

WP 029 D – Digbeth Canal Wall – Enabling Works North Contract Interim Report for Historic Building Recording

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1 Summary of Works

1.1 Introduction

- 1.1.1 This interim report details the initial results of the historic building recording carried out in relation to a section of retaining wall adjacent to the Digbeth Branch Canal ('the Site') in Birmingham. The section of canal is located immediately to the south of Curzon Street and to the north of a Grade II listed former railway bridge which now carries a road over the canal. The official name of this bridge in the list description is *The 1838 Section of Railway Bridge into Curzon Street Station over Digbeth Branch Canal*.
- 1.1.2 Level 2 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 the extent of the wall lowering will vary along the structure's length. The design drawing shows that the northernmost section of the wall will be reduced in height by 2.68m while the central section will be lowered by 1.46m and the southern section will step down in three drops.
- 1.1.3 The recording was undertaken in compliance with the Project Plan for Digbeth Canal Wall (Doc No: 1EW04-LMJ-HS-PLN-NS08-029002, 17 July 2020) and the Location Specific Written Scheme of Investigation (LS-WSI; Doc. No: 1EW04-LMJ-EV-MST-NS08-029009). For safety reasons all the recording of the wall has been undertaken remotely from a public footpath on the opposite side of the canal (c.15-20m from the wall).
- 1.1.4 The recording has been undertaken in three phases following the removal of vegetation from different parts of the wall and separate interim reports have been issued following each phase. The initial survey, which included photographic and descriptive recording of the wall prior to the main vegetation removal, was carried out on 14 August 2020. It principally focused on the northern part of the wall which will be lowered in height prior to the southern parts. An interim report on this recording was then issued on 20 August 2020. Further recording was then undertaken on 21 September 2020 following removal of much of the vegetation and a revised interim report was issued on 28 September 2020. Some remaining vegetation still obscured parts of the northern third of the structure but this could not be removed due to the possibility of nesting birds. Further recording was then undertaken on 6 October 2020 when the last section of vegetation had been cleared and shortly after a buried wall had been exposed immediately west of the main canal wall. A further revision of the interim report was then issued on 19 October 2020 to include the further recording; the current report incorporates comments and suggested amendments made on the second and third interim reports.

- 1.1.5 The vegetation clearance has comprised removing plants directly fixed to the face of the wall and immediately in front of it. However, it should be noted that towards the southern end some large bushes which are close to the water's edge, more than 1m in front of the wall, have been left in place. These obscure some views of the wall from the opposite side of the canal from where the recording is being remotely undertaken from.
- 1.1.6 Documentary research will be undertaken at the Birmingham City Archives although this currently has restricted opening as a result of the Covid-19 pandemic. Archival sources have the potential to further contribute to the understanding of the site and will be discussed and referenced within the final report.

1.2 Site Location

- 1.2.1 The section of canal-side wall which forms the focus of the current recording is c.92 m long and is located between Curzon Street (at its north end) and the Grade II listed Curzon Street railway bridge (at its south end). This railway bridge was constructed in 1837-8 to take the Grand Junction Railway into the Curzon Street Terminus Station. It is centred at SP 08122 87168 and was also included in the HS2 Phase One Environmental Statement (WCS073) as a non-designated heritage asset.
- 1.2.2 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 Ashted Bottom Lock. This is one of a series of locks on the Digbeth Branch Canal.

1.3 Work Rationale

- 1.3.1 As defined within 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 partial demolition. It will also contribute to the following specific HERDS Knowledge Creation objectives, as outlined in 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.

2 Working Methodology

2.1 Working Documents

- 2.1.1 The Project Plan for Digbeth Canal Wall (Doc. No: 1EW04-LMJ-HS-PLN-NS08-029002) defined the scope, rationale, aims and objectives for the historic building recording. The Project Plan

provided a brief summary of the origins and historic background to the Site through an assessment of available historic cartographic sources, as gathered during the preparation of the HS2 Phase One Environmental Statement. It also defined the methodology for the appropriate level of historic building recording.

