in the site kit if there are pigeons in the building. Always wash hands before eating/drinking/smoking
5	Sharps e.g. needles, broken glass • Wear suitable gloves. • If found, DO NOT touch and inform the Site Manager • Never put your hands where you can't see • Seek medical attention immediately

6	Adverse weather conditions • Individuals to wear appropriate protective clothing (rain proof and/or windproof and/or warm garments in adverse wet, windy or cold weather conditions. • Individuals to wear appropriate clothing (loose and light) and sun protection (sun screen, appropriate hat) in warm, bright weather conditions. Shorts should not be worn, short-sleeved shirts should not be worn • Work should cease in thunderstorms and appropriate shelter sought. • All staff to adhere to control measures
7	Confrontation with members of the public • Do not engage in confrontation with the public • Ensure that the works (eg tripod) do not block the footpath or interfere in the public right of way • Always be polite • Do not discuss the works, refer the person/s to the HS2 contact number 08081 434434 or hs2enquiries@hs2.org.uk • Leave the work area as soon as possible if arguments or aggressive behaviour becomes intimidating or threatening. • Report any issues to your manager.
8	Infections and Diseases • Contact with standing water to be avoided at all times. • Wear gloves • Always wash hands before eating/drinking/smoking. • Avoid unnecessary contact with eyes, mouth and nose using dirty hands. • All cuts and skin abrasions to be immediately washed and dressed. • Close fitting clothes (no shorts or short-sleeved shirts) • Medical attention to be sought if flu-like symptoms appear between one to four weeks after a possible insect of tick bite following working in such areas. • It is the responsibility of each staff member to ensure compliance with the control measures.
9	Risk of coronavirus infection. Coronavirus Project Plan and Risk Assessment have been prepared by COPA and will be adhered to by the employees on site. This is detailed in appendix C.

7.0 Specific Health & Safety Compliance Arrangements

Detail all health and safety restrictions or arrangements required for the contract
All works will be supervised by Jon Gill (COPA). All worked carried out by COPA site staff will adhere to the Client's Health and Safety procedures as outlined in this document and given during the site induction.

8.0 Protection of Third Parties from Works

Detail specific control measures for the prevention of exposing third parties to risks from works
Site specific rules in place.

9.0 COSHH

Detail all substances, material and biological organisms applicable to the works

N/A

10.0 Personal Protective Equipment (PPE) and other essentials

Equipment description	Specification (e.g. type, grade)	Applicable
Hard Hat	BS EN 397:1995	Yes
Safety Boots with ankle support	EN 345	Yes
Hi-Vis Long Sleeve Jacket	GO/RT/3297 and BS EN 471:2003 class 3 /	Yes
Hi-Vis Trousers	GO/RT/3297 and BSEN471:2003 class 1	Yes
Light eye protection	BS EN 166F (where F = low energy impact 45 m/s) should be used. This may take the form of safety spectacles or a visor.	Yes
Safety Gloves	BSEN 388 4121	Yes (alternatively, latex gloves will be used where necessary)
Sunscreen		Yes
Wet weather clothing		Yes
Respiratory protective equipment		Yes (where considered necessary)
Fully charged mobile and charger for each member of staff		Yes
First Aid Kit		Yes
Hand cleanser		Yes

11.0 Emergency Response Equipment and Arrangements

Detail all emergency response equipment and arrangements

Emergency Procedures

The site team will be provided with a copy of the LMJV Emergency Response Plan for the N4 Area detailing muster point(s), procedures, emergency contact details and directions to the nearest A&E.

A complete first aid kit will be maintained on site at all times.

Any injury will be reported and included in the site accident book.

In the case of health and safety concerns or injury, COPA staff are to inform the Project Officer in the first instance who will liaise with COPA Project Manager. Any immediate health and safety and security issues should also be reported to the client.

All site staff carry valid CSCS cards which will be made available for inspection.

In the event that a member of staff is seriously injured on site the emergency services will be

contacted immediately. The site address will be given as:

Digbeth Canal south side of Curzon Street

Birmingham

B4 7XG

In case of accident or emergency the LMJV Emergency Management and the COPA Project Management will be informed. COPA will be responsible for reporting the incident to the Health and Safety Executive (HSE), should this be required, within the time periods stipulated by the HSE.

The nearest Accident and Emergency hospital is:

Birmingham City Hospital,

Accident and Emergency Department

Dudley Rd,

Birmingham

B18 7QH

See Appendix A for directions.

In the event of a medical emergency or incident on site, a nominated member of the field team or a security guard will:

1) Call 999 or 101 and notify the appropriate emergency service and First Aider to give assistance dependant on the nature of incident.

12.0 Permit to Work Requirements

N/A

13.0 Personnel Involved in Task & Contact Details

Detail personnel involved in the task either in persons conducting job or overall numbers. Also include levels of supervision.
Please refer to Appendix B

14.0 Specific Training Requirements for Task

Detail personnel involved in the task either in persons conducting job or overall numbers. Also include levels of supervision.
All staff are CSCS card holder. Staff will be suitably trained/experienced in specific tasks (relating to historic building recording and/or measured survey). All site personnel are required to receive an LMJV HS2 Induction before accessing any sites. Records are retained at the LMJV Project Office, 6th Floor, Cornerblock, Two Cornwall Street, Birmingham B3 2DX.

15.0 Plant & Equipment to be used During Works

Detail all plant
N/A

16.0 Traffic Management

Detail requirements for traffic management restrictions and controls
LMJV to provide details on access routes and any parking requirements

17.0 Waste Disposal & Environmental Considerations

Detail all waste disposal considerations
Staff will work in accordance with the Site Environmental Procedures and Site Rules as stated by LM below. ENVIRONMENTAL SITE RULES • Core working hours from 08.00 to 16.00 weekdays (excluding bank holidays). Any work out of these hours will need to be agreed with LM and the Local Authority. • One hour before and up to one hour after normal working hours is allowed for start-up and close down of activities. No plant and/or machinery shall be turned on during this period. • No open fires allowed. • Vehicles and plant will be switched off and secured when not in use. • If you are approached by members of the public advise them to contact the HS2

helpdesk and provide contact cards.

ALL ENVIRONMENTAL INCIDENTS INCLUDING SPILLS, LEAKS, ECOLOGICAL OR DAMAGE TO BUILDINGS ARE TO BE REPORTED TO YOUR SITE SUPERVISOR WHO WILL NOTIFY LM.

Waste will be disposed of in accordance with Site Rules and Procedures

18.0 Specific Emergency Contact Numbers/Procedures

Detail all Specific Emergency Contact Numbers or Procedure references
Refer to Emergency Contact details displayed in the Site Office.

19.0 Specific Co-operation with Third Party Activities

Detail specific requirements
To be discussed at Site Meeting

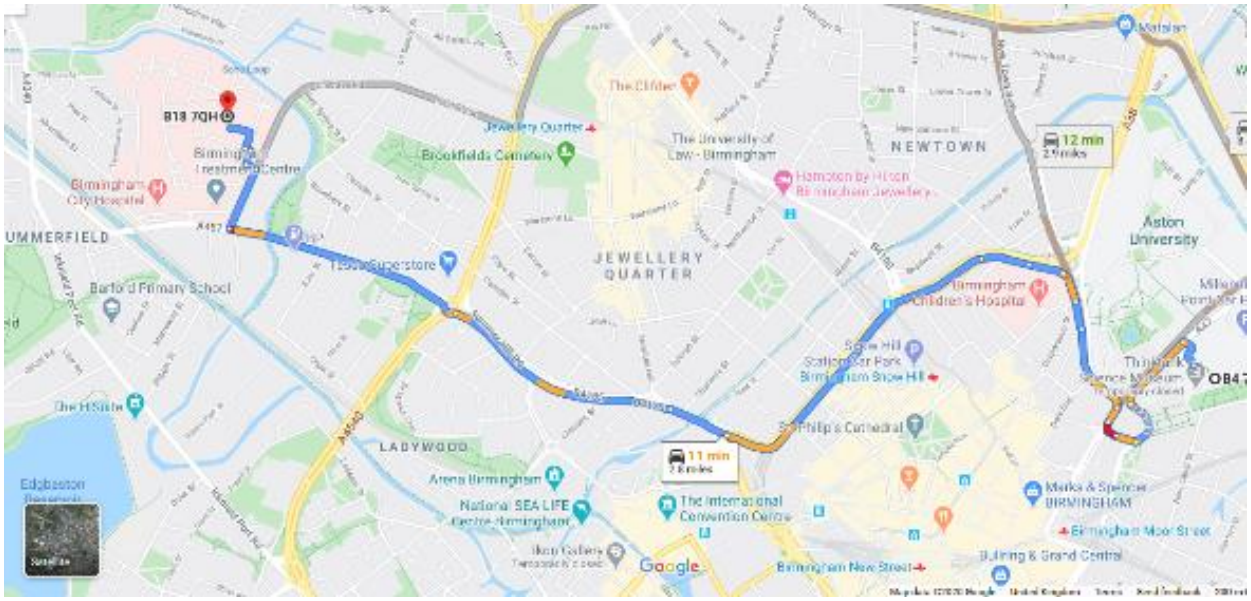
Prepared by:	Jonathan Gill		
Position held:	Senior Project Manager		
Signed:	Jonathan Gill	**Date:**	05/08/20
Review date:			

20. Acknowledgement

I confirm that I have understood the Method Statement/ Risk Assessment and undertake to execute the works in the appropriate manner.

Print Name	**Sign**	**Date**

APPENDIX A: Plan and directions to A&E



Appendix B – Personnel

Name	Company	Position	Email	Telephone
Richard Brown	COPA	Lead SPM	richard.brown@copajv.com	01865 980728 07725 782606
Julia Sulikowska	COPA	Lead Manager – Design Reporting and Built Heritage	Julia.Sulikowska@cotswoldarchaeology.co.uk	0164 347 641 07889 811391
Jon Gill	COPA	Project Manager (Buildings)	Jon.gill@oxfordarchaeology.com	01865 980740 07738 252 408
Deirdre Forde	COPA	Historic Buildings Consultant	deirdre.forde@oxfordarchaeology.com	07584 501613
Benjamin Brown	COPA	Geomatics Lead	benjamin.brown@oxfordarchaeology.com	07584 501618
Barry Flutter	LMJV	Construction manager	bflutter@lm-jv.com	xxx
Jordan Williams	LMJV	Project Manager N4	mailto:Jwilliams@lm-jv.com	07753 175225
Isaac Acquah	LMJV	Project Engineer	iacquah@lm-jv.com	07704 768068
Glenn Rose	DJV	Historic Environment Advisor	glenn.rose@wsp.com	01213 524775
Lisa Atkinson	LMJV	Site Agent	latkinson@lm-jv.com	TBC
Nick Slack	LMJV	Section Manager	nslack@lm-jv.com	07900 703741
Paul Hunt	LMJV	Project Manager	phunt@lm-jv.com	07775 551776
Rob Arnold	LMJV	Senior Construction Manager	rarnold@lm-jv.com	07921 936762
Rebecca Cottington	LMJV	Environmental Advisor	rcottington@lm-jv.com	07384 526427
Martin Welch	LMJV	Senior Health and Safety Manager	mwelch@lm-jv.com	07935 205761

	HS2	Enquiries	Use for members of the public who may have questions or concerns	08081 434434
	HS2	Incident Helpdesk	LMJV 'On site manager' to ring LMJV H&S manager/ or Environmental Manager/ or Security manager to escalate Incidents to HS2 helpdesk.	TBC

Appendix C Coronavirus (COVID-19) Risk Assessment and Project Plan

Contract	**WP029 D**			**Client**		**COPA**					
Contract No.				**Risk Assessment No.**		**ETPH_HBR-MS01**					
Activity	**Covid-19 Site working: Historic Building Recording at Digbeth Canal Wall, Birmingham**										
Activity affecting *(Tick Appropriate Box)*	**Employee**		**x**	**Vehicle**	**x**	**Environment**			**Likelihood X Consequences**		
No.	**Hazard**	**Possible Consequences**	**Pre- Control**			**Control Measures**	**Post-Control**		
			L	**C**	**RR**		**L**	**C**	**RR**
1	Covid-19 at risk categories	At greater risk of significant health issues if Covid-19 is contracted	3	5	15	**1.** Employee's that are classified as being on the Government vunerable list as per https://digital.nhs.uk/coronavirus/shielded-patient-list#risk-criteria should remain isolated at home whilst the current Government advice remains in place. **COPA Site specific control measures**: Operatives that exhibit symptoms (new, continuous cough, fever, lot or change of sense of taste or smell) or have had close contact with someone is exhibiting symptoms (i.e. advised to do so by NHS track and trace) to self-isolate. Operatives living with someone in self-isolation not to attend site	1	5	5
2	Commuting to and from site	Restrictions on maintaining 2 metre recommended social distancing and increased risk of infection as a result	3	4	12	**1.** Wherever possible private transport should be used to maintain isolation from the public when commuting to the office / site. **2.** If public transport cannot be avoided, current government advice should be followed in respect of what PPE should be worn whilst travelling, for example, face covering . **3.** On arrival at the Office / site, employees should thoroughly wash their hands for at least for 20 seconds as a method of infection control. **COPA Site specific control measures**: Adequate vehicles to be provided to enable social distancing to be maintained. Staff will travel individually in personal (if insured) or hire vehicles. Public transport will not be used. AC to be turned off. Interior surfaces to be cleaned before and after use. Hand cleaning facilities for arrival on site – team to be equipped with sufficient hand sanitiser/wipes	1	4	4
3	Employee returning to work	Risk to personal health reduced social distancing potential risk to pandemic controls	3	4	12	**1.** Any employees placed in vulnerable category classification to remain in isolation whilst advised to do so by the government. **2.**To reduce the risk to other household members, if the employee is unable to work from home, follow HR policy. **3.** Only employee's whose job is classed as critical and requires to be carried out on-site should travel to the site / office whilst the governments stay at home advice exists. **4.** Consideration should be given as to how employees will commute to work, with the preference being focused on employees who don't have to use public transport. **5.** Flexible shift patterns should be adopted where appropriate to reduce the risks associated with a historical rush hour commute and office / site start times. **6.** Social-economic considerations should be considered for employees where home working presents increased risks. **7.** Where appropriate home working should be encouraged, and resources provided to put this in place in the medium term whilst the current government advice exists. Refer to existing home working policy. **COPA site specific control measures**: As mentioned above, people self-isolating or exibiting symptoms not to attend site. Staff to work from home, apart from the site visit which is required to complete the historic building record. Site team size suffcient to ensure objectives of the recording are met but small enough to esnure social distancing can be maintained. As mentioned above, team will travel individually, with no car sharing or public transport use.	1	4	4