- 2.1.2 The LS-WSI for the historic building recording (Doc. No: 1EW04-LMJ-EV-MST-NS08-029009) was prepared in response to the Project Plan, setting out how the building recording works would be delivered. It had been prepared in accordance with the standards and guidance provided by the GWSI: HERDS, the Technical Standards for Specification for Historic Environment Project Plans and Location Specific Written Schemes of Investigation (Doc. No: HS2-HS2-EV-STR-000-000015), the Specification for Historic Environment Investigations (Document No. HS2-HS2-EV-STD-000-000035) and the relevant ClfA Standards.
- 2.1.3 All the recording work of the wall has been undertaken remotely from the public footpath on the east side of the canal (the towpath; c.15-20 m from the wall itself).
- 2.1.4 As outlined above the recording is being undertaken in stages, due to the phased removal of vegetation which covers much of the wall. The initial phase of recording (14 August 2020) was undertaken prior to the removal of any vegetation and largely focused on the northern section of the wall (c.50m in length, from Curzon Street to the lock). Parts of this section were relatively visible, although there was some vegetation cover (especially in the north and centre) so that approximately half of this section of the wall was at least partially obscured.
- 2.1.5 Further recording was then undertaken on 21 September 2020 following the removal of much of the vegetation directly attached to the wall and again prior to any reduction in its height. Some vegetation remained in an area where it was thought there may be nesting birds.
- 2.1.6 Further recording was also undertaken on 6 October 2020 when the last section of the wall had been cleared. By the time of this visit contractors had started minor ground investigations in the area immediately to the west of the main canal wall which had exposed the west side of a separate north-to-south wall. It was necessary to backfill the trench due to rainwater potentially making the wall unstable so it was agreed that the structure would be recorded at a later date when the trench was reopened. Unfortunately when the ground investigation works in this area were re-started an electric cable was encountered in this area and the works had to stop. The trench was again backfilled and this work will only be possible at a later date when a safe method is agreed. Therefore it has not been possible to record this wall although some photographs taken by the contractor have been provided to COPA and included in this third interim report (**Plates 33-35**).
- 2.1.7 Some of the vegetation removal has been to allow the construction of a pontoon on the east side of the wall but there has also been other more general vegetation clearance, including the removal of some shrubs towards the top of the wall which hang down over the brickwork.

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3 Historical Background

3.1 Summary

- 3.1.1 In the medieval period Birmingham was a market town reliant on the trade of corn, livestock and wool although by the mid-13th century it had begun production of metal goods, partly based on the coal and iron from the Black Country¹. The population of the town grew rapidly in the 18th century, largely based on the metalware trades, with new development initially largely restricted to the 'old town' area and then to the hillsides to the north and north-west of the city.
- 3.1.2 The development of the canal network in the second half of the 18th century stimulated trade by greatly reducing costs of transporting raw materials and finished goods. The Birmingham Canal was constructed between 1768 and 1772 and this was followed in 1784 by the Birmingham and Fazeley Canal. The Digbeth Branch Canal was constructed in the 1790s during the period known as the 'Canal Mania' which saw a huge number of new waterways constructed in many parts of the country; it was a short canal which connected the Birmingham and Fazeley Canal with the Grand Union Canal. The Digbeth Branch Canal descended the slope of the Rea Valley via the Ashted flight of six locks and a tunnel (Ashted Tunnel). In 1794 the Birmingham and Fazeley Canal merged with the Birmingham Canal to form the Birmingham Canal Navigations (BCN). The local network was expanded further in 1799 by the Construction of the Warwick and Birmingham Canal.
- 3.1.3 The earliest available map on which it is possible to identify the Site is the Ordnance Survey drawing from 1814. This shows that the Site was then just outside (to the east of) Birmingham's urban area while the land immediately adjacent to the canal retained the pattern of fields which had been truncated by the construction of the new channel. Curzon Street can be traced on the map extending out of the city and passing over the canal.
- 3.1.4 The semi-rural setting of the Digbeth Branch Canal was lost in the early 19th century by urbanisation and then in the 1830s by the construction of Birmingham's first two railway lines: the Grand Junction Railway which reached Birmingham in 1837 to connect with the Liverpool and Manchester Railway and then the London and Birmingham Railway which opened its Birmingham station in 1838. It was agreed that the two lines would approach the city from the east, crossing over the canal in the process, and would share the same site as their terminus, immediately to the west of the canal. 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.

¹ Historic England Research Report Series No. 031-2018, Digbeth and Deritend, Birmingham, West Midlands: Outline Historic Area Assessment

- 3.1.5 The canal and the various elements of the railway network are shown in some detail in Ackerman's Perspective of Birmingham dating from 1845². The details and relative sizes of some of the buildings may be open to doubt but the view is nonetheless very useful and it is easy to identify the section of canal in the current study between the bridge carrying the railway lines over the waterway and that carrying Curzon Street. The view shows the towpath on the eastern side of the canal and a winch or hoist on the western side for transferring goods or materials between the canal and the railway site. Two buildings are shown just to the west of this hoist although they were probably much smaller than suggested by the view. The detail of the winch may also be inaccurate but the fact that a crane is shown does strongly suggest that there was a wharf at this time in the area of the current study. The view suggests that in 1845 the ground level in the railway site was the same as that of the canal, and that therefore there was no retaining wall, but this is likely to be misleading.
- 3.1.6 The mid 1840s was an important period in the development of the railway network around Birmingham. In 1845 construction began on a larger station (New Street) closer to the town centre which necessitated a further bridge over the Digbeth Branch Canal, immediately to the south of the 1837 bridge. The original Curzon Street station site then became a goods station. In addition, in 1846 the other main companies merged to form the London and North Western Railway (LNWR).
- 3.1.7 A plan from 1852 shows a canal transshipment shed which would have straddled the area between the small basin adjacent to the canal lock and the railway site immediately to the west³. A set of north-to-south sidings lines are shown extending along this edge of the railway site and one of these passed through the transshipment shed to allow covered loading/unloading between the railway and the canal. The Warwickshire Railways website states this this transshipment shed was constructed to replace an earlier structure to the south that had been demolished as part of the extension to New Street Station³.
- 3.1.8 The 1887 OS map shows the canal surrounded by an extensive network of railway infrastructure. The area to the east of the canal is labelled the Curzon Street Wharf and there are a number of branch lines which terminate at this location. The transshipment shed shown on the 1852 plan on the west side of the canal is no longer extant in 1887, although the north-to-south branch lines do survive at this location. Towards the north-eastern corner of the railway site the map shows a Pumping Station for the Birmingham Canal Navigation.
- 3.1.9 This pumping station was a short distance to the west of the Digbeth Canal wall and it is known to have been a tall L-plan structure with a chimney adjacent to it. The date of construction of the