4	Office attributes	Location, facilities, office capacity, communal areas, other users and business criticality	3	4	12	**1.** Offices should be prioritised for re-opening based on their business criticality, ease of commute by car and associated parking, site capacity and their control over communal areas and the associated risks, and the overall capacity of the building in respect of other users. **2.** Based on site attributes and office capacity movement of office-based functions should wherever possible be located at the sites presenting the lowest risk to office-based employees whilst the pandemic is in place. **3.** Where shared premises responsibility exist for shared communal areas such as toilets, lifts, reception area and stairs, a risk assessment from the landlord is required to cover the controls that are being implemented in the shared areas to limit the risks of Covid-19. **COPA site specific control measures**: Project includes work on site, though it will require internal access into the public house and Managers house. Limit numbers of staff on site. Daily briefing to be delivered outside in the car park rather than in welfare/building to allow for greater spacing of staff. Team to take breaks independently of each other/ensuring social distancing is maintained. Vehicles and shared spaces (i.e. door handles) to be regularly cleaned. this includes the welfare vehicle used for breaks, whcih will be equipped with adequate cleaning products. Cleaning rota to be established and a sign off sheet showing when it has been cleaned and by who to be maintained Staff to travel separately in vehicles to and from site to reduce risk of contamination. Any office based staff (i.e. managerial support) to work at home as practically possible or to utilise the wider office space for isolated areas.	1	4	4
5	Office access- agress	Peak periods, increased risk of social distancing failures, symptomatic employees or visitors	3	4	12	**1.** To reduce the risk of congestion at historically peak times of access and egress the start and end times of the working day should be staggered to minimise periods of peak flow. **2.** To reduce the access – egress volume at lunchtime and the need for employees to go to the shops the use of a sandwich service should be instigated. **3.** Access to Optima Health areas to be strictly controlled - every employee and visitor to follow entry control screening instructions. If unable to comply, employees and visitors to be advised to return home and follow NHS guidance. **4.** After accessing site all employees and visitors to thoroughly wash their hands for 20 seconds. **5.** Hand sanitisers with alcohol content of > 60% to be available in communal areas such as lift lobbies, building and office entrances. **COPA site specific control measures**: The project is historic building recording on site, but access along the towpath will be needed. Social distancing to be maintained at all times/access to the building to be staggered, with team ensuring social distancing. Hand cleaning to be provided to all staff (i.e. gel/wipes). Site meetings / briefings to be kept short and delivered in small groups outside for greater ventilation rather than using cars/buildings. No office meetings planned, information to be passed on via email / phone. All staff on site to carry phones for communication with office and with others on site.	1	4	4

6	Office capacity	High density office occupation increased risk of contraction of Covid-19	3	4	12	**1.** The office should be assessed to ensure occupied workstations provide 2 metres social distancing from next workstation, reduced capacity to be achieved by a mixture of home working, shifts, and work re-location. **2.** Quarantined workstations to be clearly indicated with Out of Use signage, excess chairs and kit to be removed from workstations. **3.** Meeting rooms to be assessed, and two-metre social distancing points to be defined with appropriate signage, excess chairs to be removed. **4.** Rest area to be assessed, and two-metre social distancing points defined with appropriate signage, excess chairs to be removed. **5.** Visitor waiting area to be assessed, and two-metre social distancing points defined with appropriate signage, excess chairs to be removed. Strict scheduling of appointments to restrict the potential of overcrowding. **6.** If increased office occupancy is required breaching the two-metre social distancing, engineering controls to be put in place to shield the workstations from each other such a cleanable Perspex divider between workstation. **8.** In areas where social distancing is not possible such as storerooms these should be restricted to single-use. **COPA site specific control measures**: Project includes work on site rather than in the office, with only external access. Limit numbers of staff on site. Daily briefing to be delivered outside in the car park/street rather than in cars/building to allow for greater spacing of staff. Team to take breaks independently of each other/ensuring social distancing is maintained. Vehicles and shared spaces (i.e. door handles) to be regularly cleaned. Hand cleaning and social distancing measures to be maintained throughout the day. Staff to travel separately in vehicles to and from site to reduce risk of contamination. Any office based staff (i.e. managerial support) to work at home as practically possible or to utilise the wider office space for isolated areas.	1	4	4

7	Office culture	Breakdown in procedures, employee weariness, reduced risk perception leading to shortcuts	3	4	12	**1.** Staff rotation and home working to reduce weariness of the day to day controls in the office. **2.** Signage throughout the office to re-enforce the need for social and hygienic controls in respect of Covid-19. **3.** Two-metre social distancing markers at key points within the office, for example, reception, tea points main thoroughfare. **4.** Monthly office checkpoint meeting to discuss what is going well, concerns, suggestions, risk assessment, Health and Safety rep to be present and meetings minutes. **5.** Pro-active monitoring that all the office controls are being adhered to by all the staff **6.** Reporting of any breaches to management for investigation **7.** Appointment of "safety marshal" roles on site to monitor and enforce compliance on a day to day basis. **COPA site specific control measures**: Project includes work on site rather than in the office, external work only. Limit numbers of staff on site. Daily briefing to be delivered outside in the car park/field rather than in cars/buildings to allow for greater spacing of staff. Team to take breaks independently of each other/ensuring social distancing is maintained. Shared spaces (i.e. door handles) to be regularly cleaned. pro-active monitoring of the control measures (hand cleaning/equipment and social distancing) to be ensured by the project leader and first aider. Staff to travel separately in vehicles to and from site to reduce risk of contamination. Any office based staff (i.e. managerial support) to work at home as practically possible or to utilise the wider office space for isolated areas.	1	4	4
8	Workstations	Surface contamination transfer of Covid-19 virus	3	4	12	**1.**To reduce the risk of contamination in the workstations at the start and end of each working day the workstation is to be wiped down with D10 disinfectant and paper towels, the towels to be disposed of in the bin **2.** Telephony equipment to be sanitised at start and end of the day with appropriate sanitiser. **COPA site specific control measures:** Team will be working on site (any off site work to be carried our from home). Increased levels of cleaning to be actioned. In addition to general cleaning products, stocks of hand sanitizer and sanitizer wipes to be located in vehicles. Cleaning rota to be set up where required (i.e. shared equipment). Equipment to be identified as person specific wherever possible to reduce risk of transfer, gloves to be worn. Cleaning of equipment to be actioned. Team will use their personal mobile phones which will not be shared.	1	4	4

9	High contact areas	Surface transfer throughout the office, door entry and egress, tea & coffee points, rest area	3	4	12	**1.** Door entry systems should be reviewed to see if door release buttons can be removed to sensor exit operation to reduce contact. **2.** Provide hand sanitisers at all high contact points – areas such as entrances, tea points, rest areas. **3.** For multiple occupancy offices, instigate hourly cleaning of all high contact points with a D10 disinfectant. For single occupancy clinics a reactive cleaning regime should be implemented. **COPA site specific control measures:** Team will be working on site (external) and any off site work will be from home. Increased levels of cleaning to be actioned. In addition to general cleaning products, stocks of hand sanitizer and sanitizer wipes to be located in welfare unit and in vehicles. Cleaning rota to be set up where required. The team will use the facilities at the HS2 compound on Fazeley Street which is a five minute walk from the site. Instructtions on site to be followed to ensure social distancing/hygiene measures. Equipment to be identified as person specific wherever possible to reduce risk of transfer, gloves to be worn. Cleaning of equipment to be actioned.	1	4	4
10	Cleaning - infection control	Risk of contamination of surfaces in high use areas and across the office	3	4	12	**1.** To reduce the risk of infection, an hourly cleaning schedule of contact points, rest areas, and toilets needs to be implemented. **2.** D10 disinfectant cleaner to be used throughout the office and available at high use areas, staff to be trained in its use and COSHH assessment to be in place. **3.** Cleaning sheets to be available at all high contact points/areas to show compliance with cleaning scheduling and to be checked by site responsible person or deputy. **4.** Where practicable, consideration should be given to employing a full-time cleaner within the offices to ensure all high use areas are thoroughly cleaned on an hourly basis. An alternative approach is to ensure a cleaning regime can be implemented and managed locally. **5**. Agreements with the landlord to be in place in respect of the cleaning of the communal areas within the building. **6.** Staff to wash hands as part of postural DSE break routines once an hour. **7.** To reduce potential points of contamination desk bins to be removed and central waste points to be placed in areas of most use – rest areas & toilets. **8.** Waiting area surfaces to be cleaned between appointments and to a minimum of once an hour. **9.** Before offices re-open a deep clean should be conducted. **10.** Staff to wash hands as part of postural DSE break routines once an hour. **COPA site specific control measures:** Increased levels of cleaning to be actioned. In addition to general cleaning products, stocks of hand sanitizer and sanitizer wipes to be located in welfare unit and in vehicles. If insufficient cleaning products are avaialble, these will be acquired or the survey postponed until such time that adequate resources can be deployed. Cleaning rota to be set up as required Equipment to be identified as person specific wherever possible to reduce risk of transfer, gloves to be worn. Cleaning of equipment to be actioned.	1	4	4

11	Rest area	High use area - higher risk of social distancing breaches and contaminated surfaces	3	4	12	**1.** Maximum occupancy of the rest area to be defined by the site manager based on two-metre social distancing rules. **2.** Where possible access and egress route into and out of rest area should be defined with two-metre social distancing markers along route. **3.** D10 disinfectant to be available in the area to wipe down surfaces and equipment that has been used. **4.** If tables and chairs within the area are used these should be wiped down before and after use with D10 disinfectant and paper towels. **5.** Where rest area is not large enough to allow staff to have lunch in the area whilst maintaining social distancing staff should be allowed to have lunch at their workstations. **COPA site specific control measures:** Tea and lunch breaks to be staggered if needed to ensure social distancing. Team to take break outside/within their vehicles. The team will use the facilities at the HS2 compound on Fazeley Street which is a five minute walk from the site Food/drink not to be shared. Local facilities will not be used.	1	4	4
12	Food and beverages hygiene	Risk of cross infection from contaminated food items in fridge or store cupboards	3	4	12	**1.** Staff where possible should bring their lunch into the office in clean Tupperware containers that can be removed at the end of the day. **2.** Only essential items to be stored in the fridge. All items in containers to be wiped down with disinfectant before the item is stored in the fridge or after use and replaced in the fridge. Limit food storage in fridge to lunches brought from home and milk. **3.** Staff should wash hands after replacing items in the fridge; this will ensure they have no contamination from the items if previous controls mechanisms have broken down. **4.** Fridge to be cleaned daily and unsealed items removed. **5.** Daily stock check of the fridge to be conducted by the site responsible person to ensure only essential items are stored in it **6.** Hygiene notices to be displayed in the rest area and check sheets for cleaning and fridge checking to be on display. **COPA site specific control measures:** Sharing of food to be banned on site. Items such as coffee, tea, sugar and other such shared items to be stored in containers which can be cleaned or person specific bags. Staff encouraged to bring premade hot drinks to site in a thermos flask.	1	4	4
13	Toilets and showers	Risk of infection from contaminated surface, reduced social distancing	3	4	12	**1.** Instructions for all employees to wash hands after use of facilities and wipe down surfaces. **2.** Two-metre social distancing markers should be used where applicable. **3.** Hygiene signage to be placed within toilet areas. **COPA site specific control measures:** No use of local facilities in the area. The team will use the facilities at the HS2 compound on Fazeley Street which is a five minute walk from the site	1	4	4

14	Building and office vestibules	Risk of symptomatic visitors, cross contamination from hard surfaces	3	4	12	**1.** Regular cleaning of areas and hard surfaces with D10 disinfectant to be undertaken. **2.** Hand sanitisers to be available in all communal areas. **3.** Social distancing signage to be in place. **4.** Covid-19 isolation signage to be in place at entrances to building and office areas. **COPA site specific control measures:** Site work only. Site daily briefings numbers to be limited and held outdoors where possible. No deliveries anticipated. No other contractors anticipated on site, except site managers who will be notified before starting any work. Social distancing measures and hand hygiene to be maintained at all times.	1	4	4
15	First aid	Risk of cross infection	3	4	12	**1.** First aiders should be provided with the following PPE in case they have to administer first aid, gown, glasses, face mask, surgical gloves as set out in P-CG-168. **2.** If CPR is required, the person's mouth must be covered before CPR, Hands-Only CPR is to be performed whilst waiting on emergency services. CPR can be carried out in conjunction with a defibrillator if available. **3.** First aiders to remove PPE and wash hands as set out in P-CG-168 and to dispose of it in the clinical waste. **4.** First aider will control and distribute plasters and medical wipes from the first aid kit to ensure control and hygiene of the on-site first aid kit. **COPA site specific control measures:** All first aid kits to contain emergency face coverings for first aiders and the person they are assisting. Where possible first aid should be conducted while maintaining 2m social distance. COPA First Aid Guidance Note will be available for the team for further details.	1	4	4
16	Emergency procedures	Social distancing procedures	3	4	12	**1.** Whilst social guidance distancing rules apply, it would assist in keeping the planned statutory Fire drills to the minimum of once annually. **2.** In buildings where multiple floors exist, a tenant's agreement is required as to how an evacuation will be conducted to try to reduce congestion at any point within the evacuation. **3.** To ensure that no bottlenecks occur during an evacuation it is essential that the Fire escape routes are checked daily basis, and the final exit doors are not locked or blocked. **4.** During a planned drill, social distancing wherever possible should be maintained. **COPA site specific control measures:** Site is external (adjacent to public footpath) and will be subject to survey lasting up to 2 days, fire drills will not be undertaken.	1	4	4
17	Deliveries	Maintaining social distancing and integrity of access/egress and escape routes	3	4	12	**1.** Establish an area within the office area for deliveries that avoids them being taken through the office. **2.** Where possible agree delivery times to avoid access and egress peak periods. **COPA site specific control measures:** No deliveries anticipated.	1	4	4
18	Disabled users	Maintaining social distancing during an evacuation	3	4	12	**1.**Due to the close proximity that may be required during a disabled evacuation, employees with mobility issues should work from home for the period of the pandemic. **2.** Disabled clients should only be accessed on ground floor sites to reduce the risks of close proximity required in the use of an evac chair. **COPA site specific control measures:** The team does not include disabled staff as mobility is required to access site to fulfill the brief. No other operatives (i.e. clients or deliveries) anticipated on site other than site security.	1	4	4