² Ackerman's Perspective of Birmingham, 1845. [Online] available at <https://www.warwickshirerailways.com/lms/lnwrcs2173.htm> (accessed 7 Sept 2020)

³ This appears to be a modern tracing of an historic 1852. [Online] available at <https://www.warwickshirerailways.com/lms/lnwrcs2166.htm> (accessed 7 Sept 2020)

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pumping station is not known but John Minnis has suggested a date of 1870s-80s⁴. The building was largely demolished in the 1960s but the wall which bordered Curzon Street survived and was recently recorded by COPA, together with other remnants, as part of the HS2 enabling works (Doc. No. 1EW04-LMJ-EV-REP-NS08-029014).

- 3.1.10 The 1887 OS map shows a sloped bank on the west side of the canal, to the north of the lock extending (and tapering) up to the Curzon Street bridge. A feature is shown towards the centre of this area which is likely to have been a set of steps from the canal up to the raised level close to the pumping station.
- 3.1.11 An undated plan which is probably late 19th century in date shows the pumping station as well as an outdoor machinery store on the west side of the wall in the current project and a small store and office nearby⁵.
- 3.1.12 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.
- 3.1.13 The top of the central section is believed to have been lowered in the 1970s (J. Williams, pers. comm.).

4 Description of Wall

4.1 General Description

- 4.1.1 The current report addresses a section of the canal retaining wall south of Curzon Street and north of a Grade II listed former railway bridge (*The 1838 Section of Railway Bridge into Curzon Street Station over Digbeth Branch Canal*). The wall is c.92m in length and lines the west side of the canal. Its height above the water varies along its length but the tallest section is that towards the northern end which is c.4m above the waterline. The wall comprises evidence of various constructional phases and in several areas tree roots have caused bulging or distortion to its face.
- 4.1.2 For the purpose of the current description the wall has been divided into three sections (A-C):
- The northernmost section adjacent to the Curzon Street road bridge (Section A; **Plates 1, 3, 27-32**);
 - The central section (Section B) part of which is parallel to Ashted Lock and basin (**Plates 11, 16, 25-26**);

⁴ Minnis, J. 2015. Curzon Street Station, New Canal Street, Birmingham Historic England Research Report Series 029-2015.

⁵ Undated plan of Birmingham (Curzon Street) Goods Station depicting the eastern extent of Curzon Street (The National Archives RAIL 410/4039).

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- The southernmost section which is adjacent to the former railway bridge and which is below a lock/overflow weir (Section C; **Plates 2, 13-15, 17-24**).

- 4.1.3 **Section A (the northernmost part of the wall)** is c.1m taller than the section to the south and there is a sloped coping between the two elements. There are several phases apparent in this section of wall but the character of the brickwork in each is suggestive of a late 19th or early 20th-century date (**Plate 5**). There is a distinct horizontal break showing that the uppermost 10 courses (with soldier course coping) represent a secondary raising of the wall which is continuous across Section A. Beneath this horizontal break the wall continues down c.33 courses to the waterline and there is a vertical break within this area dividing two constructional phases. The section of wall to the north of the vertical break is constructed from English bond brickwork, generally with red stretchers and blue headers. This banding is known to have been favoured by the LNWR.⁶ There are three drain outlets (weep holes) in this area. The brickwork to the south of the vertical break is constructed from yellow stretchers with occasional courses of blue headers. Towards the top of the wall there are four courses of stretchers between each course of headers.
- 4.1.4 **Section B (the central part of the wall)** is longer than Section A and has a kinked profile so that the southern half is adjacent to a basin, parallel to Ashted Lock. The northern half splays out slightly. As detailed above there is a plan from 1852 which shows a transshipment shed in the railway site which straddled over this basin to allow covered loading and unloading. At the southern end of this basin, adjacent to the end of the lock, is a weir or overflow. As outlined above the recording in the current project has been undertaken from the public footpath on the opposite side of the canal and thus a close examination of this area has not been possible.
- 4.1.5 All the main vegetation has been cleared from Section B and this has exposed a number of constructional phases. The lower part (c.11 courses) of the section parallel with the lock is constructed from bricks laid in English bond and a banded pattern with courses of blue bricks towards the top and bottom and red bricks in-between (**Plates 7-10**). It is significant to note that this brickwork is similar to that used in the pumping house facing Curzon Street. The pumping house is thought to be late-19th century in date and although the main building has been demolished, the elevation to Curzon Street survives. The main section of brickwork above is also laid in English bond engineering brick and it may be early 20th century in date. However, towards the southern end of Section B there is an area of clearly later rebuild which may even date to the 21st century. This brickwork is braced or restrained by a large steel beam along the face which is anchored into the bank behind. This is secondary and may be mid or late 20th century in date.
- 4.1.6 The brickwork in Section B to the north of the kink or splay (**Plate 6**) appears the same as the possibly early 20th-century brickwork in the upper part of the section immediately to the south. The steel anchor beam continues across this area.