19	Stress and wellbeing	Mental health wellbeing, feelings of isolation, concerns over pandemic	3	4	12	**1.** Wellbeing champions across business and wellbeing webinars in place for coping techniques. **2.** "Stay Connected" exercise webinars in place; these should remain in place within the office as a good feel factor. **3.** Wellbeing checks to be incorporated in weekly and monthly meetings. **COPA site specific control measures:** Ensuring wellbeing and mental health of employees is important to COPA. Regular communication (by email/phone/video call) between employees and their line managers and project managers is maintained so that any changes to work arrangements and the new systems of work in relation to coronavirus can be explained and any potential issues can be raised	1	4	4
20	Shift home working	Ergonomic risks as periods of home working increase	3	4	12	**1.** Additional ergo kit to be provided as required to prevent kit having to be taken back and forth from the office. **COPA site specific control measures:** **Limited** office work - teams will work from home mostly where possible.	1	4	4
21	Occupational hazards	Skin exposure, dermatitis, additional use of hand sanitisers, washing	3	4	12	**1.** Frequent cleaning to be carried out by suitably trained staff only, PPE to be provided. **2.** Single-use PPE gloves to be used for infrequent cleaning. **3.** Low-risk detergents such as D10 to be used. **4.** COSHH risk assessment to be provided to all staff. **COPA site specific control measures:** COPA have prepared its site specific coronavirus risk assessment and safe systems of work to ensure the survey can go ahead safely. Any equipment will be cleaned as required and low risk cleaning products will be provided.	1	4	4
22	Storage of personal belongings	Maintaining 2 metre social distancing	3	4	12	**1.** Lockers and coat stands to be provided for employees in designated areas away from workstations. **2.** Social distancing marketing's in the locker area where appropriate. **3.** Staggered start and leaving times to reduce numbers at areas at any given period. • **COPA site specific control measures:** Team will use their vehicles for storage of personal belongings if needed (these spaces will not be shared)	1	4	4
23	Air con	Lack of natural ventilation in confined spaces increase risk of spread of Covid-19 via air con	3	4	12	**1.** Aircon and fans should be prohibited in multi-occupied office spaces when occupied as there is evidence that these can spread the virus significant distances, further than the two-metre social distance. **2.** For office cooling, aircon can be used at night and blinds during the day to reduce solar gain or reflective film. **3.** Wherever possible natural ventilation should be used within the offices. **4.** Meetings should be restricted to well-ventilated rooms only **5.** Reduced capacity to assist in keeping heat gain down **COPA Site specific control measures:** The site is external. Team will travel individually to site (no sharing of vehicle)	1	4	4

Likelihood of Occurrence	Score	Consequence of Occurrence	Risk Rating		Action
Very Unlikely	1	Insignificant / E.g. Non- Lost Time Incident (212 – Cat. 1)	Low	1 - 5	Works may proceed
Unlikely	2	Minor / E.g. Non-Reportable Incident (212 – Cat. 2)			

Possible	3	Moderate / E.g. Reportable Lost Time Incident (212 – Cat. 3)	Medium	6 - 12	All reasonable practicable measures in place and the point of work risk assessment captures further controls as required. Works may proceed with caution.
Likely	4	Major / E.g. Reportable Incident– Permanent Disability (212 – Cat. 4)	High	13-25	Unacceptable. Do not proceed until further controls are in place and risk has been reduced with all controls in place.
Almost Certain	5	Catastrophic / E.g. Fatality (212 – Cat. 5)			

Compiled By					
Name:	**Jon Gill**	Signature:		Date:	**06/082020**
Approved by					
Name:		Signature:		Date:	

Risk Assessment Review required **(***Approver to decide review period)*	**Date:**		**Rev:**	

Enabling Works North Contract - LM COVID-19 Project Plan

WP 029 D Historic Environment Works – Digbeth Canal Wall – Enabling Works North

Contract

Document Number: 1EW04-LMJ-HS-PLN-NS08-029002

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Contents

1 Purpose

1.1 This project plan has been prepared in line with the Construction Leadership Council Site Operating Procedures and outlines the key steps LM projects will take to manage the risks associated with the Coronavirus (COVID-19).

1.2 Construction sites operating during the Covid-19 pandemic need to ensure they are protecting their workforce and minimising the risk of spread of infection. This document is intended to introduce consistent measures on sites of all sizes in line with the Government's recommendations. These are exceptional circumstances and the industry must comply with the latest Government advice on COVID-19 at all times.

1.3 Public Health England (PHE) guidance for construction states "where it is not possible to follow the social distancing guidelines in full in relation to a particular activity, you should consider whether that activity needs to continue for the site to continue to operate, and, if so, take all the mitigating actions possible to reduce the risk of transmission". **Where face to face working is essential to carry out a task when working within 2 metres, written authorisation will be sought from the LM Senior Project Manager, following a written risk assessment using the hierarchy of control prior to works taking place.**

1.4 The health and safety requirements of any construction activity must also not be compromised at this time. If an activity cannot be undertaken safely it should not take place**.** We are aware that emergency services are also under great pressure and may not be in a position to respond as quickly as usual. Sites should remind the workforce at every opportunity of the Site Operating Procedures/RAMS which are aimed at protecting them, their colleagues, their families and the UK population.

2 Employee Awareness and Self-Isolation

2.1 Employees working on this project who fall into the government identified high risk categories must speak to their line manager. LM require these individuals to follow government guidance for self-isolation.

2.2 Anyone who meets one of the following criteria should not come to site:

- Has a high temperature or a new persistent cough - follow the guidance on self-isolation
- Is a vulnerable person (by virtue of their age, underlying health condition, clinical condition or are pregnant)
- Is within 14 days of the day when the first member of their household showed symptoms of Coronavirus.

2.3 Anyone who is living with someone who is shielding from Coronavirus should stringently follow guidance on social distancing and minimise contact outside the home. Provided they adhere to this guidance and the project specific controls they can continue to attend work.

2.4 Sites must share the company issued briefings and posters with all employees to ensure people are aware of the symptoms and company processes in relation to COVID-19.

2.5 LM COVID-19 information page on The Hub https://LMgroup.sharepoint.com/sites/TheHub/SitePages/COVID-19-INFORMATION.aspx

2.6 Employees must not attend work if they suspect they or a member of their household may have COVID-19 must follow the current government guidelines for self-isolation. As set out above.

3 Travel to work

3.1 Employees in non-operational roles should agree a method of working remotely or minimising site attendance whilst maintaining project support.

3.2 When using a private vehicle to make a journey that is essential, cars should only be shared by members of the same household.

3.3 If the journey is essential, and there is no option but to share a car with people who are not part of the same household, journeys should be shared with the same individuals and with the minimum number of people at any one time, avoid rotation of personnel between groups. A travel buddy system will need to be implemented and this will be visually demonstrated by wearing of arm bands and a numbering system, so it can be effectively monitored. Details of this should be recorded below.

3.4 Good ventilation by keeping the windows open and facing away from each other may help to reduce the risk of transmission. Private vehicles that are used by people from multiple households should be cleaned regularly using gloves and standard cleaning products with particular emphasis on handles and other areas where passengers may touch surfaces.

3.5 Where public transport is the only option for workers, change and stagger site opening hours to reduce congestion on the network and avoid peak travel hours.

3.6 Projects should consider parking arrangements for additional cars and bicycles where practicable.

3.7 Employees should keep 2 metres away from people at fuel stations, use "Pay at Pump" if possible. Employees should use the gloves provided.

3.8 Movement of project personnel between LM sites / offices will be minimised in line with the 'battleship' strategy.

3.9 Project Specific Travel Arrangements

Type of Travel	Arrangements/Control Measures
Vehicle	Team of 2: each member of the team to travel independently in own (if insured) or hired car. Vehicles will not be shared.
Refuelling	Team to ensure vehicles are sufficiently fuelled up to reduce the need to fuel up on way to site. When refuelling operatives must following all

	guidance and instructions (spaces in queues etc.) put in place by the Provider
Public transport	Public transport will not be used.

4 Arrival on site

4.1 Non-essential project visitors shall not be permitted onto site.

4.2 LM will continue to operate health and safety assurance during this period. LM have specific guidelines to follow for site assurance to ensure social distancing is maintained at all times. This guidance has been released via email and is available on The Hub.

4.3 Security Guards should maintain 2 metres distance from people arriving to work. Any lines or queues should be managed to maintain separation distances.

4.4 Projects should review work scope and resources to introduce staggered start and finish times where practicable to reduce congestion and contact at all times.

4.5 Ensure measures are in place to prevent the spread of the virus whilst operating security systems / turnstiles. In most cases a gate is most appropriate.

4.6 Everyone must confirm on arrival that they do not have a new continuous cough or high temperature and that they have not knowingly been in contact with someone who has these symptoms.

4.7 All people attending site will wash their hands with soap and water where ever possible, or use hand sanitiser if water is not available, before entering and leaving the site environment. Where practicable hand cleaning facilities shall be located at site entrances and exits.

4.8 LM have issued specific guidance for the supply chain to forward on where required, which provides instructions on how to handle deliveries to site. Drivers should remain in vehicles, observing separation distances and utilise non-contact methods of documenting deliveries.

4.9 Project Specific Access Arrangements

Access/Security Issue	Arrangements/Control Measures
Parking	The site is a section of canal wall and the recording will be undertaken from a public footpath. The car will be parked in a pay and display car park near the site
Other operatives	COPA will be the only operatives in the area (public footpath) from where the recording will be undertaken although a site meeting will take place with LM prior to the work to confirm which part of the wall is to be demolished initially. Social distancing to be maintained at all times

Arrival	Social distancing will be maintained at all times.
Hand hygiene	Team to be equipped with hand sanitiser/wipes which are to be used following arrival to the site and where necessary throughout the day. The team will use the nearby LM compound to ensure appropriate hygiene can be maintained.

5 Social Distancing

5.1 Sites and work need to be planned and organised to avoid crowding and minimise the risk of spread of infection by following PHE and HSE guidance and the advice within these Site Operating Procedures. Project teams must review all risk assessments to eliminate physical contact between workers and implement 2 metres separation whenever possible.

5.2 Public Health England (PHE) guidance for construction states "where it is not possible to follow the social distancing guidelines in full in relation to a particular activity, you should consider whether that activity needs to continue for the site to continue to operate, and, if so, take all the mitigating actions possible to reduce the risk of transmission". **Where face to face working is essential to carry out a task when working within 2 metres, written authorisation will be sought from the LM Senior Project Manager, following a written risk assessment using the hierarchy of control, prior to works taking place.**

Eliminate

- Workers who are unwell with symptoms of Coronavirus (Covid-19) should not travel to or attend the workplace
- Rearrange tasks to enable them to be done by one person, or by maintaining social distancing measures (2 metres)
- Avoid skin to skin and face to face contact
- Stairs should be used in preference to lifts or hoists and consider one ways systems
- Consider alternative or additional mechanical aids to reduce worker interface

Reduce

Where the social distancing measures (2 metres) cannot be applied:

- Minimise the frequency and time workers are within 2 metres of each other
- Minimise the number of workers involved in these tasks
- Workers should work side by side, or facing away from each other, rather than face to face
- Lower the worker capacity of lifts and hoists to reduce congestion and contact at all times
- Regularly clean common touchpoints, doors, buttons, handles, vehicle cabs, tools, equipment etc
- Increase ventilation in enclosed spaces
- Workers should wash their hands before and after using any equipment

Isolate

Keep groups of workers that have to work within 2 metres:

- Together in teams e.g. (do not change workers within teams)
- As small as possible
- Away from other workers where possible

Control

- Consider introducing an enhanced authorisation process for these activities
- Provide additional supervision to monitor and manage compliance

PPE

- Sites should not use RPE for Coronavirus (Covid-19) where the 2 metre social distancing guidelines are met.
- Where it is not possible to maintain a 2 metre distance, each activity should be risk assessed using the hierarchy of controls and against any sector-specific guidance, mindful that masks (RPE) are the last resort in the hierarchy. LM do not encourage the widespread use of face masks in relation to COVID-19. NHS guidance states these are only required for those undertaking medical care for those actively exhibiting symptoms. FFP3 dust masks will continue to be used where required by task specific risk assessment.
- Re-usable PPE should be thoroughly cleaned after use and not shared between workers.
- Single use PPE should be disposed of so that it cannot be reused
- Where personnel are required to work in specific environments (e.g. where persons are shielding, with symptoms, or confirmed Coronavirus (Covid-19) cases may be present e.g. healthcare or in a home environment) additional PPE should be considered specific to the Coronavirus (Covid-19) risk

Behaviours

- The measures necessary to minimise the risk of spread of infection rely on everyone in the industry taking responsibility for their actions and behaviours. Please encourage an open and collaborative approach between workers and employers on site where any issues can be openly discussed and addressed.

5.3 Project Specific Activities

Activity	Arrangements/Control Measures
Travel to site	Team to travel individually to ensure social distancing is maintained.
Access to site	The area where the recording will be undertaken from is on a public footpath adjacent to the canal and therefore no special access arrangements are required although details of when the work is to be undertaken will be passed to LM control. Prior to the work a site visit will be made with LM to discuss the recording. Social distancing measures will be maintained at all times – the site is of sufficient size to allow for the COPA team and LM operatives to keep distance.
Historic building recording – photographic record	Team of 2 to ensure social distancing is maintained at all times. Teams to work at distance/stagger access to room to ensure the distancing is maintained.
Breaks	Breaks to be staggered if required to ensure social distancing. Staff to use the outside areas or their own vehicles for breaks. The staff will be provided with appropriate cleaning products and a rota for the cleaning

	will be established. The team will use the facilities at the HS2 compound on Fazeley Street which is a five minute walk from the site.

6 Hygiene and Cleaning regimes

6.1 Projects should increase cleaning regimes on all facilities to ensure they are cleaned with particular focus on commonly touched surfaces such as worktops, door handles, toilet flushes and equipment controls.

6.2 Welfare facilities will be regularly cleaned and a check sheet has been developed to guide and document this. LM have issued a welfare checklist to assist with this.

6.3 Localised areas such as workstations and desks should be self-cleaned by the user with cleaning materials provided.

6.4 Projects should look to provide additional hand washing facilities or hand sanitisers across the project to enable employees to increase the frequency of hand washing. Employees should diligently wear the required PPE and increase the frequency of hand washing undertaken.

6.5 Based on the size of each facility, signage will be displayed by the site manager to determine how many people can use it at any one time to maintain distance of two meters

6.6 Re-usable PPE should be thoroughly cleaned after use and not shared between workers. Single use PPE should be disposed of so that it cannot be reused.

6.7 Sites will need extra supplies of soap, hand sanitiser (60%+ alcohol based hand sanitiser) and paper towels and these should be securely stored.

6.8 Project Specific Hygiene and Cleaning Arrangements

Location/Activity	Arrangements/Control Measures
Hand hygiene	Provide hand cleaning facilities – team to ensure sufficient hand sanitiser/wipes are available for the duration of the survey.
Shared objects/spaces/equipment	Do not share tools etc. where reasonably practicably. Increased levels of cleaning to be actioned. In addition to general cleaning products, stocks of hand sanitiser and sanitiser wipes to be located in vehicles. Equipment to be identified as person specific wherever possible to reduce risk of transfer, gloves to be worn. Cleaning of equipment to be actioned. Any shared equipment/spaces to be cleaned after each use. Appropriate cleaning products will be provided.