⁶ Minnis, J. 2015. Curzon Street Station, New Canal Street, Birmingham Historic England Research Report Series 029-2015.

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- 4.1.7 **Section C (southernmost part of wall)** is beneath the lock/weir and therefore the water level is lower. Here there is a low wall immediately adjacent to the water and a taller wall to the rear (**Plates 12-13**). Between the walls is a shallow overgrown bank. Much of this area has now been cleared of vegetation and it is much more visible now than during the initial phase of recording.
- 4.1.8 The southernmost c.19 m of Section C is constructed from light red brickwork laid in English bond and with a rough, mottled face. It is in relatively good condition and its character is suggestive of a date from before 1850. At its southern end this section of brickwork appears to be integral with the ashlar abutment of the 1838 railway bridge and therefore it is likely to be contemporary with it (**Plate 22**). The northern end of this section of brickwork terminates with a clear but irregular vertical break which probably results from the rebuild of the section immediately to the north. This brickwork to the north of this break is also laid in English bond but it is slightly darker and with a less mottled face. The character of this brickwork would suggest a mid 19th-century date and it may have been a relatively early alteration.
- 4.1.9 At a point c.5.5m to the north of this structural break there is another vertical break. However, this one is only present in the upper half of the wall and it is a clear straight joint rather than an obvious irregular repair. Below the vertical joint the red brickwork continues northwards but above there is an area of dark Staffordshire-blue engineering bricks of probable late 19th century date (**Plates 17, 18, 24**). In this area the height of the visible wall tapers due to the rise of the bank against it.
- 4.1.10 **Buried wall to west of canal wall:** As referred to above contractors started ground reduction works to the west of the main canal wall and they exposed part of a buried wall. Due to concerns over the stability of this area it was necessary to back fill the excavation before archaeologists had the opportunity to visit and record the structure. Some outline photographs were taken by the contractors and provided to the archaeologists (**Plates 33-35**) but it is not possible to form any clear understanding of the wall from these. The wall appears to be c.3m to the west of the main canal wall and orientated parallel with it (N-S). At least fourteen brick courses were exposed from the top of the wall.

4.2 The Setting of Digbeth Canal Wall

- 4.2.1 The setting of the Digbeth Branch Canal has undergone extensive changes since the 1790s when it was originally constructed through a semi-rural landscape just to the east of Birmingham's built-up town centre. By the middle of the 19th century the area through which it passed had become a heavily industrialised landscape largely surrounded by railway infrastructure. More recently the setting has undergone further substantial alterations by the clearance of much of this infrastructure and the redevelopment of surrounding parts of the city centre. In particular the setting has been altered by the construction of the Birmingham City University Library which looms c.30m behind the Site (**Plate 3**).

- 4.2.2 The main setting of the retaining wall is formed by the Digbeth Branch Canal, the Ashted Lock and the other canal features such as the tow path, overflow weir, basin and mooring posts. Other key features which define this area are the bridges over the canal to the north and south. The wall still has an important historic and visual relationship to the canal and railway infrastructure.
- 4.2.3 The sunken nature of the canal gives it a secluded, relatively quiet character close to the centre of Birmingham and it is a clearly defined area with bridges to the north and the south.
- 4.2.4 On the east side of the canal there is a ramp and other raised platforms from where the Grade I listed Curzon Street Station can be glimpsed in the distance behind the wall. The rear side of the station wall (former pumping station) is also visible to its rear.

4.3 Designated Heritage Assets

- 4.3.1 **Warwick Bar Conservation Area:** The canal and the section of retaining wall are located within the Warwick Bar Conservation Area and therefore it is important to consider this wider context of the Site's setting.
- 4.3.2 The Warwick Bar Conservation Area is characterised by buildings and structures alongside the Digbeth Branch Canal and the Warwick and Birmingham Canal. The Conservation Area Appraisal⁷ states that 'the built character of the conservation area is defined through a range of warehouse complexes and purpose built works or manufactories from the mid-19th to the mid-20th century'. One early 19th century works does survive (The Gun Barrel Proof House) but it is exceptional in this regard. It is interesting to note that these later 19th and early 20th century works that the Conservation Area Appraisal refers to date from long after the hey-day of the canal age. They help illustrate that although the construction of the railways led to the canal network as a whole rapidly losing its pre-eminence for industrial transportation, some individual waterways remained of considerable importance in the late 19th and early 20th century.
- 4.3.3 The Conservation Area Appraisal refers to 'long views out of the conservation area both from the streets and the canal towpaths, particularly towards Curzon Street Station' being 'of key importance' in the wider setting of the Conservation Area. It also adds that 'the sequence of views from bridge to bridge along the Digbeth Branch Canal is important'.
- 4.3.4 **The 1838 Section of Railway Bridge into Curzon Street Station over Digbeth Branch Canal:** At the southern end of this section of the Digbeth Branch Canal is a Grade II listed bridge which was constructed in 1837-8 to carry the Grand Junction Railway over the canal. It was designed by Joseph Locke and is a single span, brick built bridge with a Neo-classical ashlar front and wing walls to each side. The bridge was subsequently altered by the construction of an adjoining deck to accommodate further lines to the south of the original route. The bridge now carries a road.

⁷ Warwick Bar Conservation Area Appraisal, Birmingham City Council, 2008

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4.4 Summary of Phasing

- 4.4.1 As outlined above the section of retaining wall adjacent to the Digbeth Canal Wall has evolved in a number of constructional phases, largely of 19th-century date. The oldest substantial section of the surviving wall is that towards the south, adjacent to the 1838 railway bridge and apparently contemporary with it. The character of this section of brickwork is suggestive of a date from before 1850 and its construction appears to be integral with that of the bridge. It is very unlikely that the wall pre-dates the 1838 bridge; prior to the construction of the railway the canal would have passed through fields in this area and there would probably have been a sloped bank rather than a tall retaining wall here.
- 4.4.2 The lower 11 courses of the section parallel with the lock chamber (the southern half of Section B) could also survive from the 1830s although they may be late 19th century in date. They are similar in character to the brickwork used in the surviving Curzon Street elevation of the former pumping station which is also thought to have been constructed in the late 19th century.
- 4.4.3 The taller section of wall towards the north is likely to be late 19th or early 20th century in date.

5 Scheme Design

5.1 Proposed Scheme Design

- 5.1.1 As part of the enabling works for HS2 it is proposed to reduce the height of the retaining wall for its full length between the Curzon Street Bridge to the north and the former railway bridge to the south. This is illustrated on the Scheme Design Drawing (ref. 1EW04-LMJ_DJV-GT-DGA-NS08-053020). The ground level of the west side of the wall will be lowered and a platform created on this side of the wall with a graded bank extending to the west. As detailed on the drawing, the tallest part of the wall towards the north end will be lowered by 2.68m while the central section will be lowered by 1.46m and the southern section will step down in three drops (Scheme Design Drawing ref. 1EW04-LMJ_DJV-GT-DGA-NS08-053021).
- 5.1.2 A pontoon will be formed on the water to allow for dismantling works. The work will be undertaken in two phases with the northern half lowered first followed by the southern half. The work is complicated by the presence of Japanese Knotweed above the wall in the northern half of the Site.

5.2 Assessment of Scheme Impacts

- 5.2.1 As outlined in the Project Plan and WSI the current project is principally intended to provide an record of the wall prior to its removal but it may also be of value to provide an outline assessment of the impact of the proposals on heritage significance. This is not intended to be a full heritage impact assessment.

- 5.2.2 **Non-designated heritage assets:** It is currently proposed to lower the height of the retaining wall and this will therefore comprise an impact on a non-designated heritage asset. The northern and southern parts will be reduced to approximately half their current height while the central section will be lowered by less than half its height. For most of the length of wall this will only directly impact brickwork dating from the late 19th or 20th centuries, when the wall was raised in height or reconstructed, but the southernmost c.15-17 m is older for its full height, probably dating from the 1830s when the adjacent railway bridge was constructed.
- 5.2.3 It is considered that the reduction in height of the earliest (c.1830s) part of the wall will form a major impact on its overall heritage significance while the works to the later 19th-century parts of the structure will form a moderate impact. This reflects the relative heritage significance of the different parts of the wall.
- 5.2.4 **Designated heritage assets:** The reduction in height of the wall will also have a direct impact on the Warwick Bar Conservation Area and an indirect impact on its setting. It will also have an indirect impact on the setting of the Grade II listed railway bridge.
- 5.2.5 The main character of the Conservation Area and the setting of the railway bridge are formed from the industrial sites and the tall brick canal-side retaining wall contributes to this. Its reduction in height will form a detrimental impact although the overall level of harm to the designated assets should be low-moderate. The wall has undergone many phases of alteration and the proposals will form another part of this evolution. The proposals will increase intervisibility between the canal and the Curzon Street Station site as well as enhancing an understanding of the relationship between the two areas. Lowering the wall should allow a greater understanding of how goods or materials were formerly transferred between the canal and railway site via the former transhipment shed over the basin.
- 5.2.6 Ground reduction works are likely to expose buried archaeological remains which should be recorded.