7 Canteens and Eating Arrangements

- Dedicated eating areas should be identified on site to reduce food waste and contamination
- Break times should be staggered to reduce congestion and contact at all times
- Hand cleaning facilities or hand sanitiser should be available at an appropriate location where people eat and should be used by workers when entering and leaving the area.
- The workforce should be encouraged to bring pre-prepared meals and refillable drinking bottles from home
- Workers should sit 2 metres apart from each other whilst eating and avoid all contact
- Where catering is provided on site, it should provide pre-prepared and wrapped food only
- Payments should be taken by contactless card wherever possible
- Crockery, eating utensils, cups etc. should not be used unless they are disposable or are washed and dried between use
- Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced
- Tables should be cleaned between each use
- All rubbish should be put straight in the bin and not left for someone else to clear up
- All areas used for eating must be thoroughly cleaned at the end of each break and shift.

7.1 Project Specific Eating Arrangements

Canteens/Break out Areas	Arrangements/Control Measures
Eating Arrangements	Team are instructed not to share food. All operatives to provide their own food. Utensils such as cups etc. must not be shared and should be cleaned thoroughly before and after use. Items such as coffee, tea, sugar and other such shared items to be stored in containers which can be cleaned or person specific bags. Staff encouraged to bring premade hot drinks to site in a thermos flask. No canteen on site – staff to take breaks in their vehicles, or outside, ensuring social distancing measures is maintained. Shared spaces to be cleaned after each use with appropriate cleaning products and a sign off sheet showing when it has been cleaned and by who will be maintained. The team will use the facilities at the HS2 compound on Fazeley Street which is a five minute walk from the site. Hand hygiene to be maintained before food/drink consumption

8 Site Meetings

- Utilise video and teleconferencing for meetings wherever possible.
- Briefings such as inductions, setting to work, permit issue etc. should be undertaken with the minimum required numbers of people for the shortest period possible. Multiple briefings may be required to observe separation requirements.
- A "wet signature" is not required and the briefing facilitator should instead make a note of those in attendance.
- Briefings and meetings should be held outdoors or in open areas where possible
- Only absolutely necessary meeting participants should attend
- Attendees should be at least 2 metres apart from each other
- Rooms should be well ventilated / windows opened to allow fresh air circulation.

9 Employee illness at work

9.1 If a worker develops a high temperature or a persistent cough whilst at work, they should inform their line manager and arrange to return home (or where impractical to their company provided temporary accommodation) immediately.

9.2 They should avoid touching anything and where applicable cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow.

9.3 They must then follow the guidance on self-isolation and not return to work until their period of self-isolation has been completed. The line manager will keep in contact with the employee to offer any practical support during this period.

9.4 Anyone who has been in close proximity (inside 2 metres) or shared transportation will also be asked to self-isolate in accordance with government instructions on whole household isolation.

9.5 It is not necessary to close the workplace or send any staff home, unless government policy changes. Any equipment or work areas where the employee has been working will be cleaned in accordance with the government guidance on COVID-19 decontamination in non-healthcare settings.

9.6 Cleaners will wear disposable gloves and use disposable cloth to wipe down surfaces using disinfectant cleaning products. These should be double bagged, then then thrown away in the regular disposal bins / skips after cleaning is finished.

9.7 If an area has been heavily contaminated, such as with visible bodily fluids, from a person, a specialist cleaning contractor will be required to undertake a thorough clean of the area.

9.8 Inform LM if anyone on site reports a diagnosed case of Coronavirus (Covid-19), or there are any cases of self-isolation.

9.9 LM will request information on number of diagnosed cases of Coronavirus (Covid-19) or self- isolation as part of the monthly H&S KPI returns also.

10 Emergency Preparedness

10.1 Site management teams must proactively assess emergency preparedness including hibernation plans to maintain project and asset security.

10.2 Consideration must also be given to potential delays in emergency services response, due to the current pressure on resources. Consider preventing or rescheduling high-risk work or providing additional competent first aid or trauma resources.

10.3 In the event of first aid being required the social distancing arrangements should be maintained (unless there is imminent threat to life) and instruction for self-administering aid should be given from outside the 2m separation area. The primary responsibility is to preserve life and first aid should be administered if required and until the emergency services attend.

10.4 Consideration should also be given to resource continuity for key roles with assistance from LM project manager and LM functional support.

10.5 Project Specific Emergency Arrangements

Activity/Type of Emergency	Arrangements/Control Measures
First aid	All first aid kits to contain emergency face coverings for first aiders and the person they are assisting. Where possible first aid should be conducted while maintaining 2m social distance. COPA First Aid Guidance Note will be available for the team for further details.

11 Monitoring and Review

11.1 The company will continue to review its approach in line with government guidance and restrictions.

11.2 There are various internal review panels assessing business impact and response at executive, business unit and project level. The company processes, FAQs and project summary document will be routinely updated and reissued to reflect LM's approach.

11.3 Site COVID-19 inspections will be completed by LM for each site, at a minimum frequency of weekly.

12 COVID-19 Safety Marshal

12.1 In line with the current Government and Public Health England guidance, to address the spread of COVID 19, LM has determined that there is a requirement for a dedicated role on our worksites to 'marshal' the implementation of control specified to prevent the spread of the COVID-19 virus.

12.2 The nominated individual must have the appropriate authority to stop works if necessary. The role can be either combined with existing site duties or a stand-alone position depending local circumstances.

COVID-19 Safety Marshal	Project Responsibilities
Jon Gill, Building Recording Manager	First aider on site; ensuring social distancing and hand hygiene measures are maintained; discussing with project leader and manager any potential risks to implementation of the control measures.

13 References

- https://murphygroup.sharepoint.com/sites/TheHub/SitePages/COVID-19-INFORMATION.aspxCovid-19 FAQs
- Amber briefing – Social distancing
- Amber briefing – Social distancing delivery drivers
- Green communication –Assurance visit guidance – support functions
- Amber briefing – COVID-19 Shared accommodation guidance
- Amber briefing – COVID-19 Vehicle occupancy
- Welfare checklist
- COVID-19 inspection form
- What good looks like booklet COVID-19 edition.

15.2 Appendix B – Project Plan

WP 029 D Historic Environment Works – Digbeth Canal Wall – Enabling Works North Contract

Project Plan for Historic Building Recording

Document no: 1EW04-LMJ_DJV-EV-PLN-NS08-029009

Revision	Author	Checked by	Approved by	Date	Reason for revision
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1 Executive Summary

1.1.1 This High Speed 2 (HS2) North Section Project Plan details the proposed methodologies, techniques and outcomes for the historic building recording of the Digbeth Canal Wall. The building recording addresses a section of the canal retaining wall south of Curzon Street and north of the Grade II listed section of the 1838 Curzon Street railway bridge in Birmingham, West Midlands. The setting of the asset will also be recorded.

1.1.2 The Scheme Design drawing (Drawing No. 1EW04-LMJ_DJV-GT-DGA-NS08-053020) shows that the wall's height will be reduced by a maximum of approximately 3m from the wall towards the southern end of the wall. For the majority of the rest of the wall's length the height is to be reduced by approximately 2m. Lengths are not provided on the Scheme Design drawing of the canal wall so more detailed dimensions to the works are not able to be provided here.

1.1.3 The GWSI: HERDS Specific Objectives guiding the project plan are below:

- KC43: Investigate the link between the development of the railways and broader changes in the historic landscape, such as urban settlement expansion and the decline of the canal network

1.1.4 The purpose of this Project Plan is to:

- define the scope of the building recording;
- outline the aims of the recording and how it will contribute to the specific objectives of the GWSI: HERDS;
- specify the methodology to be employed; and
- set out the proposed deliverables and reporting mechanisms.

2 Location and Site Background

2.1 Baseline

2.1.1 The Project Plan has been prepared in accordance with guidelines set out in HS2 Technical Standard – Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (HS2-HS2-EV-STD-000-000036).

2.1.2 The building recording will address the retaining wall ('the Site') associated with the Digbeth Branch Canal located between the Curzon Street railway bridge tunnel to the south and Curzon Street road bridge to the north within Birmingham City Council (Appendix A, Figure 1). The Site is here defined as the section of retaining wall and centred approximately on National Grid Reference (NGR) 408123 287161 (Appendix A, Figure 2). The Site is located within the boundary of the Warwick Bar Conservation Area.The Digbeth Canal Wall is positioned adjacent to the locally listed Ashsted Canal Locks and Digbeth Branch Canal.

2.1.3 The HS2 Phase One Environmental Statement (ES) identified the Digbeth Branch Canal (ES Ref. WCS073) as a non-designated heritage asset which is intersected by the Land Potentially Required During Construction. The Digbeth Branch Canal was completed in 1790 as an extension to the Grand Union Canal and is crossed by the 1838 Curzon Street railway bridge immediately south of the Site[1]. The Digbeth Canal includes the Ashsted Locks (ES Ref. WCS074), described as a flight of five locks between the Curzon Street railway bridge tunnel and the Ashted Road tunnel. The canal is in a deep cutting and passes through a significantly altered industrial setting with many of the 19th and 20th century buildings which previously occupied the canalside having been demolished. This has resulted in a more open setting than was historically the case.

2.1.4 The ES identified 14 non-designated heritage assets located within 250m of the Digbeth Canal Wall which are shown on Figure 3 in Appendix A and listed in Appendix B, Table 7. Assets within the surrounding area were mainly built in connection with the industrial development of the area. Six additional heritage assets are recorded in the Birmingham Historic Environment Record (HER) within the 250m search area and are shown on Figure 2 and listed in Appendix C, Table 7.

2.1.5 Five designated heritage assets are also within the 250m buffer area. These comprise:

[1] London-West Midlands Environmental Statement Volume 5: Technical Appendices. CFA26 Washwood Heath to Curzon Street. Baseline report (CH-001-026). Cultural Heritage. 3.6.5.

- Grade II* listed Birmingham Gun Barrel Proof House (NHLE 1291262);
- Grade II listed Eagle and Ball Public House (NHLE 1076223);
- Grade II listed The 1838 section of railway bridge into Curzon Street Station over Digbeth Branch Canal (NHLE 1075609);
- Grade II listed Canal Side Warehouse with Stop Lock and Dock, Warwick Bar, Warwick and Birmingham Canal (NHLE 1075624); and
- Grade II listed Lawley Street Railway Viaduct (NHLE 1076135).

2.1.6 Thirteen previous archaeological investigations were located within 250m of the Digbeth Canal Wall (Appendix A, Figure 4). These investigations range from desk-based assessments to evaluations and are detailed in Appendix C, Table 8. The investigations may provide information on the original industrial developments either side of the Digbeth Branch Canal and therefore provide further context for the heritage asset.

2.2 Historic development

2.2.1 The Digbeth Branch Canal was completed in 1790. It is possible that the present-day canal wall was also constructed by that date., However, as the canal wall is not labelled on any of the historic mapping, it is impossible to determine the precise date when the asset was built. The earliest available map showing the Site is the Ordnance Survey Drawing dating to 1814 (not reproduced)[2]. This map shows the canal prior to the construction of the railway and expansion of the city towards the site. The banks of the canal at the location of the site on the 1814 drawing are undeveloped and surrounded by fields. The canal is still shown to be crossed by the Curzon Street road.

2.2.2 The area surrounding the asset has been through phases of changing industrial development and decline during the last two centuries as shown in the historic mapping. The wall and its associated section of the canal does not appear to have undergone any major alteration since its construction apart from the construction of the Curzon Street railway bridge tunnel in 1838 which most likely removed part of the original wall.

2.2.3 The development of the Site's surroundings is first depicted on Richard Foster's 1838 map of Curzon Street Station following its construction to the west of the canal wall (Appendix A, Figure 5). The drawing shows the layout of the early Curzon Street Station following its

[2] Dawson, R, 1814. *Ordnance Survey Drawing, Birmingham 24*. [Online] Available at: http://britishlibrary.georeferencer.com (Accessed on 10/07/2020)

completion in 1838 and depicts the early components of both the Grand Junction Railway (GJR) and London and Birmingham Railway (L&BR) sections of the station. The Digbeth Canal Wall forms part of the north-eastern boundary of the Curzon Street Station site and connects to the Curzon Street Screen Wall to the north. The construction of the Curzon Street railway bridge tunnel would have likely resulted in the demolition of part of the Digbeth Canal Wall and represents the only probable significant change to the fabric of the wall.

2.2.4 The area surrounding the site continued to be developed during the 19th century following the construction of Curzon Street Station and the railway so that the setting of the Digbeth Canal Wal became more closed and industrial. The Ordnance Survey (OS) map of 1887 (Appendix A, Figure 6) shows the section of the canal enclosed on both sides by railway infrastructure. Industrial back-to-back housing is also visible to the west, north and east of the site demonstrating the rapid expansion of Birmingham and its population during the late-19th century. A pumping station for the railway is also labelled on this section of the canal which appears to have remained in use until the mid-20th century. By this time Curzon Street Station had ceased to function as a passenger terminus and was now in use only as a goods station, as labelled on Ordnance Survey maps from 1887 up until the closing of the station in 1966 and its subsequent demolition (Appendix CH-001-026, 3.6.21). Very little change is apparent between the OS maps of 1887 through to 1937/1938 (Appendix A, Figures 6 – 8).

2.2.5 Many of the small structures lining the east bank of the canal appear to have been demolished prior to the Ordnance Survey map surveyed 1937-1938 (Appendix A, Figure 9). Additional features can be seen to the west of the canal wall within the Curzon Street complex which may be related to the goods station.

2.2.6 Whilst the Ordnance Survey map surveyed 1952-1953 (Appendix A, Figure 10) does not show any significant change to the canal, the changing character of the area is shown by the disappearance of most of the housing to the north of the site, altering the historic industrial setting of the Digbeth Canal Wall.

2.3 Site Conditions

2.3.1 The Dibgeth Canal Wall forms the eastern retaining wall of the Digbeth Branch Canal for 92m between the Curzon Street road bridge to the north and the Curzon Street railway bridge tunnel to the south. The wall is located at a section of the canal which included one of the Ashted locks.

2.3.2 The wall is constructed from red and blue brick reinforced with a metal band which runs along the east face of the wall close to the top. The bricks appear similar to the red and blue bricks used in the construction of the nearby lock and pavement.

2.3.3 Much of the wall is overgrown with vegetation, particularly to the south by the railway tunnel and in the northern half which is almost entirely obscured by vegetation towards the Curzon Street bridge. Some modern graffiti is visible on the wall towards the south although this is mostly obscured by shrubs and long grass. A significant amount of graffiti is also present on the canal lock mechanisms to the east of the wall.

2.3.4 The asset's setting is largely more open than it was historically, as a result of the demolition of most of the industial buildings that once lined the canal banks. The 21st century Birmingham City University Library and University Locks student accommodation dominate the views to the north while the view south is blocked by the railway bridge tunnel.

2.3.5 Construction of HS2 Phase One North will result in the demolition of part of the Digbeth Canal Wall. The setting will also become more closed following the construction of the new railway and subsequent building developments in the area.