6 Summary Conclusions

6.1 Summary of Works

- 6.1.1 Historic building recording is required to investigate and record the history, character and significance of Digbeth Canal Wall and contribute to the following specific HERDS Knowledge Creation objective:
- 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.

- 6.1.2 The current phase of the building recording has contributed to this objective through the creation of an initial photographic and written record which will help to provide an enhanced understanding of the historic development of the wall and its relationship with both the canal and the Curzon Street Station site.
- 6.1.3 The Digbeth Branch Canal was constructed in the 1790s when this was still a semi-rural area just outside urban Birmingham. A plan from 1814 shows this stretch of the canal with fields to each side. It is likely that there was little significant change to this area prior to the later 1830s when the Grand Junction Railway and London and Birmingham Railway were constructed, each entering the town from the east and terminating at a site immediately to the west of the Digbeth Canal.
- 6.1.4 A perspective view of Birmingham from 1845 suggests that by this date there was a simple wharf with a winch to transfer between the canal and the railway site. A plan from 1852 suggests that a larger transshipment shed had been constructed on the railway site to cover over a small basin on the canal. This shed had been removed by the OS map of 1887, presumably having been replaced by the larger Curzon Street Wharf on the east side of the canal. By this date a large pumping station had been constructed close to the wall at the north-east corner of the railway site.
- 6.1.5 The brick retaining wall on the west side of the canal shows a number of constructional phases and evidence relating to repairs and increases to the height of the wall. The earliest surviving part of the wall appears to be the southernmost c.19m which was probably contemporary with the construction of the adjacent railway bridge in 1837-8. Much of the rest of the wall probably dates from various phases from the 19th and 20th centuries.
- 6.1.6 The growth of the transport network of canals and railways was of huge importance to the development of Birmingham, particularly from the mid-18th century to the mid-20th century and caused dramatic changes to the urban landscape. The current recording has helped investigate the development of the transport network and the link with wider urbanisation thereby contributing to the KC43 Knowledge Creation objective.
- 6.1.7 The Site also provides evidence of the relationship between the canals and railways in the 19th century with goods or materials being transferred between the two and the current height of the wall particularly illustrates the development of this part of the railway site.
- 6.1.8 Another important aspect of the Digbeth Branch Canal which the work has highlighted is the fact that the canals in this area continued in use and remained of importance in transporting goods well into the 20th century. The Warwick Bar Conservation Area contains many canal-side works from the mid-19th to the 20th century and the canal continued to see investment long after the establishment of the railway network and after the hey-day of the canal. The retaining wall helps illustrate this as part of the overall history of the canal and it therefore contributes to KC43.

6.1.9 It is currently proposed to lower the height of the retaining wall along its full length and this work will therefore comprise impacts to various designated and non-designated heritage assets. These will include:

- Direct impacts to a non-designated heritage asset (the wall itself) and to a designated asset (Warwick Bar Conservation Area);
- Indirect impacts to two designated heritage assets: the Warwick Bar Conservation Area and the Grade II listed railway bridge.

6.1.10 The lowering of the wall will largely impact on brickwork that is believed to be late 19th and 20th century in date although the southernmost section is thought to be contemporary with the Grade II listed 1838 railway bridge. It is considered that the lowering of the earliest part of the wall will comprise a major impact to the heritage of the wall itself and a low-moderate impact on the setting of the two designated assets.

6.2 Additional Phases of Works

6.2.1 Archaeological monitoring of the ground reduction works on the west side of the wall should be undertaken. In particular recording should be undertaken on the buried wall that was temporarily exposed but then re-covered before it could be seen by the archaeologists.

6.2.2 Further historical research will be undertaken at the Birmingham City Archives when they reopen.

7 References and Glossary of Terms

7.1.1 The following terms have been used in this report:

- Archaeological Contractor – the organisation undertaking the historic building recording.
- 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

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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.