2.4 Building Context

2.4.1 The Digbeth Canal Wall runs north to south over a length of 92m between the Curzon Street road bridge to the north and the Grade II Listed Curzon Street railway bridge tunnel to the south. The Digbeth Branch Canal was completed in 1790 and links the Birmingham and Fazeley Canal at Aston Junction and the Grand Union Canal at Digbeth Junction. The 2.4km long canal is divided into six locks known as the Ashted Locks leading down from Aston Junction.

2.4.2 The Digbeth Branch Canal is located within, and forms the boundary of, the Warwick Bar Conservation Area[3].. The Site is significant to this conservation area as it is dominated by the transport networks which were constructed as part of the industrial development of Birmingham (Appendix CH-001-026, 4.3.53). These consist of the River Rea, the canal network and finally the railway and development of the road network.

2.4.3 The setting of the Site was significantly altered during the second half of the 20th century with the demolition of many of the larger industrial buildings along each bank, most notably the demolition of the Curzon Street Station buildings in the late 1960s. The Digbeth Branch Canal lost most of its historic urban setting in the post-war era to new road construction and modern redevelopment[4]. Since the designation of the Conservation Area in June 1987 a series of

[3] The Warwich Bar Conservation Area: Character Appraisal and Supplementary Planning Policies document states that 'the demolition of any canal boundary walls, canal retaining walls or bridge walls and parapets will not be allowed' on Page 34.
[4] Warwich Bar Conservation Area: Character Appraisal and Supplementary Planning Policies. March 2008. Birmingham City Council. Page 13.

projects have been undertaken to enhance the canals. Repairs to the canal wall were carried out and the towpaths were resurfaced.

3 Aims and Objectives

3.1 Requirement for Work

3.1.1 The historic building recording is required as a portion of the Digbeth Canal Wall will be demolished and because its investigation and recording will address Specific Objectives in the GWSI: HERDS. The building recording will comprise a Level 2 survey, as defined in Understanding Historic Buildings: A guide to good recording practice (Historic England, 2016). This is because of recording's high potential to contribute to Specific Objectives, the significance of the asset, the extent of current knowledge regarding the asset or its type, and the nature and magnitude of the impact.

3.1.2 Historic building recording shall be undertaken in accordance with Standard and guidance for the archaeological investigation and recording of standing buildings or structures (CIFA, 2014, updated June 2019).

3.1.3 In accordance with HS2's Technical Standard for Setting Recording (HS2-HS2-EV-STD-000-000037), 'Simple recording' will be undertaken. This is because the setting of the Digbeth Canal Wall is characterised by the development of the canal and railway as well as the nearby Curzon Street Station. The setting of the asset has changed gradually over time but retains significant elements from earlier phases.

3.2 Aims

3.2.1 The aims of the historic building recording are to assess and record the character, extent and significance of the Digbeth Canal Wall. The recording will investigate the building with consideration to:

- the use and character of the building, its component parts and evidence of its use and construction;
- identifying, explaining and recording any elements of architectural or historic significance within the Site;
- understanding the role of the site in the context of the surrounding area and its community
- record the change to the significance of the identified heritage assets as a result of the

detailed design;

- suggest provisions to be made during demolition, where applicable, for the salvage of material of architectural or historic significance which has the potential for reuse;
- create a lasting report of the building(s); and
- contribute to the delivery of GWSI: HERDS Specific Objectives as specified in Section 3.3.

3.3 Contribution to GWSI: HERDS Specific Objectives

3.3.1 All historic environment work on HS2 is guided by the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) (Ref HS2-HS2-EV-STR-000-000015) and the Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035). Its purpose is to establish the objectives and mechanisms for designing and carrying out all historic environment related investigations, so that the work has specific aims, rather than an approach of simply mitigating impacts in order to collect information.

3.3.2 Through delivery of the works set out in Section 4 and through addressing the aims set out in 3.2 the building recording will create knowledge and outputs that would contribute to the specific objectives in the following ways:

Table 1 Contribution to Specific Objectives

Specific Objective	Contribution
KC43: Investigate the link between the development of the railways and broader changes in the historic landscape, such as urban settlement expansion and the decline of the canal network	The Site is located within an area that represents a distinct interaction between the canal network and the railway in the development of Birmingham during the Industrial Revolution. The wall is associated with a section of the Digbeth Branch Canal which was completed in 1790 which was later impacted by the construction of the Curzon Street railway bridge tunnel in 1838. The site is also situated in an area that underwent significant changes in character following the development of the railway as the city rapidly expanded beyond the canal during the 19th century. Historic building recording of the site has the potential to contribute towards our understanding of the interaction between the developing transport infrastructure in th

	centre of Birmingham and its relationship to the expansion of the city.

4 Scope and Methodology

4.1 Introduction

4.1.1 The building recording shall be undertaken in accordance with specific guidance produced by HS2, namely the Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) and the Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) (HS2-HS2-EV-STR-000-000015).

4.1.2 The Contractor shall comply with the process set out in the Heritage Consent Strategy (HS2-HS2-EV-STR-000-000008).

4.2 Location Specific Written Scheme of Investigation

4.2.1 A Location Specific Written Scheme of Investigation (LS-WSI) shall be produced. This shall provide the detailed method of investigation, including survey area, access arrangements, welfare, accommodation, site safety, RAMS, etc. The LS-WSI will be approved by HS2 prior to starting work.

4.3 Historic Building Recording

4.3.1 Tasks and activities that shall be undertaken as part of the Level 2 Historic Building Recording include:

- desk-based or archival research of drawings and maps held at the Birmingham Archives and collections to identify and examine documents relating to the design and construction of the building on the Site. The research will include the assessment of existing secondary sources compiled as part of the HS2 project; if local archives and libraries are inaccessible due to Covid-19 related precautionary measures, the off-site investigation could be undertaken after the site visit.
- a historic map regression to identify any changes to the building, how the Site developed over time and its relationship with the town and city of Birmingham and the surrounding wider landscape;
- an analysis of the building from direct observations, to record the extant fabric and identify alteration phases, to create the photographic and drawn records and to inform

the written description;

- a site walkover survey to inform a written description of the asset and a description of the asset's setting;
- a written description of the historic building, focusing on overall form and features of architectural significance, a summary of the alterations undertaken over time by owners/tenants, identifying any key drivers or periods for change;
- a photographic record of the asset to accompany the written description; and
- detailed recommendations for the salvage of any building materials, if appropriate.

4.3.2 The building recording shall be informed by consulting the following sources:

- current engineering detailed designs and construction information;
- Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) (HS2-HS2-EV-STR-000-000015);
- HS2 Phase One Environmental Statement and Supplementary Environmental Statements (HS2-HS2-EV-STD-000-000036);
- the Technical Standard Specification for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035;
- the Technical Standard: Recording of the Setting of Heritage Assets (HS2-HS2-EV-STD-000-000037); and
- Sources listed in Table 2 below

Table 2 List of sources

Local heritage	• Local interest groups • Local authority archaeologists • Local authority conservation officers
Historic Environment databases and documents	• Historic environment records • National Heritage List for England (NHLE) • Historic England Archives • National Mapping Programme • Historic building survey data

	• Historic building grey-literature reports • Historic building journals and monographs • Regional inventories • Public and private collections • Conservation Area Appraisals and Management Plans • Extensive Urban Surveys • Historic Townscape or Landscape Characterisation datasets and reports
Historical documents and published sources	• Architectural drawings, floor plans and elevations • Charters • Registers • Manuscript collections (secular and ecclesiastical) • Deeds • Contemporary publications • Published inventories e.g. Pevsner
Cartographic and pictorial documents	• Ordnance Survey maps, as detailed scale as possible • Building floor plans and elevation drawings • Early maps, prints and paintings • Tithe, enclosure and other parish maps • Estate plans
Remote sensing data	• Aerial photographs held at relevant repositories • Existing measured survey or remote sensing records e.g. laser scans, previous building surveys
Secondary sources	• Regional and period studies • Architectural history or buildings archaeology thematic studies • Landscape studies • Regional and National Research Assessments and Strategies

4.3.3 The building recording shall comprise a Level 2 survey, as defined in Section 5 of Historic England's guidance, as summarised below in Table 3 and shall include the elements specifically outlined in 4.3.4 – 4.3.6 below.[5]

Table 3 Historic England levels of recording for historic building assessment works

Recording Level	Scope	Description
Level 2	Descriptive record	A higher level of descriptive survey where further works are not envisaged. The interior and exterior will be inspected, and the written account will be accompanied by photographs and some drawing. The survey will enable a general statement of significance to be made.

4.3.4 The drawn record shall include the following items specified in the Historic England guidance:

- measured sketched plans of all floors and elevations of all sides of the building (Item 1) and schematic age of fabric plan of the complex, at ground level. Plans should include the location of any structural or ornamental features of historic significance (Item 3);
- a site plan relating the building to other structures on the Site and to any related topographical and landscape features (Item 7);
- plan or plans identifying the location and direction of accompanying photographs (Item 8); and
- copies of earlier drawings throwing light on the building's history (Item 9).

4.3.5 The photographic record shall include the following items:

- general views of the asset in its wider setting or landscape (Item 1);
- the building's external appearance. Typically, a series of oblique views will show all external elevations of the building and give an overall impression of its size and shape. Where individual elevations include complex historical information, it may also be appropriate to take views at right-angles to the plane of the elevations (Item 2); and

4.3.6 The written account shall include the following items:

- the precise location of the asset as an address and a National Grid Reference (Item 1);
- a note of any statutory designation (that is, listing, scheduling, Register of Historic

[5] Historic England, 2016. *Understanding Historic Buildings: A guide to good recording practice*

Parks and Gardens, conservation area). Information on statutory designations can be found on the Historic England website. Non-statutory designations (local lists) may be added (Item 2);

- the date when the record was made, the name(s) of the recorder(s) and the location of any archive material (Item 3);
- a contents list, and lists of illustrations, photographs and figures (item 5);
- a detailed summary statement reporting the building's form, function, date and sequence of development. The names of architects, builders, patrons and owners should be given if known (item 6);
- a discussion of the building's past and present relationship to its setting: its relationship to local settlement patterns or other man-made features in the landscape; its part in a larger architectural or functional group of buildings; its visual importance as a landmark, etc. (Item 15);
- a full bibliography and a list of sources consulted (Item 23); and
- a glossary of architectural or other terms likely to be unfamiliar to readers. If few in number, terms may be explained more economically within the text or in footnotes (Item 24).

5 Post-Investigation Reporting and Archiving

5.1.1 A single building survey report shall be produced with the following structure:

- Executive Summary;
- Introduction;
- Summary of project's background (including Specific Objectives addressed);
- Description and illustration of the building location, including of its setting;
- Previous work(s) relevant to the building recording (e.g. DBA, DDBA, previous surveys);
- Topography of the site;

- Specific Objectives and aims;
- Methodology of site-based and off-site (reporting) work, including of recording setting;
- Results and observations including quantitative report, accompanied by illustrations (including any constraints on site);
- Assessment and interpretation of results against original expectations and Specific Objectives and, where appropriate, a review of evaluation strategy;
- Consideration of the results and conclusions within their wider context;
- Evaluation of the methodology employed, and the results obtained (i.e. a confidence rating);
- Publication and disseminations proposals (in addition to survey report);
- Archive deposition;
- Bibliography;
- Appendices, including:
- Specialist assessment or analysis reports where undertaken (e.g. dendrochronology)
- Illustrations, including location plans with scale and grid co-ordinates
- A photographic record of the building and its setting.

5.1.2 The following figures shall accompany the survey results and interpretation:

- General location plan (mandatory);
- Engineering design (mandatory);
- Cartographic, pictorial and image data (mandatory);
- Survey drawings, plans and elevations (where relevant);
- Plans or drawings showing extent and features of setting (where relevant);
- Survey drawings showing areas of building identified for conservation, salvage etc.
- Townscape/Landscape Character Area Mapping (where relevant);

- Impact drawings (where relevant).

6 Dissemination

6.1.1 The project archive and finds shall be deposited with the appropriate museums archive, as identified in the LS-WSI, according to the Historic Environment Physical Archiving Strategy (HS2-HS2-EV-STR-000-000018) and the Historic Environment Physical Archiving Procedure (HS2-HS2-EV-STD-000-000039).

6.1.2 Digital and hard copies of the report shall be submitted in accordance with the requirements of the relevant Historic Environment Record (HER) and the National Record for the Historic Environment (NRHE) in Swindon.

6.1.3 Significant discoveries shall be reported in summary in the local archaeological society journal and/or other relevant journal as appropriate.

6.1.4 In accordance professional standard practice an 'Online AccesS to the Index of archaeological investigationS' ('OASIS') record shall be completed for submission to the HER and Archaeological Data Service (ADS). A digital copy of the final report shall be submitted to the ADS.

6.1.5 All digital data management and archiving shall be carried out in accordance with the Historic Environment Digital Data Management and Archiving Procedure (HS2-HS2-EV-STD-000-000040) and the Historic Environment Digital Data Management and Archiving Strategy (HS2-Hs2-EV-STR-000-000019).

7 Information Management

7.1.1 GIS deliverables shall be provided in accordance with the *Cultural Heritage GIS Specification* (HS2-HS2-GI-SPE-000-000004). CAD files shall be GIS compatible and follow standards set out in the same Specification. Figures may be produced using CAD, but final deliverables must be supplied in GIS format.

7.1.2 Mapping and spatial data deliverables shall conform to the Employer's GIS Standards as set out in HS2-HS2-GI-STD-000-000002 and other associated referenced documents.

7.1.3 The Employer's standard template for reports (HS2-HS2-PM-TEM-000-000004) shall be used.

8 Quality Assurance Processes

8.1.1 The building recording shall be managed and undertaken by suitably qualified, experienced and competent professionals.

8.1.2 The Appointed Contractor shall liaise with DJV regarding the works programme and quality assurance of the works. In the event of potential delays to programme, the Appointed Contractor shall issue an Early Warning Notice (EWN) via CEMAR following internal approval by their Project Director.

8.1.3 The Appointed Contractor shall have direct communication with LM on contractual matters and non-heritage quality assurance; DJV shall be informed of any EWNs raised in the course of the works.

8.1.4 The works shall be overseen and internally quality-assessed by the Appointed Contractor's senior management and shall be directed by their Project Director.

8.1.5 All parties will follow HS2 protocols for Intra- and Inter-project communication, which will consist of the following format:

- Weekly progress meetings will be held to discuss the progress of on-site works, forecasting of the works programme and to highlight any potential EWNs;
- Matters arising from progress meetings will be discussed and meeting minutes will be forwarded to all parties (Appointed Contractor, DJV, LM).

8.1.6 The following interfaces are anticipated based on current information:

- The Employer (HS2);
- The Contractor (LM-JV)
- The Archaeological Consultant (DJV);
- Third party stakeholders via DJV;
- HS2 via DJV;
- Other contractors working on separate parts of the evaluation area.