7.1.2 The following documents are referred to:

Title	Reference
Chartered Institute for Archaeologists 2014 Code of Conduct	CIFA 2014
Warwick Bar Conservation Area Character Appraisal	Birmingham City Council, 2008
Contractor’s Environmental Management Plan	IMS 15.3.1
Contractor’s or Employers Community Relations Strategy	IMS 11.1.1
Contractor’s Health and Safety Policy	IMS 15.1.1
Cultural Heritage GIS Specification	HS2-HS2-GI-SPE-000-000004
Cultural Heritage GIS Standard	HS2-HS2-GI-STF-000-00010
Employer’s protocols for Intra- and Inter- project Communication	IMS 12.1.1
Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy	HS2-HS2-EV-STD-000-000015
Heritage Consents Strategy	HS2-HS2-EV-STR-000-000008
HS2 London West Midlands Environmental Statement, Volume 5 Technical Appendices	CH-001-021, ES3.5.2.21.3 CH-002-021, ES3.5.2.21.4 CH-003-021, ES3.5.2.21.5
HS2 Technical Standard: Specification for Project Plans and Location Specific Written Scheme of Investigations	HS2-HS2-EV-STD-000-000036
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

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Location Specific Written Scheme of Investigation for Digbeth Canal Wall	No: 1EW04-LMJ-EV-MST-NS08-029009
Curzon Street Station, New Canal Street, Birmingham – Historic England Research Report Series 029-2015.	Minnis, J 2015
Digbeth and Deritend, Birmingham, West Midland - Historic England Research Report Series 31-2018	Bayer,O et al 2018
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
Technical Standard for the Recording of the Setting of Heritage assets	HS2-EV-STD-000-000037
Technical Standard – Temporary Works	HS2-HS2-CV-STD-000-000005
WP 029(A) – Historic Environment Works – Curzon Street Wall – Enabling Works North Contract Report for Historic Building and Setting Recording	1EW04-LMJ-EV-REP-NS08-029014

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APPENDIX A: PLATES



Plate 1: General view from south-east of Digbeth Branch Canal with the retaining wall in background (taken 14 August 2020)

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Plate 2: General view from north-east of Digbeth Branch Canal with the retaining wall in background (taken 14 August 2020)

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Plate 3: North end of the canal wall with Birmingham City University Library behind (taken 14 August 2020)

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Plate 4: Curzon Street Bridge at north end of the Site (taken 14 August 2020)

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Plate 5: North section of the canal wall (Section A) taken 14 August 2020. Note vertical break towards left edge of image with yellow bricks to south (possibly late 19th or early 20th-century rebuild) and red/blue bands of brick to north (late 19th century) which was favoured by the LNWR. The upper 10 courses across both areas are from a later phase when the canal wall was raised.

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Plate 6: Section B (central part of the canal wall). Note extent of vegetation cover and bulging of brickwork towards top of the canal wall (taken 14 August 2020)

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Plate 7: Section B (central part of the canal wall) taken 14 August 2020. Note the lower 10 courses (probably mid to late 19th century) older than courses above.

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Plate 8: Section B (central part of the canal wall) taken 14 August 2020. Note the lower 10 courses older than courses above. Also note vegetation and poor condition of the canal wall

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Plate 9: Section B (central part of the canal wall) taken 14 August 2020. The upper part of the brickwork to the left side of the photo is probably of late 20th-century date. Note vegetation and poor condition of the canal wall.

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Plate 10: Southern end of Section B (central part of the canal wall) with lower 10 courses possibly mid 19th century in date and upper part of wall (c.19 courses) dating to a much later rebuild (late 20th or 21st century). Taken 14 August 2020

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Plate 11: General view of the canal wall from east with Birmingham City University Library to rear (taken 14 August 2020)

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Plate 12: Low part of the southern section of the canal wall (Section C). Taken 14 August 2020

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Plate 13: Southern end of the canal wall by former railway bridge with Curzon Street Station in background (taken 14 August 2020)

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Plate 14: North portal of the former railway bridge (taken 14 August 2020)

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Plate 15: Northwards view towards the Site from beneath the former railway bridge (taken 14 August 2020)

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Plate 16: Ashted Bottom Lock viewed from the north (taken 14 August 2020)

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Plate 17: Northern part of Section C following vegetation removal (taken 21 September 2020).

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Plate 18: Northern part of Section C after vegetation removal (taken 21 September 2020). The lower part of the brickwork here may be mid-late 19th century while the darker upper part may be late 19th or early 20th century.

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Plate 19: Structural break in Section C with earlier brickwork to left (c.1830s) and slightly later to right (taken 21 September 2020)

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Plate 20: General view of wall after vegetation removal (taken 21 September 2020)

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Plate 21: Southern end of Section C, adjacent to 1838 railway bridge, after vegetation removal (taken 21 September 2020). This brickwork is probably largely contemporary with the 1838 bridge.

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Plate 22: Southern end of wall, adjacent to 1838 railway bridge and probably largely contemporary with it (taken 21 September 2020)

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Plate 23: Section C looking southwards (taken 21 September 2020). The brickwork in the foreground is probably mid 19th-century in date and slightly later than the 1838 brickwork in the distance.