8.1.7 The Appointed Contractor shall submit a draft of all reports to Asite for review after they have been checked and then reviewed by senior qualified, experienced and competent professionals. DJV will subsequently provide internal feedback and may require that the Appointed

Contractor amends documentation before acceptance. The Appointed Contractor shall upload PDFs of accepted documents to Asite for issue to HS2. HS2 may provide feedback and require amendment to submitted documents before they are approved.

9 Evidence of Engagement

9.1.1 This section will be completed following to provision of comments from the Local Planning Authority and stakeholders.

10 Figures

10.1.1 The following figures are attached as Appendix A:

- Figure 1: Site Location of Digbeth Canal Wall
- Figure 2: Site Plan of Digbeth Canal Wall
- Figure 3: Heritage Assets within 250m of Digbeth Canal Wall
- Figure 4: Previous Investigation within 250m of Digbeth Canal Wall
- Figure 5: Richard Foster's 1838 drawing of Curzon Street Station
- Figure 6: Ordnance Survey map of 1887
- Figure 7: Ordnance Survey map of 1902
- Figure 8: Ordnance Survey map of 1913
- Figure 9: Ordnance Survey map of 1937-1938
- Figure 10: Ordnance Survey map of 1952-1953

11 References and Glossary of Terms

11.1 References

Table 4 References cited in this report

Reference	HS2 document reference no.
Birmingham historic environment data and mapping at: https://localview.birmingham.gov.uk/Planning/Sites/HLC_Maps/	-
Historic England, 2016, Understanding Historic Buildings: A guide to good recording practice	-
Warwick Bar Conservation Area: Character Appraisal and Supplementary Planning Policies. March 2008. Bimringham City Council.	-
HS2 Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS)	HS2-HS2-EV-STR-000-000015
HS2 Heritage Consent Strategy	HS2-HS2-EV-STR-000-000008
HS2 London West Midlands Environmental Statement, Volume 5 Technical Appendices, CFA26: Washwood Heath to Curzon Street, cultural heritage	CH-001-026, ES 3.5.2.26.3, CH-002-026, ES 3.5.2.26.4, CH-003-026, ES 3.5.2.26.5
HS2 London West Midlands Environmental Statement, Volume 5: Map Books, Cultural Heritage - West Midlands Metropolitan (Part 4 of 4)	ES 3.5.1.4.4
HS2 Technical Standard Specification for historic environment investigations	HS2-HS2-EV-STD-000-000035
HS2 Technical Standard: Specification for Project Plans and Location Specific Written Scheme of Investigations	HS2-HS2-EV-STD-000-000036
HS2 Technical Standard for Recording of the Setting of Heritage Assets	HS2-HS2-EV-STD-000-000037
Warwickshire Railways, available at: http://www.warwickshirerailways.com/index.htm	-
Richard Foster. 1990. Birmingham New Street: The Story of a Great Station. Background and Beginnings: The Years up to 1860. Huddersfield.	-

11.2 Glossary of Terms

11.2.1 The following terms have been used in this report:

- **Appointed Contractor** - the organisation undertaking the building recording on behalf of the Contractor.
- **Contractor** – the organisation undertaking the building recording on behalf of the Employer.
- **Detailed Desk Based Assessment** – analytical document that builds on the information gathered previously in the Environmental Statement to address issues, questions or uncertainties within a given area. It may be developed to provide a more detailed understanding of the resource in an area to inform design development or construction programming.
- **DJV**- the body responsible to the Contractor for assurance of historic environment work and all communication with the Employer and other stakeholders regarding strategy, scope and method of work.
- **Employer** – Hs2 Ltd.
- **Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy** – the framework for delivering all historic environment investigations undertaken as part of the HS2 Phase 1 programme.
- **Health and Safety Compliance Manager** – The manager with responsibility for site inspections, reporting and issuing of recommendations for the Site Supervisor and Project Manager to implement.
- **Location** – a specific HS2 worksite or group of worksites that are being addressed as a combine historic environment investigation programme of assessment, evaluation and investigation.
- **Location Specific WSIs** (LSWSI) – specification document assembling one or more Project Plans within an area of land defined primarily for construction programme purposes. The LS-WSIs will be agreed with the Project Manager and would provide a costed and programmed approach to delivering outcomes.
- **Project Director** - a manager provided by the Appointed Contractor who is responsible for the direction of the works and the field team.
- **Project Manager** - acts as administrator of the contract for the Contractor, handling certification, compensation events etc., with an obligation to act fairly and impartially as an agent of the Contractor. An office-based manager who is the Contractor's

principal point of contact and who has overall responsibility for the project budget and delivery

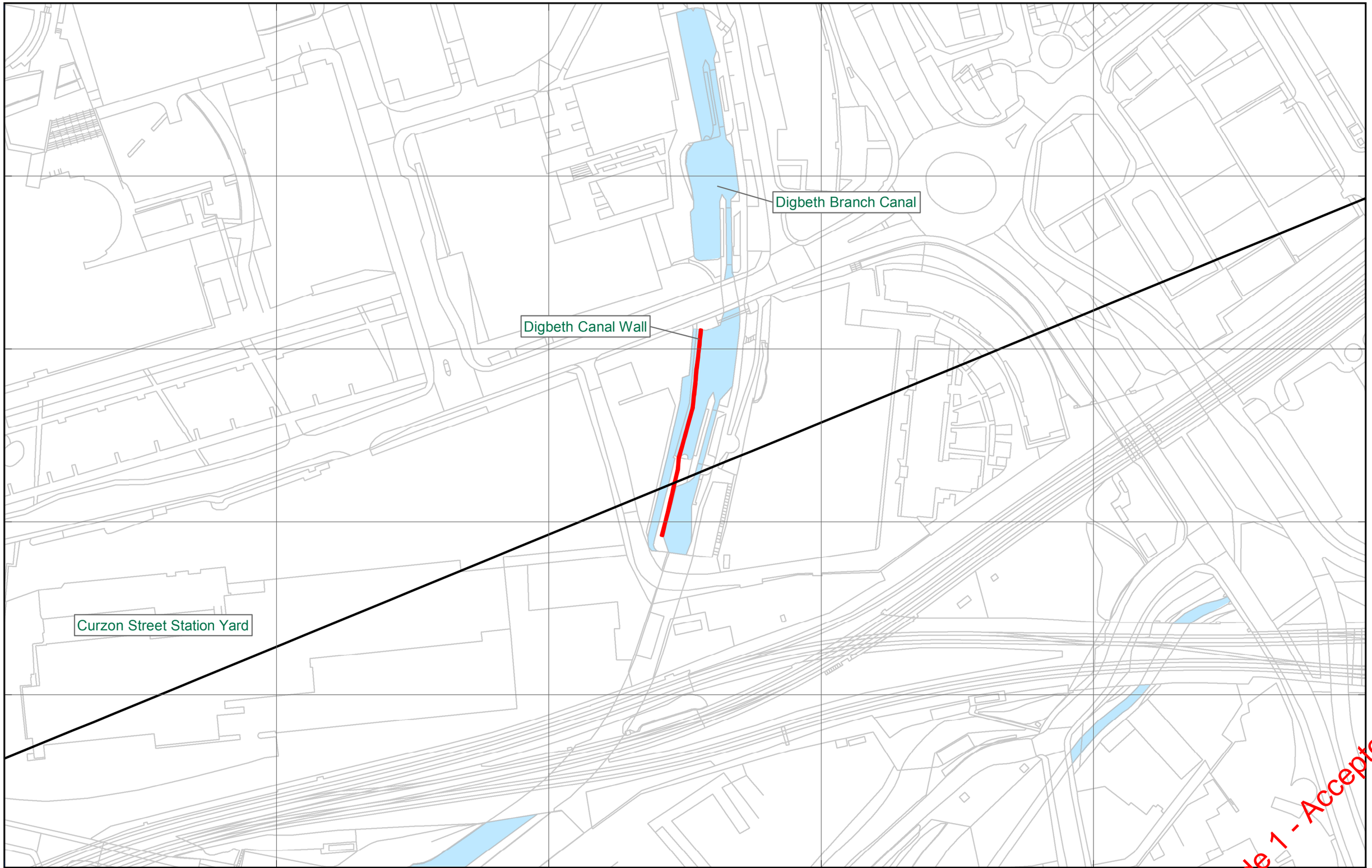
- **Project Plans** – specification document for each specific package of activity (e.g. a survey, desk-based assessment, excavation, recoding project). The plans would respond to the Specific Objectives set out in the GWSI: HERDS and be delivered within an agreed budget.
- **Works** – the specific historic environment assessment, evaluation or investigation works at each location.

11.3 Acronyms

Table 5 Acronyms salient to this report

Acronym	Description
CIfA	Chartered Institute for Archaeologists
CoCP	Code of Construction Practice
DDBA	Detailed Desk Based Assessment
EIA	Environmental Impact Assessment
EMR	Environmental Minimum Requirement
ES	Environmental Statement
GIS	Geographical Information Systems
GWSI: HERDS	Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy
HE	Historic England (formerly English Heritage)
HER	Historic Environment Record
IHBC	Institute of Historic Building Conservation
LLAU	Limits of Land to be Acquired or Used
LS-WSI	Location Specific Written Scheme of Investigation
OASIS	Online Access to the Index of archaeological investigations

Appendix A: Figures



Legend

- Route in tunnel
- Route on surface
- Site outline
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body

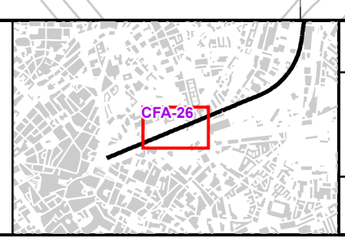


Figure 1

Map Name

Digbeth Canal Wall
Location Plan

Community Forum Area CFA26
Washwood Heath to Curzon Street

HS2

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Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA

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Metres

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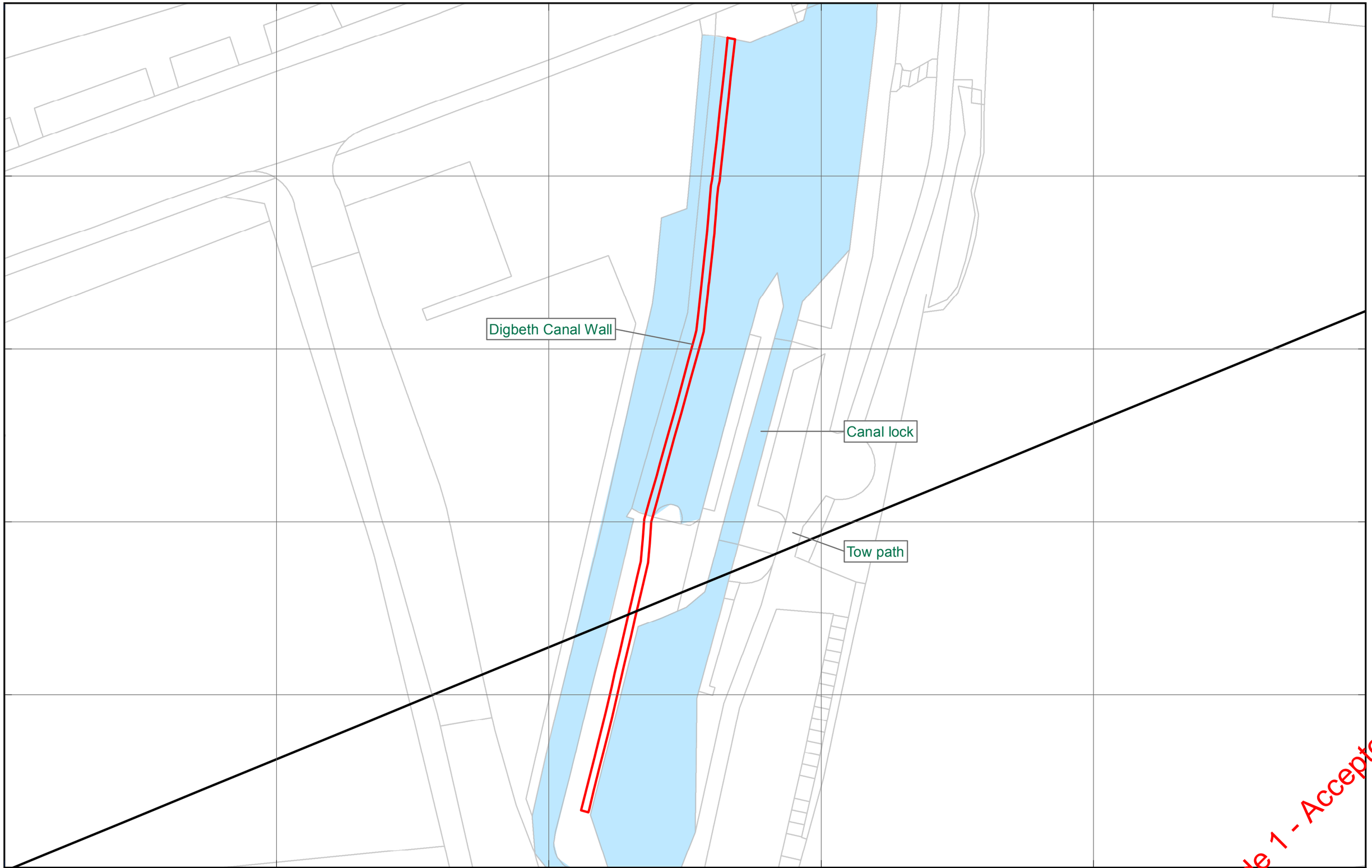
Date: 13/07/20



Legend

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- Route on surface
- Site outline
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body

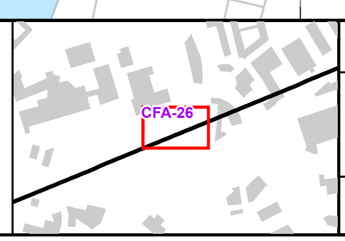

Figure 2

Map Name

Digbeth Canal Wall
Site Plan

Community Forum Area CFA26
Washwood Heath to Curzon Street

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snow Hill, Queensway,
Birmingham, B4 6GA

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Metres

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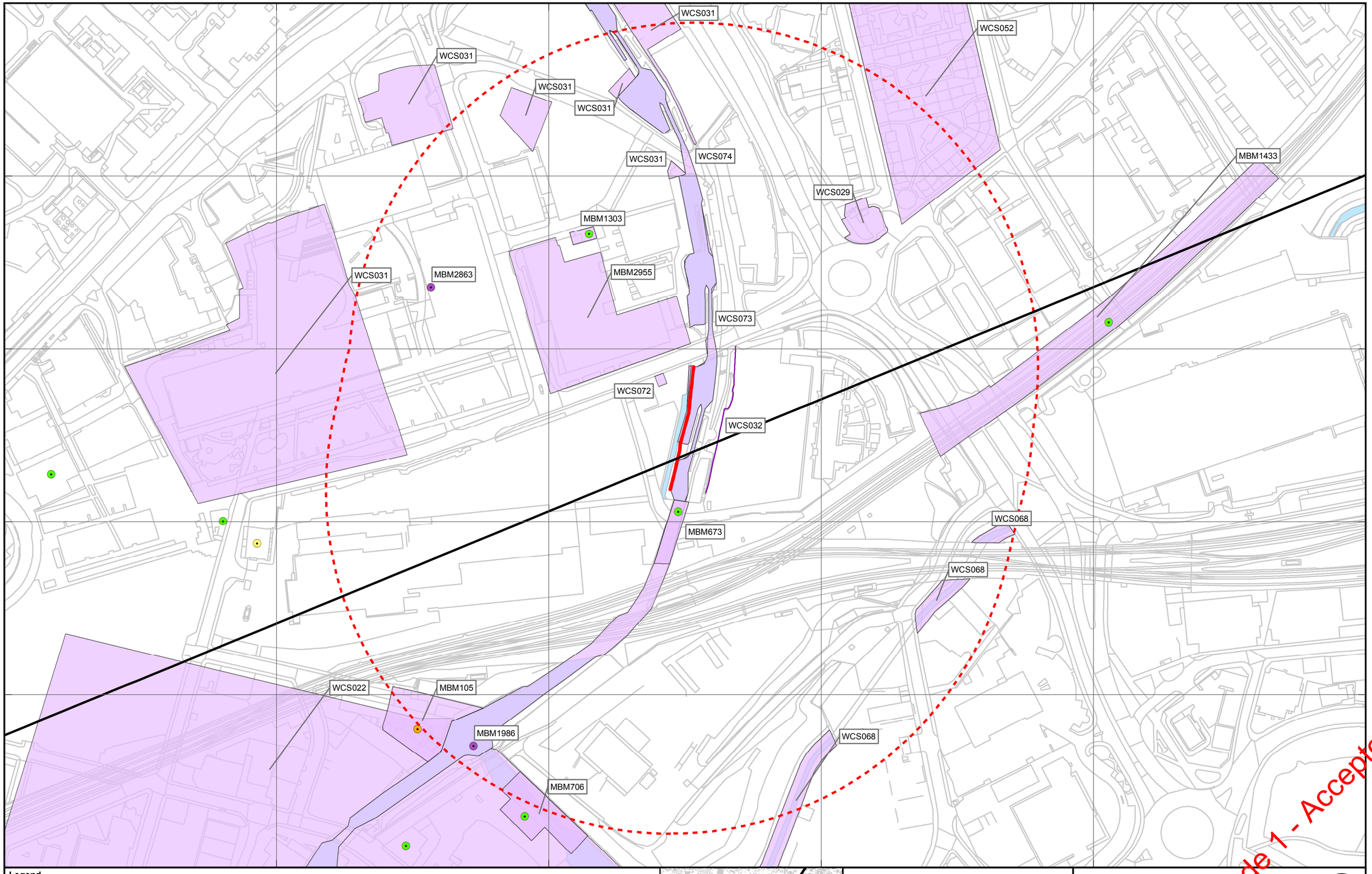
Date: 13/07/20



Legend

- Route in tunnel
- Route on surface
- Site outline
- Digbeth_Canal_Wall_250m_Boundary_010720
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body
- Non-designated heritage assets (point)
- Non-designated heritage assets (line)
- Non-designated heritage assets (polygon)

Listed Building

- Grade I
- Grade II*
- Grade II

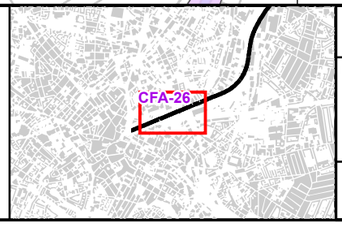


Figure 3

Map Name

Digbeth Canal Wall
Heritage Assets

Community Forum Area CFA26
Washwood Heath to Curzon Street

Registered in England. Registration number 06791686.
Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA

Scale at A3: 1:2,500

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Metres

Doc Number: 1EW04-LMJ_DJV-EV-PLN-NS08-029009

Date: 13/07/20

A B C D E

1 2 3 4 5

EBM484
EBM482
EBM442
EBM591
EBM51
EBM483
EBM652
EBM365
EBM350
EBM366
EBM624
EBM348
EBM568

Legend

- Route in tunnel
- Route on surface
- Site outline
- Digbeth_Canal_Wall_250m_Boundary_010720
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water Body
- HER Events (polygon)

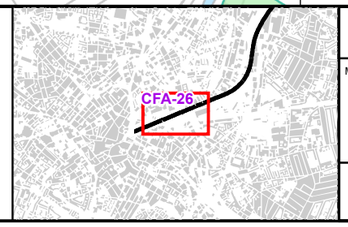

Figure 4

Map Name

Digbeth Canal Wall
Previous Investigations

Community Forum Area CFA26
Washwood Heath to Curzon Street

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snow Hill, Queensway, Birmingham, B4 6GA

Scale at A3: 1:2,500

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Date: 13/07/20

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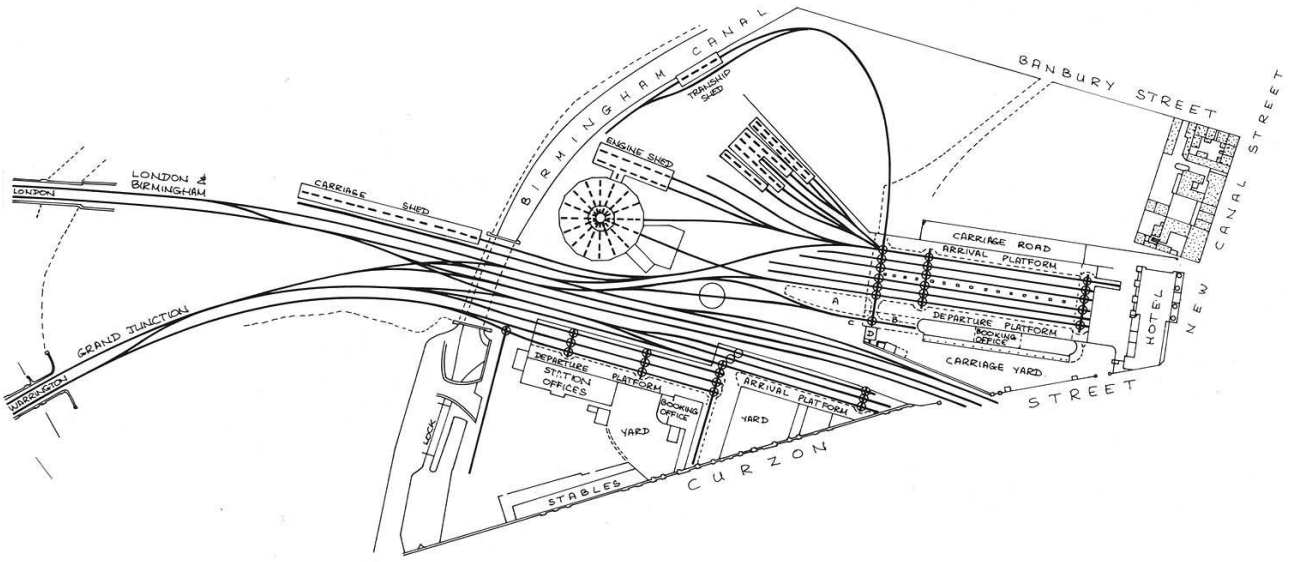

Figure 5: Richard Foster's 1838 drawing showing the layout of Curzon Street Station with both the GJR and L&BR components. Richard Foster. 1990. Birmingham New Street: The Story of a Great Station. Background and Beginnings: The Years up to 1860. Huddersfield. Image from Warwickshire Railways https://www.warwickshirerailways.com/lms/lnwrcs2167.htm (Accessed 10/07/2020)

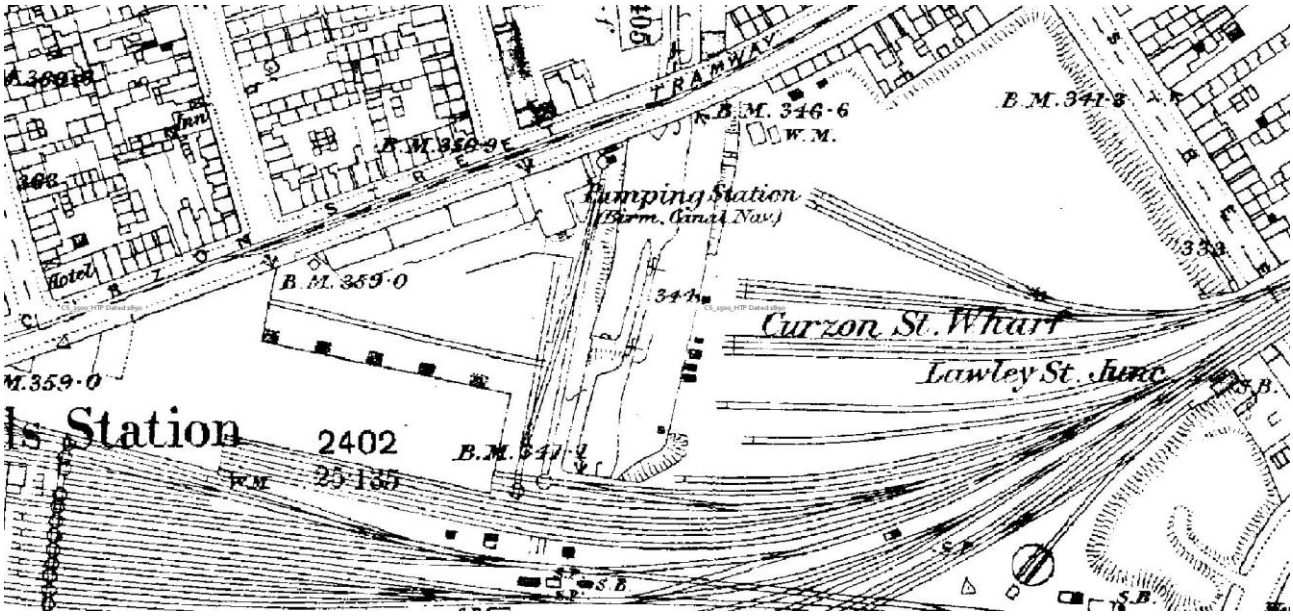

Figure 6: Ordnance Survey 1st edition 25-inch map. Warwickshire XIV.5 (Birmingham). Surveyed 1887. Southampton, Ordnance Survey

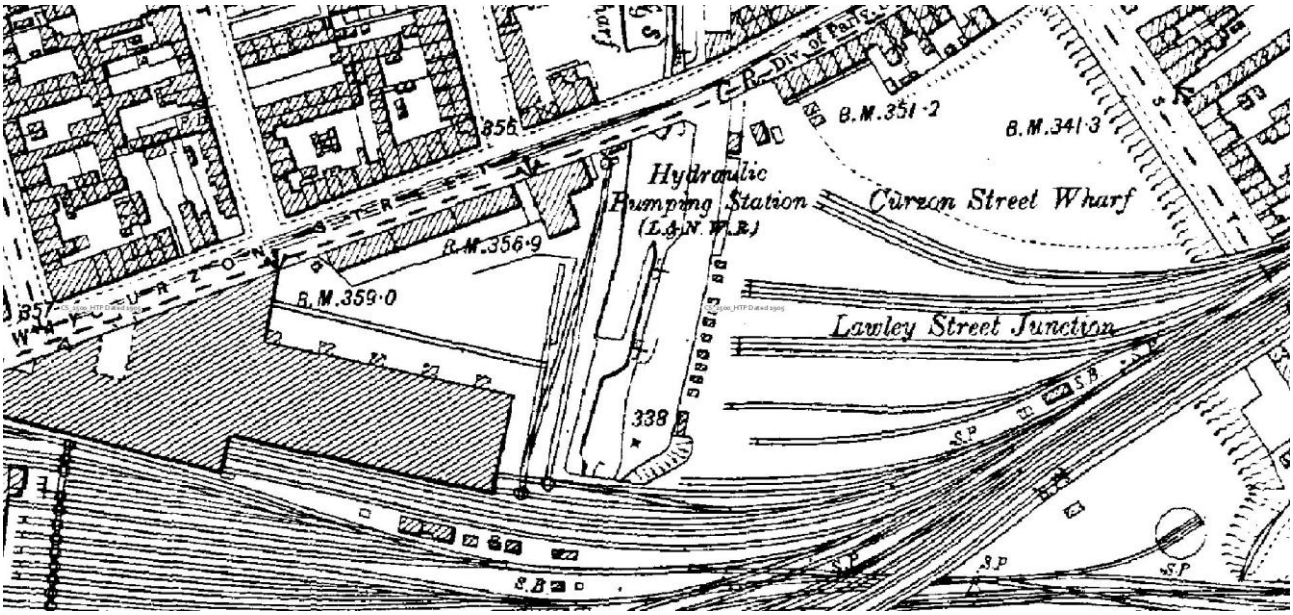

Figure 7: Ordnance Survey 1st edition 25-inch map. Warwickshire XIV.5 (Birmingham). Revised 1902. Southampton, Ordnance Survey

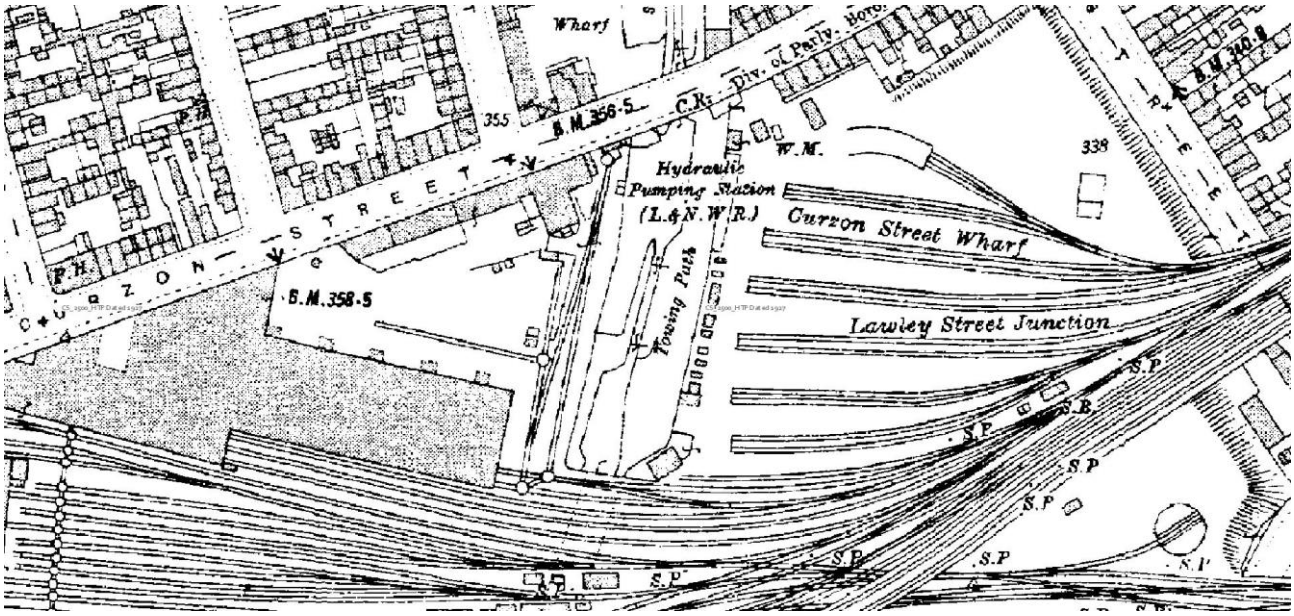

Figure 8: Ordnance Survey 1st edition 25-inch map. Warwickshire XIV.5 (Birmingham). Revised 1913. Southampton, Ordnance Survey