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Plate 24: Northern part of Section C with later area of dark blue brick (taken 21 September 2020)

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Plate 25: Structural break in Section B after vegetation removal (taken 21 September 2020)

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Plate 26: Section B after vegetation removal (taken 21 September 2020)

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Plate 27: Section A after vegetation removal (taken 6 October 2020)

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Plate 28: Section A after vegetation removal (taken 6 October 2020)

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Plate 29: Section A after vegetation removal (taken 6 October 2020)

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Plate 30: Section A after vegetation removal (taken 6 October 2020)

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Plate 31: Section A after vegetation removal (taken 6 October 2020)

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Plate 32: Section A after vegetation removal (taken 6 October 2020)

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Plate 33: Wall exposed in excavation works to west of canal (photo taken 2 October 2020 by LM)

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Plate 34: Wall exposed in excavation works to west of canal (photo taken 2 October 2020 by LM)

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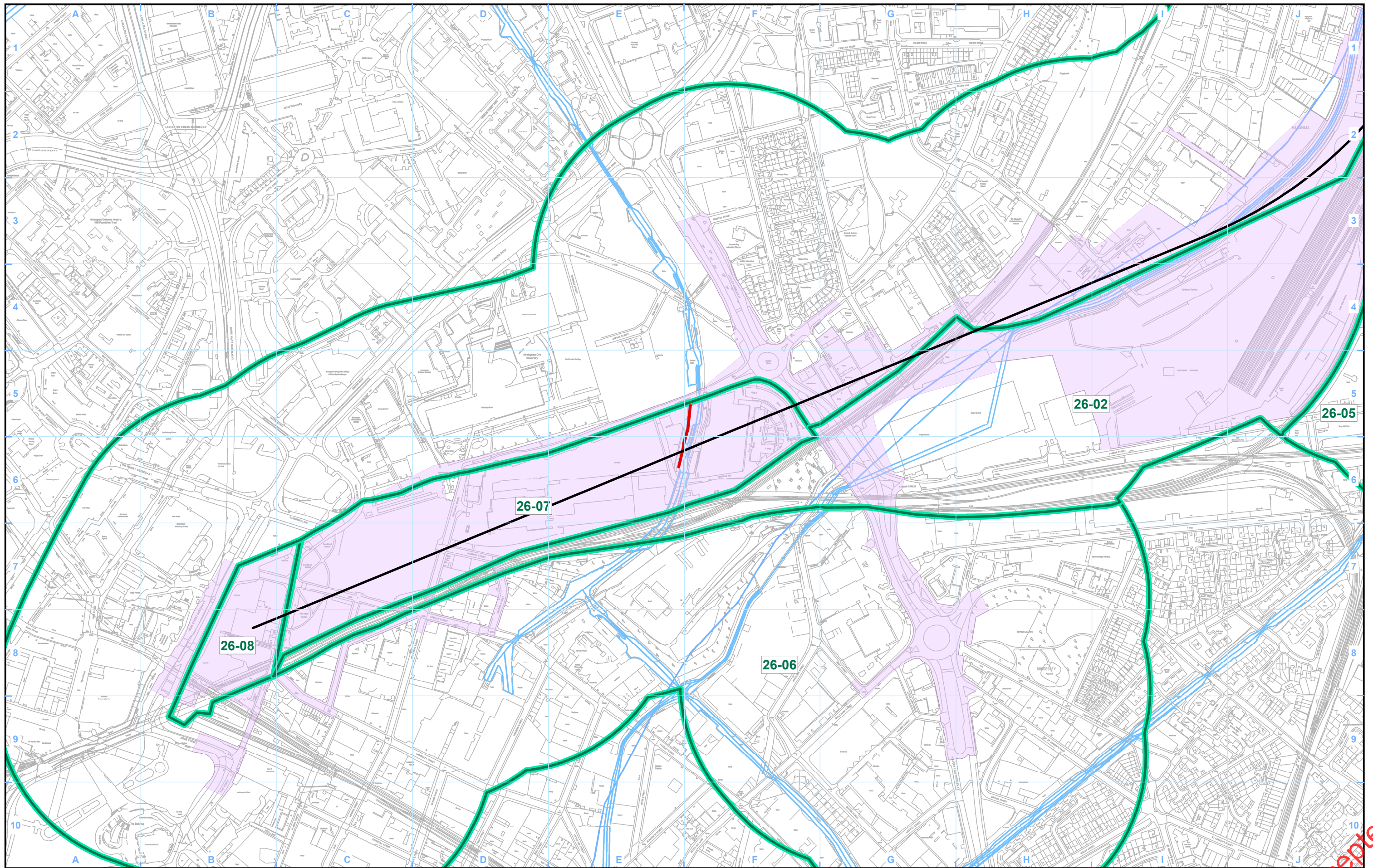
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Plate 35: Wall exposed in excavation works to west of canal (photo taken 2 October 2020 by LM)

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- 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

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Legend
 Site
 Building Outlines

Map Number **Figure 2**
 Map Name **Digbeth Canal Wall Outline**
 Community Forum Area 26
 Washwood Heath to Curzon Street

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