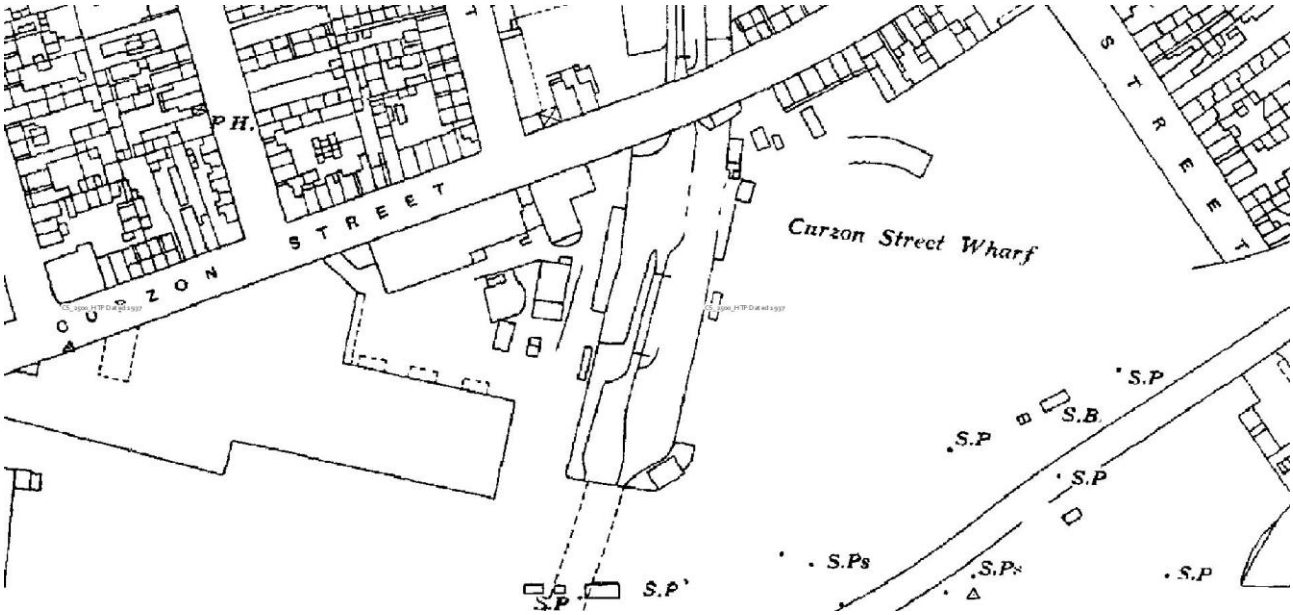

Figure 9: Ordnance Survey 1st edition 25-inch map. Warwickshire XIV.5 (Birmingham). Revised 1937 to 1938. Southampton, Ordnance Survey

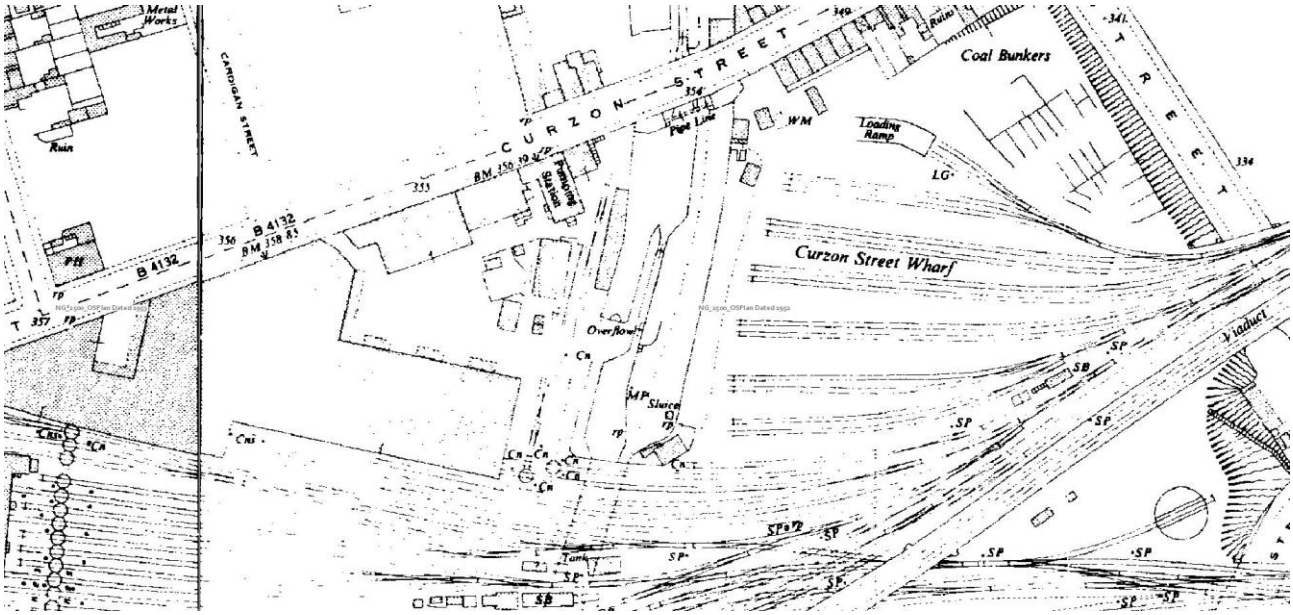

Figure 10: Ordnance Survey post-World War Two map series. Birmingham SK0887. Surveyed 1952 to 1953. Southampton, Ordnance Survey

Appendix B: Heritage Assets

Table 6 Non-designated heritage assets within 250m study area

Reference No.	Name	Description
ES Ref. WCS022	Digbeth/Deritend Settlement	Extent of the Digbeth/Deritend settlement. This settlement represents the most significant survival of medieval elements in Birmingham with good survival of medieval buildings. There are also good examples of 19th century industrial buildings and the settlement provides evidence for the development of the city of Birmingham and the transition from medieval to modern. The setting of the asset is Birmingham itself, of which it forms and important part. The setting contributes to the significance of the asset by providing a townscape context and by being part of the evolution of the city. The significance of the asset lies within its archaeological value and the preserved medieval deposits which could survive throughout the area. There is also historic value with the contribution the asset makes to the narrative of the development of Birmingham as well as the architectural value of the surviving medieval buildings.
ES Ref. WCS029	Moriarty's public house (former White Tower), Lawley Middleway	Mid-20th century purpose built public house of red brick with stone detailing. Located in a prominent corner plot at the junction of A4540 Lawley Middleway and Vauxhall Road. The principal entrance faces to A4540 Lawley Middleway. The building is located in a prominent position within an urban setting with residential development to the east.
ES Ref. WCS031	Curzon Street Goods Shed	Curzon Street railway goods yard from 1838 onward. The site of the former Curzon Street Goods Yard lay on the north side of Curzon Street. The setting of this asset is the other assets related to the former Curzon Street station, but the lack of any tangible remains means that this contributes little to the significance of the asset. The significance lies in the historical association with the Curzon Street Station and in the archaeological evidence it can provide for early transport technology.
ES Ref. WCS031	Site of buildings, Cardigan Street, AB Row	Cardigan Street/AB Row. The setting of this asset has been diminished through its demolition and redevelopment. The significance of the asset lies in the archaeological evidence it can provide for the construction and location of buildings from Post medieval Birmingham and the evidence it can provide for the growth of the settlement.
ES Ref. WCS031	Brass Foundry House, Belmont Row	The site of a terraced house and a brass foundry, at 13-17 Belmont Row now demolished. The site is located on the west side of the Digbeth Branch Canal alongside the CWS works building and lies within the Warwick Bar Conservation Area. The setting of this asset has been diminished by its demolition and redevelopment but does encompass the line of the Digbeth Branch Canal. The significance of the asset lies in its archaeological value and the information it can provide for the brass foundry and the technology

Reference No.	Name	Description
		and architecture required for this. It has historic value as part of the development of industrial Birmingham.
ES Ref. WCS031	Decontamination building	Belmont Row Cleansing Station, Eastside was one of 23 ARP cleansing stations constructed at Public Works depots in 1939, for decontamination of squads. The brick-built building comprises a two-storey central element flanked by lower ranges to each side. The building was previously part of a range of works buildings located on the north side of Belmont Row which have now mostly been demolished. The building is set perpendicular to Belmont Row and faces to the Digbeth Branch Canal basin. The demolition of buildings along Belmont Road has degraded the setting of the asset which is now in an isolated location on the canal with open aspects to most sides including towards the site of the Proposed Scheme.
ES Ref. WCS031	Lawley Middleway industrial buildings	A range of late 19th century and 20th century industrial buildings off A4540 Lawley Middleway and fronting the Digbeth Branch Canal have been previously demolished. The building walls which faced onto the canal have been retained. The walls, which show the remains of former windows and doors, provide evidence for the industrial character of the canal with building built alongside the tow path. The retention of the building walls preserves a part of the character of the conservation area.
ES Ref. WCS031	34 Belmont Row	Three-storey domestic structure located on the south side of Belmont Row alongside the Belmont Row canal overbridge. The setting of the building is currently degraded on account of the demolition of industrial buildings on Belmont Row and Pitt Street. Future redevelopment will restore the streetscape setting.
ES Ref. WCS032	Hedgerow	50m long hedgerow, 3m wide associated with Warwick Bar Conservation Area, located to south of B4132. The setting of this asset is the Warwick Bar Conservation Area and the Digbeth Branch Canal along which it was originally constructed to provide a sense of a green corridor running through the heavily industrial city. The significance of the asset lies in its historical and aesthetic value. The hedgerow provides a glimpse of how the canals were intended to look when they were first opened. Their connection with the early communication and transport routes also provides historical information on the growth and expansion of the city centre.
ES Ref. WCS052	Ashcroft Estate, Windsor Street South	Planned housing estate constructed completed in the 1930s. The estate comprises self-contained blocks of houses arranged around internal courtyards. The estate provides evidence for the provision of inter-war housing; however, it remains an isolated example fronting onto a principally industrial streetscape.
ES Ref. WCS068	River Rea, Fazeley Street	The river was canalised in the 1890s, running through a series of channels, culverts and tunnels, enabling the development of land above and

Reference No.	Name	Description
		formalising the relationship of the river to the canal system. As it runs through the study area, the river is characterised by its industrial setting.
ES Ref. WCS072	Curzon Street Pumping Station	Curzon Street pumping station, late 19th century brick structure incorporated into the wall that defines the south side of Curzon Street.
ES Ref. WCS073	Digbeth Branch Canal	Digbeth Branch Canal, completed in 1790. The canal is an extension to the Grand Union Canal and includes the Ashtead locks. It is crossed by the 1838 Curzon Street railway bridge and subsequent additions such that the canal is effectively in a tunnel. North of the 1838 portal the canal is in a deep cutting within which are the first of five locks before the canal enters the Ashted Road Tunnel. The canal is crossed by the Curzon Street road overbridge and Belmont Road overbridge. The canal is located within the Warwick Bar Conservation Area and is a locally listed building. The formal industrial setting of the canal has been eroded by clearance of much of the 19th and 20th century industrial and commercial buildings that lined its west bank. Currently vacant land on both sides of the canal has various permissions for development such that the now open setting of the canal will change. There are long views both north and south along the canal across the locks and Belmont Row basin. The view southward faces towards the city with the former Curzon Street station particularly prominent with railway infrastructure in the distance.
ES Ref. WCS074	Ashted Canal Locks, Ashted Row	Flight of five locks on the Digbeth Branch Canal between the Curzon Street tunnel and Ashted Road tunnel. The locks are an important feature of this part of the Warwick Bar conservation area. The canal is in a deep cutting and passes through a degraded industrial setting with many buildings on the canal side having been demolished. The setting of the canal and locks is as a result more open than was historically the case and there are long vistas southwards from the Ashted tunnel towards the Proposed Scheme and the city centre. Developments part of the future baseline will change the setting and restore some of the streetscape setting of the canal truncating the long views currently possible but these will not affect views directly south along the canal corridor and across the locks.
HER Ref. MBM105	Birmingham Gun Barrel Proof House	Birmingham Gun Barrel Proof House. 1813 by John Horton.
HER Ref. MBM673	1838 Section of Railway Bridge	Circa 1838. J Locke engineer. Joint bridge for the London and Birmingham and Grand Junction Railways
HER Ref. MBM706	Canal Side Warehouse, Warwick and Birmingham Canal, Fazeley Street	Circa 1840 red brick canal side warehouse with the eaves of roof carried out over stop lock/wharf abutting Warwick Bar lock.
HER Ref. MBM1303	Moby Dick's Public House	Corner site with Gopsal St. Circa 1840-50 public house.

Reference No.	Name	Description
HER Ref. MBM1433	Lawley St Railway Viaduct	1837-39, the last section of the Grand Junction Railway to be completed, engineered by Joseph Locke.
HER Ref. MBM2955	BCU flint, buried soil and 19th-20th century domestic and industrial remains	Features recorded in watching brief.

Appendix C: Previous Investigations

Table 7 Previous Investigations within 250m study area

Reference No.	Name
EBM51	Curzon Street building recording
EBM348	Warwick Bar Conservation Area assessment and recording
EBM350	Curzon Park desk based assessment 2005
EBM365	Curzon Street evaluation
EBM366	Curzon Street watching brief
EBM442	Belmont Row Decontamination Unit building recording
EBM482	Building survey at Cardigan Street/AB Row, Plots 1 and 1a
EBM483	Building Survey of Moby Dick and 13-14 Penn Street
EBM484	Building Survey at Lawley Middleway
EBM568	Warwick Bar canalside features
EBM591	13-17 Belmont Row building recording
EBM624	Curzon Park desk based assessment 2007
EBM652	BCU Phase II watching brief